

## WASTE RECYCLING IN BANGLADESH-AN OVERVIEW

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### ABSTRACT

Driven by the economic necessity, which is associated with poverty, Bangladesh must achieve close to the 100 percent recycling rate if it wants to develop. This study is an overview of the present state of recycling in order to provide information useful in determining scenarios concerned with its sustainability. Both conceptual and technological advances in waste collection disposal processing and reprocessing methods would help to improve the current recycling system of this country.

*Keywords: Waste, Recycling, Cutlery, Processing materials, Household*

### INTRODUCTION

After the devastation of Twin Tower and the war in Iraq, world is facing serious economic disaster in trade and commerce, especially the export sector as the world continuous with the slow-down of industrial production and international trade. This has affected least developed countries like Bangladesh.

Our resources are limited. We are supposed to use our resources maximally. All "waste" should not have to be wasted as many of those can be recycled. Recycling mainly involves processing of materials so that those can be used as raw materials for making usable things. Those may be used to produce the same product; for example, broken pieces of glass can be made into new glass. Or those may be of very different natures; for example, iron and steel from cans and cars can be re-melted to make electric poles and rods.

Re-use means using the same item again and perhaps again and again. Re-use has been carried out for centuries. It was done for clothes, toys, cutlery, crockery and other tools handed down from generation to generation. Second-hand shops and antique dealers rely on re-use. In large cities (like Dhaka, Chittagong, Khulna etc.) some people, especially the poor, make living by sorting and picking from garbage dumps and re-using and selling what they can.

There are many recyclable goods available in our country. Extra income can be generated through recycling those waste ones. The waste is sorted out, separating plastic, paper; metal and glass from the rest of the waste, such as, the green waste from the kitchen and the materials are then sold to recycling enterprises. In this study we have emphasized mainly on five major recyclable items plastic, ship breaking, aluminum can, paper and household waste.

All information is collected from different sources and fieldwork. In field we have noted problems faced by the people involved in this sector. We have also suggested some solutions about those problems.

### METHODOLOGY

For the purpose of this study we have used systematic and objective process for gathering, recording and analyzing data. We have tried to avoid distorting effects of personal bias as possible. For the purpose of the research first of all we have tried to identify the issues. Then we tried to diagnosis the problems. At the end we selected and evaluated the courses of actions.

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### **Objectives**

The main objective of this study is to find out the overall scenario of the waste recycling in Bangladesh. We have tried to figure out the impacts of recycling in our economy and its possibilities for the development of the economy.

### **Overview**

The population of Bangladesh is estimated as 140 million. Of that, almost 11 million live in greater Dhaka, of which 8 million lives in Dhaka city itself. Every year half a million people migrate to Dhaka city. The population of the city is growing at the rate of 9 % per annum.

Due to different reason the infrastructure, industrial and communication sector of the capital city Dhaka are developing at a fast rate. At present Dhaka has become the center point of all the administrative activities of the country.

Due to ever growing population in the city, the increase of waste product has been boosted up rapidly. According to a survey from statistical bureau, in Dhaka city daily 10 lakhs metric tons wastes is being produced. Industrial units were allowed to grow up in Tejgaon, Dhania, Kajla, Demra and other areas without following any city development master plan. As because population of this city is growing at a geometrical proportion, so also are, growing small industries indiscriminately. Urbanization is progressing without any central plan. Waste in urban areas is produced from various sources like hotel factories, business centers, hospitals, kitchen markets and construction sites. The Dhaka City Corporation (DCC) is responsible for the waste management of this city. Their duties start from collection of waste to its dumping. The DCC can hardly cope with the situation with its manpower of 5300 cleaners. There is also lack of adequate space for waste disposal. But all waste does not have to be wasted by disposing off. Those could have many alternative uses.

### **Recyclable Product**

From the fieldwork we have identified the following probable recyclable product:

(i) Plastic (ii) Raw paper (iii) Rubber (iv) Iron (v) Aluminum (vi) PET Bottle (vii) Glass and (viii) Tin

### **Collection of Recyclable product**

We found that most of the recyclable products are collected from various places which are:

(i) Dumping ground (ii) Whole seller (iii) Retail seller (iv) Houses

### **Probable economic impact of waste recycling in Bangladesh**

Recycling could have significant impact on our economy by the following ways:

1. Huge number of people could be employed in recyclable enterprise, which would lower the unemployment rate of our economy.
2. We can use our limited resources optimally and efficiently.
3. It could reduce our dependence on imported foreign raw materials.
4. Obviously it will reduce the pollution problem of our Country.
5. Over all it could contribute substantially in our GDP.

### **Recycling scenario in this country:**

#### **Plastic:**

Bangladesh achieves close to the 100 per cent recycling rate for its plastic waste, and thus appears to have one of the most efficient plastics recycling systems in the world, driven by the economic necessity, which is associated with poverty. The minimization of the uncertainties associated with the present system of plastic recycling, particularly the quality and quantity of both the reclaimed plastic and recycled products have become one of the key issues in solid waste management (SWM) in Dhaka. Economic and social forces have concentrated all stages of this recycling process in the older part of Dhaka. Five to eight operational stages in the plastic recycling stream have been identified. The key activities are collection of wastes, and their sorting into resin types and colour classes. An average daily total of 33 tonnes of post-user plastic waste from all parts of the country are accumulated and subsequently recycled. The dirty plastic waste is only recycled into low-grade

products. Both conceptual and technological advances in waste collection, disposal, processing and reprocessing methods would help to improve the current recycling system and, thus, the quality of the recycled products too.

### **Ship Breaking**

A number of industries in Bangladesh, particularly those requiring steel products, rely on the ship-breaking yards to supply those with raw materials. In Bangladesh, the ship-breaking industry is the main source of raw material for the steel industry, as the nation has no domestic sources of iron ore and is faced with high prices for "new" steel in the international market. However, the ship-breaking industry has never been regulated and falls short in many respects of international standards. At present, a total of 32 ship-breaking yards are operating regularly on the beaches north of Chittagong, and those dismantle and recycle around 60-80 large ocean-going ships every year. Few of these recycling yards are registered under the national Factories Act 1965, but existing labour laws do not cover their workers. Ship breaking is generally done manually and with very little protection for the workers dismantling huge vessels directly on the open beach. For the workers, it is dangerous, and accidents causing injury, disability or death are not uncommon. In addition, such work is very poorly paid (US\$ 20-60 per month) and mostly accepted only by men from poverty-stricken areas in northern Bangladesh. Most workers are employed on a day-to-day basis, and their wages, hours of works and overtime payment fail to meet the minimum labour standards. Moreover, the improper disposal of harmful chemicals around ship-breaking yards is not only hazardous for the workers, but also a serious source of pollution of the surrounding environment.

### **Aluminum Can and Paper**

From our study we found that the following activities are involved in recycling aluminum can and paper in our country. The steps are given below:

1. Collection of aluminum can and paper
2. Aluminum cans are pressed as blocks. Then it is melted and made into roll. After that it is ready for reuse.
3. Usually paper is reused directly for making bags (*Thonga*), but some times it has been converted into pulp for recycling.

### **Household Wastes**

Most of the house hold wastes are not being recycled properly in our country. So there is a great potentiality for this item. It could be used as a raw material for the production of biogas and organic manure, which are very important raw materials in the context of our country. It is possible to establish commercially viable private enterprise for this purpose. Currently government has realized the importance of recycling of household wastes are agreed to start a pilot project with JICA to produce electricity and manure from household leftover.

### **Problems facing by recycling sector:**

From the fieldwork we find that the following are the major problems facing by the people involved in these recycling activities.

1. The worker work in very unhygienic places.
2. They use highly dangerous chemicals for melting materials, which are harmful to their body. They usually don't use any protective gear for their safety.
3. Many factories are situated on the bank of different river. The factories are throwing their wastes here and there which ended polluting the water and air. This also causes much harm to the worker because they are in constant touch with the same polluted environment.
4. Recycling is not a respectable enterprise in our country.
5. Most of the plants use very old production method for recycling, which are hazardous for the health of the workers.
6. Government doesn't have long run policies regarding the improvement of this sector.
7. Chance of getting loan from bank is very limited for this sector.

### **Some suggested solutions**

Government should take the following steps for the overall improvement of this sector

1. Government should shift the recycling factories outside of Dhaka city.
2. Government should impose rules and regulations for the use of chemicals.

3. The recycling sector could be a booming industry for our economy. So Government can provide adequate subsidies to the recycling firms.
4. There suppose to be free flow of bank loan for this sector.
5. Government can declare recycling as a thrust sector.
6. There suppose to be clear and long-guidelines from the government.
7. NGOs working closely with the government, private sector, and local communities, can improve the situation by waste recycling activities, conducting further research on such things as hazardous waste management and organic farming, training people and creating jobs by promoting waste recycling.

## **CONCLUSION**

From the above discussion we can opine that the recycling and reuse are the necessity for the day. We have to figure out potential recyclable items as much as possible. As because we have scarcity of resources, we have to learn to utilize this scarce resources optimally and efficiently. For this reason recycling has broad spectrum of prospect in Bangladesh.

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