

# **OBSERVATION OF GARMENTS WASTE MANAGEMENT SYSTEM**

**Submitted By:**

**Md. Fazlul Haque** (183-47-178)

**Md. Ariful Islam** (183-47-172)

**SoumitroHalder** (183-47-158)

**Md. Abu Hasan** (183-47-168)

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**Bachelor of Science in Civil Engineering**



**Department of Civil Engineering**

**Faculty of Engineering**

**Daffodil International University**

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## DECLARATION

This is certify that this project and thesis entitled “**Observation of Garments Waste Management System**” is done by the following students under my direct supervision and this work has been carried out by them in the following areas of Changwon, EPZ, Savar, Asuhlia, Chandra of the department Of Civil Engineering under the faculty of engineering of daffodil international university in partial fulfillment of the requirements for the degree of bachelor of science in civil engineering. The presentation of the work was held onSeptember-2022.

### Countersigned



**Md. Masud Alom**

Assistant Professor  
Department of Civil Engineering  
Faculty of Engineering  
Daffodil International University

### Signature of the Authors

*Md. Fazlul Haque*

---

Name: Md. Fazlul Haque  
ID #: 183-47-178

*Ariful Islam*

---

Name: Md. Ariful Islam  
ID #: 183-47-172

*Soumitro Halder*

---

Name: SoumitroHalder  
ID #: 183-47-158

*Md. Abu Hasan*

---

Name: Md. Abu Hasan  
ID #: 183-47-168

The project and thesis entitled “**Observation of Garments Waste Management System**” submitted by Md. Fazlul Haque, ID No: 183-47-178, Md. Ariful Islam, ID No: 183-47-172, Soumitro Halder, ID No: 183-47-158, Md. Abu Hasan, ID No: 183-47-168 Session: Fall 2018 has have been accepted as satisfactory in partial fulfillment of the requirement for the degree of Bachelor of Science in Civil Engineering on September 2022.

## BOARD OF EXAMINERS



---

**Dr. Mohammad Hannan Mahmud Khan**

Associate Professor & Head  
Department of CE, DIU

Chairman



---

**Md. Masud Alom**

Supervisor  
Assistant Professor  
Department of CE, DIU

Internal



---

**Rayhan Md. Faysal**

Assistant Professor  
Department of CE, DIU

Internal

**Dedicated  
To  
Beloved Parents and Respected Teachers**

# CONTENTS

Title Page	i
Declaration	ii
Dedication	iii
Contents	iv-v
List of Tables	vii
List of Figures	viii
Acknowledgement	x
Abstract	xi
<b>Chapter I : Introduction</b>	<b>1-2</b>
1.1 General	1
1.2 Background of the Study	1
1.3 Objectives	1
1.4 Organization of the thesis	2
<b>Chapter II : Literature Review</b>	<b>3-10</b>
2.1 Introduction	3-5
2.2 Study Area Maps	6
2.3 Concept of Waste	7
2.4 Various stages of wastage in garment industry	7
2.4.1 Fabric Store	7
2.4.2 Wastes in the Cutting Room	8
2.4.3 Bundling Room	8
2.4.4 Production Floor	8
2.4.5 Washing, printing or embroidery	8
2.4.6 Finishing	9
2.5 Reasons of wastage	9
2.6 Waste management is a method	10
2.7 Advantages of Waste Management	10

<b>Chapter III : Methodology</b>	<b>11-12</b>
3.1 Introduction	11
3.2 Flow Diagram of Methodology	11
3.2.1 Literature Review	12
3.2.2 Site Selection	12
3.2.3 Questionnaire survey	12
3.2.4 Data collection	12
3.2.5 Data Analysis	12
3.2.6 Data Presentation	12
<b>Chapter IV : Result and Discussion</b>	<b>13-17</b>
4.1 Introduction	13
4.2 Questionnaire for General People	13-14
4.3 Questionnaire for Senior Officer	14
4.4 Questionnaire survey report	15-16
4.5 Summary	17
<b>Chapter V : Conclusion and Recommendations</b>	<b>18-19</b>
5.1 Conclusion	18
5.2 Recommendations	19
<b>References</b>	<b>20-22</b>

## **LIST OF TABLES**

Table 2.1: Various stages of wastage during production	9
Table 4.1: Questionnaire for General People	13
Table 4.2: Questionnaire for Senior Officer	14

## LIST OF FIGURES

Figure 2.1 Location of Map of the Selected area	6
Figure-2.2: Production Flow Diagram	7
Figure-2.3: Stages of wastage	8
Figure 2.4: Different Steps of Waste Management System	10
Figure 3.1: Waste management is a method	11
Figure 4.1: survey report on question no. 1	15
Figure 4.2:survey report on question no. 2	15
Figure 4.3: survey report on question no. 3	15
Figure 4.4: survey report on question no. 4	16
Figure 4.5: survey report on question no. 5	16



## APPENDIX

Table B.1: List of Questionnaire for Authorized Person (VIP People)	24-25
Table B.2: List of Questionnaire for General People	25-29
Figure C.1: Photograph during Questionnaire for Authorized person	30-33
Figure C.2: Photograph during Questionnaire for General People	34-35

## **LIST OF ABBREVIATIONS**

ASBC	Ashulia, Savar, Baipayl, Chandra
EPZ	Export Processing Zones
COD	collect on delivery

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## ABSTRACT

The necessity of garment waste reducing, recycling and disposal management is motivated by the increasing cost and decreasing availability of dumping area and the diminish of natural resources. The raw materials in various combinations undergo different processes during production and are converted to finished goods. The residue left out after each process during production remains waste. The aim of this study was to identify the garments industry to shift to better waste management practices of the selected garments and to possible solution to recover the present condition.

During the observation of a few surrounding Garments of Ashulia, Savar and EPZ we tried to look after the processing of their waste management system. Most of the waste is generated from the factory was clothing waste, which is 1.5 tons approx. every day. Recyclable waste is generated around 90kg every day. Caution they follow to protect the workers from generated waste were proper dress and fire safety. Worker is affected by the generated waste were said yes 0% and no 30% and future plans for improving your factory waste and management were discussing with the higher authorities to reduce this waste. We reached to garments employee, local people and farmers to know how they are dealing with this waste.

From the analysis, we find that, directly affected by the waste is 30%, not affected 65% and neutral 5%. Last six months average 8/9 people has been affected by this waste, 41% people said that they are affected, 57% said no one affected and neutral 2%. The management system of garments factory is right were said 52%, not right said 40% and neutral 8%. Waste affecting agricultural land were said yes 25%, not affecting 68% and neutral 7%. Improvement of drainage system could be the way out of this problem were said yes 66% people, no 25% and neutral 9%.

The study concludes that the Waste Management is the human control of the collection, treatment and disposal of different wastes. Some components of waste have economic value and can be recycled once correctly recovered. The most important barriers to recycling are lack of equipment and technology, lack of materials to recycle and lack of consumer awareness. The compositions of different wastes have varied over time and location, with industrial development and innovation being directly linked to waste materials.

# CHAPTER I

## INTRODUCTION

### 1.1 General

Garments waste can be divided into pre-consumer and post-consumer waste. The pre-consumer waste is generated at factory floors during cutting, and during the manufacturing process of apparel making, and includes fabric selvages and leftover fabric scraps. The garments industry is one of the major industries in the world and became a major role in the economy of many countries. In the garments process, produced wastes (gas, solid and liquid). About 80-150 L of water is used to produce 1 kg of fabrics and around 12-20 tons of fabrics per day. Main pollution comes from production and finishing processes, pollutants are high suspended solids, COD, heat, colour, acidity, and other soluble substances. An impeccably superfluous word waste in our daily life and one of part are garments wastes. Waste is the substance that comes from different source and it's not useful in daily life of human beings. People are constantly creating waste for the environment, one of them are garments waste. In this section, it is important for garments industry to shift to better waste management practices.

### 1.2 Background of the Study

Waste is directly linked, both technologically and socially, to the human development. Waste management practices can differ for developed and developing nations, for urban and rural areas, and for residential and industrial manufacturers or producers. This is in order to reduce the negative impacts of wastes on environment and society. Environment protection could be achieved by adopting state-of-the-art technologies to minimize waste generation, effective treatment of effluent so that the effluent discharge conforms to the expected norms, and recycling the waste several times before dispose or discharge. Garments manufacturers undertake a range of waste-generating activities such as washing/drying, warp preparation, weaving, dyeing, printing, finishing, quality and process control, and warehousing. The major wastes generated by this sector are fiber wastes. These include soft fiber wastes, yarn spinning (hard fiber) wastes, beaming wastes, off-cuts, packaging, spools and creels.

### 1.3 Objectives

The objectives of this study are as follows:

1. To observe the situation of Garments Waste in Selected Garments.
2. To find out the possible solution to recover the present condition.

## **1.4 Organization of the thesis**

**This thesis consists of 5 chapters,**

Chapter 1 (Introduction) describes background and objectives of the study.

Chapter 2 (Literature Review) study area maps, concept of waste, various stages of wastage in garment industry, reasons of wastage, waste management is a method, advantages of waste management

Chapter 3 (Methodology) Chapter three covers the different methods of performing the study and adopted methods for the study.

Chapters 4 (Results and Discussion) analyzes the results generated in this study.

Chapter 5 (Conclusion and Recommendations) presents the summary of the major findings of the study and presents recommendation for future studies.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

A literature review outlines the research that professionals and academics have done on a particular subject. One may occasionally be required to create one on their own, however it is more typical to do so when writing an article, research report, or thesis. The goal of writing a literary review is to communicate to the reader what knowledge and opinions have been established about a subject, as well as their advantages and disadvantages. Reviews of the literature are used as resources for a certain topic. If you are short on time to conduct research, literature reviews are a great place to start. A smart place to start your study for a research report is with literature reviews. A good knowledge of the literature in the field was required for the majority of research tasks.

The author ought to discuss their current knowledge and their future learning goals in book reviews. After reading this chapter, the reader ought to be persuaded that the author's suggested study will significantly advance the field.

Due to the rise in the disposal of significant amounts of textile waste to landfills and the combustion of unsold stock, the waste management literature has, as a result, given particular emphasis to the disposal of clothing items in post-consumption (Hu et al., 2014, Havas, 2014, Burton, 2018). Additionally, even though many of the textiles used in manufactured goods can be recycled or repurposed, it is estimated that 85% of global manufacturing ends up in landfills (Mckinsey Global Fashion Index, 2019; Burton, 2018).

If the consumption and manufacture of clothing become circular via reuse and recycling techniques, this problem can be resolved (Pal, Gander, 2018). Reusing and recycling textiles can have benefits for the environment in addition to socioeconomic ones, since it can lessen the industry's negative effects as well as those of the businesses involved, especially Small and Medium Enterprises (SMEs) (BOCKEN et al., 2017; KOZLOWSKI et al., 2018).

According to Kozlowski et al. (2018), The move to a circular model of production and consumption can be considerably aided by SMEs, who make up a sizable component of the apparel industry. Furthermore, Bocken et al. (2017) showed that SMEs are not the only ones who can engage in the circularity experimentation process. It was determined after examining the duties and resources required by large clothing brands from a circular economy perspective that the variety of other projects (between universities or other companies) continues to be a promising path that can spark new activities and practices, which are at the heart of transitions to circularity (Bocken et al., 2017; Diddi et al., 2019).

However, since the introduction of sustainable measures for the capture and use of resources is still organized linearly, which could lead to the loss of competitive capacity and incompatibility with proposals to create value for the customer, it is still difficult to match market expectations with circular practices (Franco, 2017; Pal, Gander, 2018). Additionally, the management of textile waste that incorporates circular approaches is still regarded as dispersed. Accordingly, from the perspective of the circular economy, this necessitates the design of solutions that consider the obligations and interdependencies created between the agents related to the management of textile waste and the resources required to gather, sort, and reintroduce materials into the clothing production chain (Pal, Gander, 2018).

From a practical standpoint, these procedures can provide an overview of how they are selected by clothing firms and how this process is carried out (resources and responsibilities). Theoretically, the identification and mapping of these projects would offer fresh approaches that could be tried out in different situations (Bech et al., 2019).

Consumers' final disposal of clothing items does not necessarily imply that they have lost their structural integrity or physical usefulness (Fraser, 2011). In this situation, it is possible to consider a circular approach to managing textile waste by jointly establishing collecting, sorting, and recovery processes in order to maximize organizational structures and keep adverse environmental effects to a minimum (Dahlbo et al., 2017). Circular practices are actions that try to maintain textile resources in closed-loop cycles during the production and consumption processes at their highest level, based on the capture of value after the consumer consumes clothing items.

Three procedures are included in waste management: (a) collecting, which refers to the gathering of post-consumer clothing items; (b) sorting, which involves determining what to do with each product; and (c) reinsertion, which refers to reincorporating the item back into the production chain (Beh et al., 2016). The beneficial effects of the collection process start with consumer behavior patterns (and possibly re-education), according to Leal-Filho et al. (2019). The proper disposal of clothing items for donation or resale in consignment shops depends on the user's knowledge and comprehension of sustainability, recycling, and reuse (Hu et al., 2014).

In most cases, such collection activities take place through a variety of channels, with the collectors being in charge of deciding and planning how they would communicate, look for, and remove clothing items to carry these goods autonomously to the sorting centers (Palm et al., 2014; Franco, 2017). The people in charge of the activity and the available resources are typically taken into consideration when choosing collection efforts (e.g. Franco, 2017; Méjias et al., 2019).



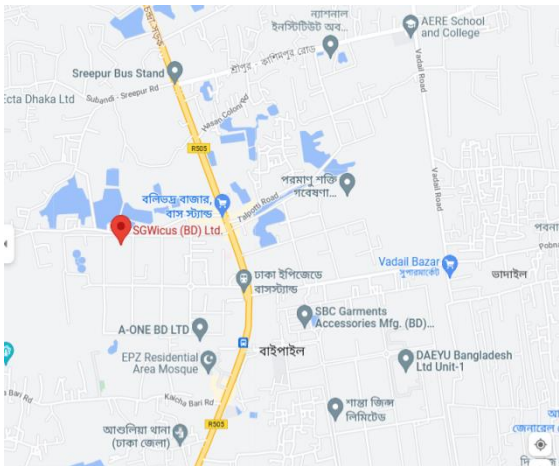
After being gathered, textiles are carefully sorted and categorized based on a set of criteria that will determine where the material will be used and how it will be reprocessed (Hu et al., 2014;

Bukhari et al., 2018). After collecting, the sorting process moves forward and can be guided in accordance with the channels that the consumer selects after using the clothing item (resale or donation). Following separation, the piece of clothing can be recycled or reused to rejoin the production line.

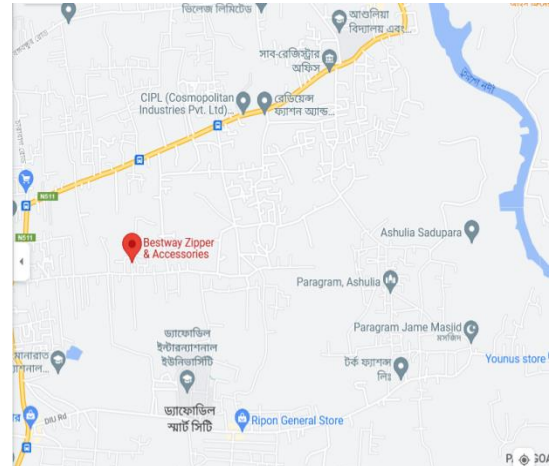
Sorting and categorizing textiles according to their state and the types of fibers they contain is a step in the recycling process. The remainder is crushed and made into fiber or textile using mechanical processes, such as carding (cleaning and mixing yarns), spinning, crushing and extraction (depending on the final use, it may be necessary to incorporate virgin fibers), and extraction (depending on the use, it may be necessary to incorporate usable post-consumer items) (Lela-Filho et al., 2019; Noman et al., 2013).

Ishrat Jahan (2017) Controlling waste has grown more and more important in the apparel industry. Although it is not a significant waste stream in terms of volume or weight, the creation of clothes has a significant environmental impact. Proper production planning and control should be strengthened within the company. The economics of the apparel industry improve as a result of waste control. According to the recycling company, industrial recycling requires a large scale, and textile flows are too modest for a successful recycling process. More research is needed to find the optimum recycling procedures.

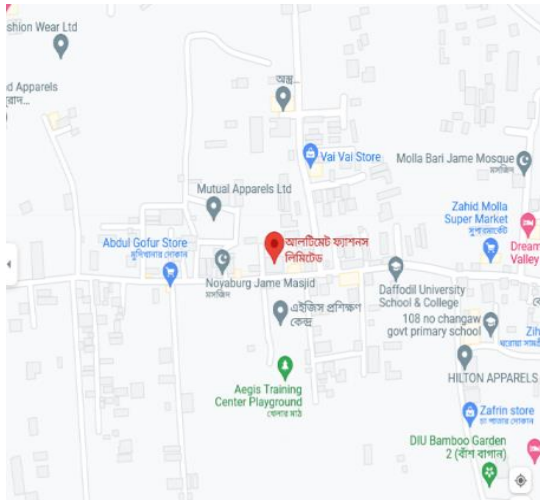
## 2.2 Study Area Maps



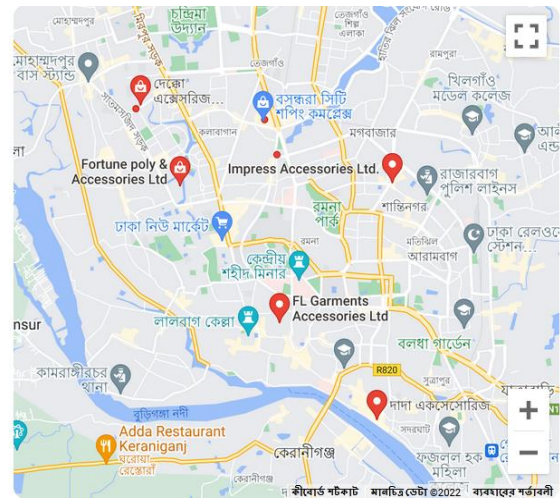
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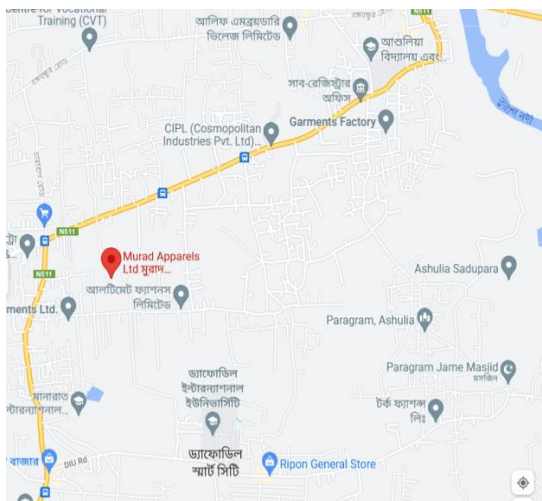
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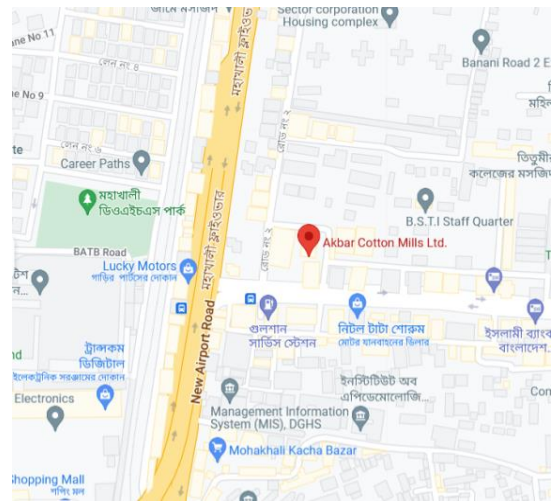
c



d



e



f

Fig. 2.1 Location Map of study area (a-f).

### 2.3 Concept of Waste

Simply waste is purchased raw materials those are subsequently not sold as product. It is an unwanted material or substance; also treated as trash, garbage, rubbish etc. depending upon the type of materials. Waste could be explained easily by the following simple production flow diagram (Figure-2.4). Many manufacturers of ready made garment industry accept waste as a normal cost of business.

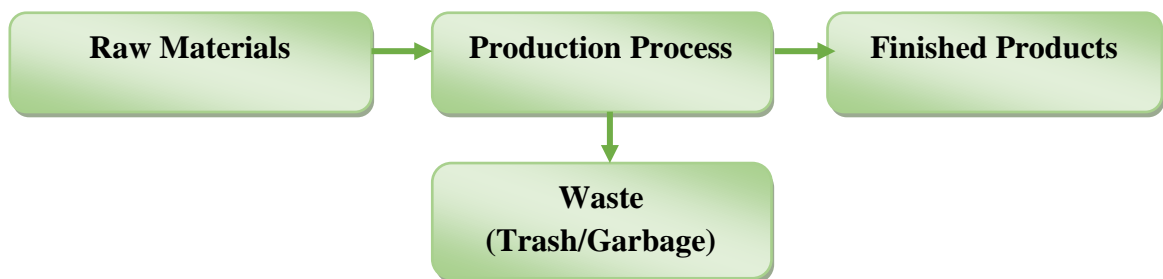


Fig. 2.2 Production Flow Diagram

### 2.4 Various stages of wastage in garment industry

The stages of wastage in the point of view of a ready-made garment industry can be described as the flow chart of Fig. 2.5

#### 2.4.1 Fabric Store

Inspection of the incoming fabric is very important. Fabric storehouse is the right area where the fabric for production is received or dispatched for production. The fabric which is sourced from the outside into the store house should be inspected for defects.

## 2.4.2 Wastes in the Cutting Room

In the cutting room, wastage can be occurred from several sources, such as

- Marker utilization;
- Cutting waste;
- Roll surplus etc.

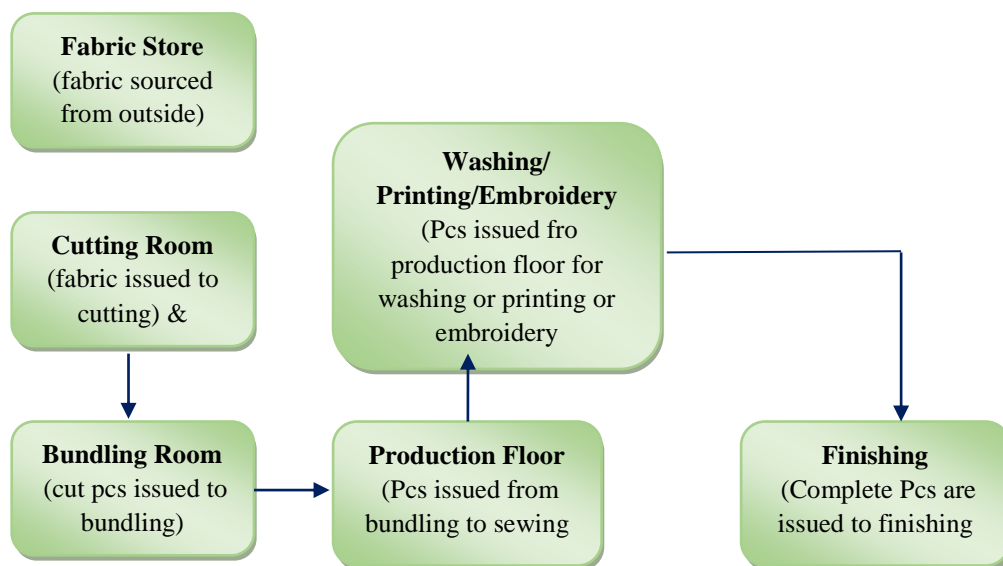


Fig. 2.3 Stages of wastage

## 2.4.3 Bundling Room

The inspection is not 100%, some defective pieces go undetected and reach the stage of production.

## 2.4.4 Production Floor

The lines are loaded by the loaders with the bundles which pass on the line according to the operation. The operator may find the piece defective at any stage and dispose it off there and then only.

### 2.4.5 Washing, printing or embroidery

The wastages happen when either the pieces are lost or misplaced during the transportation for washing, dying, printing or embroidery. The printing on the garment does not match the standard while in the case of embroidery, it may not be on the correct place on the garment or the number of threads used is less and desired effect is not obtained.

### 2.4.6 Finishing

This may include measurement/fit defect, trims defect or pressing.

We can simplify the various stages of wastage, specially during production can be listed as below (Table-2.1)

**Table 2.1** Various stages of wastage during production

<b>Sample Production</b>	<input type="checkbox"/> Mistakes in design communication. <input type="checkbox"/> Craftsmanship problems.
<b>Cutting Floor</b>	<input type="checkbox"/> Wrong color of shades <input type="checkbox"/> Fabric faults.
<b>Sewing</b>	<input type="checkbox"/> Problems in sewing machines.
<b>Outsourcing</b>	<input type="checkbox"/> Printing, dyeing, embroidery.
<b>Final Inspection</b>	<input type="checkbox"/> Finishing/Ironing problems, measurement faults, size mistakes etc.

## 2.5 Reasons of wastage

The main causes of wastage in garment industry can be stated below:

- In efficient, obsolete and conventional technologies.
- Motion.
- Delay/waiting.
- Lack of technical skills and awareness in terms of quality.
- Over processing

- Over production
- Inventory

## 2.6 Waste management is a method

The following triangle depicts the notion of waste management Figure 3.1.

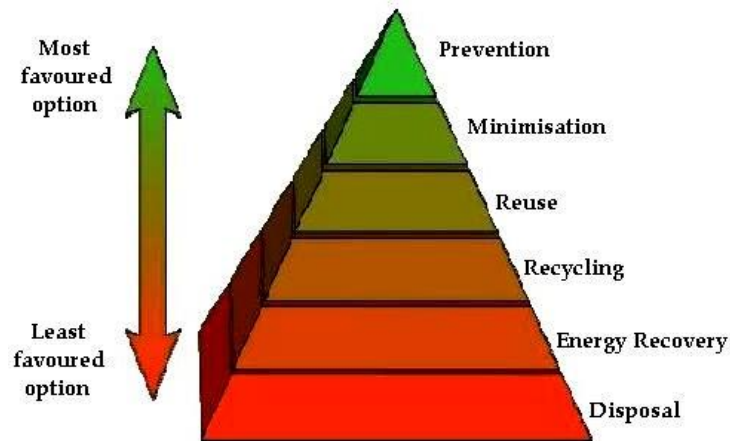


Fig. 2.4 Different Steps of Waste Management System

## 2.7 Advantages of Waste Management

The worldwide trash problem is growing by the day, thanks to population increase and high product consumption in the industrialized countries. More garbage is being produced than the environment can accept. The advantages of waste management are listed below:

- Saving resources and energy
- Reducing pollution
- Increasing the efficiency of production.

# CHAPTER 3

## METHODOLOGY

### 3.1 Introduction

Methodology outlines the techniques for the collection of data and the basic planning Approach. First step is to identify the objectives and selection of the study area. are adopted to play the role of sheet anchor of any study and so a clear idea and good graph of the related subject is very essential for the attainment of the project goals, this chapter focuses on each objective depend on how the corresponding theoretical background of the study with elaborate and in-depth discussion on the relevant definitions and procedures regarding the volume study, situation of Garments Waste in Selected Garmentsto possible solution to recover the present condition.

### 3.2 Flow Diagram of Methodology

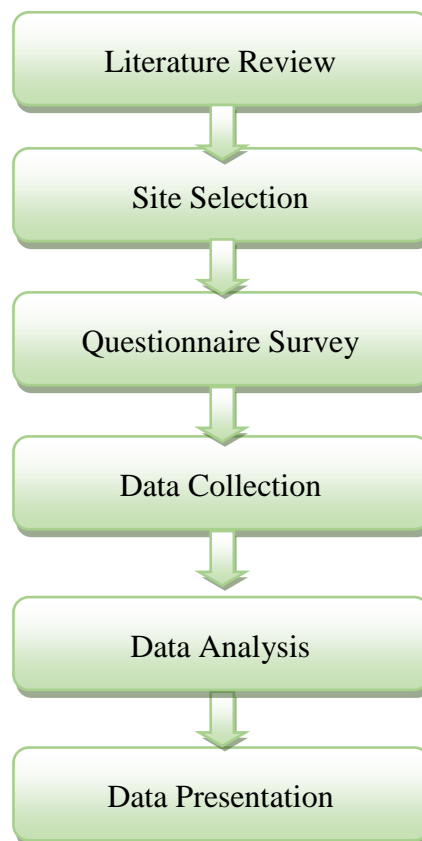


Fig 3.1 Flow diagram of methodology

### **3.2.1 Literature Review**

As the study is based on secondary data, literature review was an important part of the study. Related studies on questionnaire survey with semi-structured interviews is another. In addition to a broad assessment of the existing situation in Bangladesh's garment industry, the literature was researched in order to assemble trustworthy information on environmental responsibility in the garment sector (particularly in target region). Prior to the analysis of the detailed survey study, a conceptual framework was constructed in this manner. Environmental issues in the garment sector were assessed step by step, with a special focus on the target location.

### **3.2.2 Site Selection**

Site selection for this study was done by selecting six garment factories special focus on the target location of Savar. Six different garment factories kind of Savar areas were taken (I) SG Wicus (BD) Ltd., (II) Bestway Zipper and Accessories, (III) Ultimate Fashions Limited, (IV) FEM Accessories Ltd., (V) Murad Apparels, (VI) Akabr Cotton Mills Ltd.

### **3.2.3 Questionnaire Survey:**

The Questionnaire Survey of six factories of Savar, Ashulia, Baple & EPZ areas each was made in the Handwork of our team.

### **3.2.4 Data Collection:**

We went to the ground and collected individual data of each person, and we went to the garment factories to see everything with our own eyes and collected information by asking some questions.

### **3.2.5 Data Analysis:**

Raw data were collected from questionnaire, then the data were organized and summarized into the scrutiny, then coding and interpreting the result through Microsoft Excel-2016 program.

### **3.2.6 Data Presentation:**

Data was presented in the Microsoft word file for research paper and in the Microsoft PowerPoint for presentation.



## CHAPTER 4

### RESULT AND DISCUSSION

#### 4.1 Introduction

Waste management in G Wicus (BD) Ltd., Bestway Zipper and Accessories, Ultimate Fashions Limited, FEM Accessories Ltd., Murad Apparels and Akabr Cotton Mills Ltd. has been analyzed. All the data has been analyzed by questionnaire for general people and questionnaire for senior officer.

#### 4.2 Questionnaire for General People

Table 4.1 Questionnaire Survey

Questions	Total Survey on 100 no's of people		
1. Whether you are affected by this factory waste?	Yes	No	Neutral
	30%	65%	5%
2. Whether how many people has been affected in last six months by this waste?	No of people	No One	Neutral
	41% people said that average 8/9 people are affected.	57%	2%
3. Do you think management of this garments factory is right?	Yes	No	Neutral
	52%	40%	8%
4. Is this waste affecting your agricultural land?	Yes	No	Neutral
	25%	68%	7%
5. What do you think could be the way out of this problem?	Yes	No	Neutral
	66% people are said improvement of factory	25%	9%

### 4.3 Questionnaire for Senior Officer

Table 4.2: Questionnaire for Senior Officer

Questions	Total Survey on 32 no's of senior officer & staff	
1. What kind of waste is generated from your factory?	Mostly are clothing waste	
2. How much waste is generated from your factory of every day?	1.5 tons approx.	
3. What kind of transport system do you have for the transfer of generated waste?	Usually covered van & sometimes truck	
4. How much recyclable waste is generated from your factory of every day?	Around 90 Kg	
5. What kind of caution do you follow to protect the workers from generated waste?	Proper dress and fire safety	
6. Whether any worker is affected by the generated waste?	Yes	No
	0%	30%
7. What are future plans for improving your factory waste management?	We are discussing with the higher authorities to reduce this waste.	

## 4.4 Questionnaire survey report

**Question no. 01.** Whether you are affected by this factory waste?

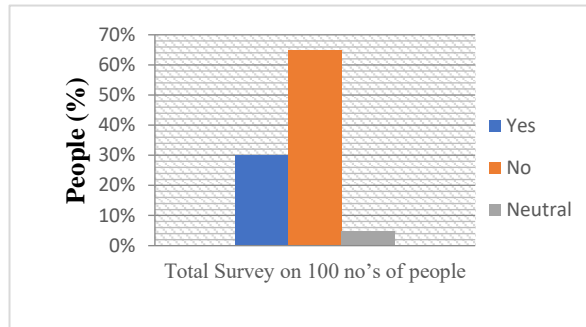


Fig. 4.1 survey report on question no. 1

**Question no. 02.** Whether how many people has been affected in last six months by this waste?

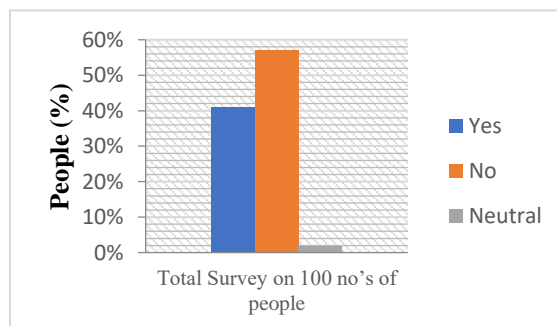


Fig.4.2 survey report on question no. 2

**Question no. 03.** Do you think management of this garments factory is right?

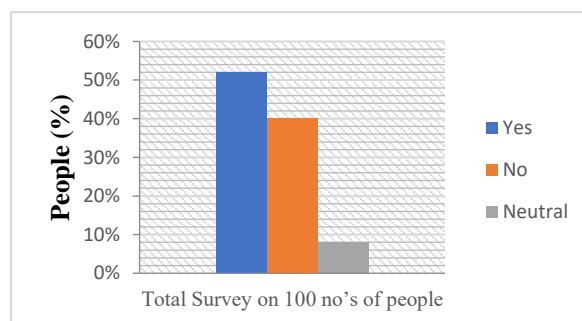


Fig. 4.3 survey report on question no. 3

**Question no. 04.** Is this waste affecting your agricultural land?

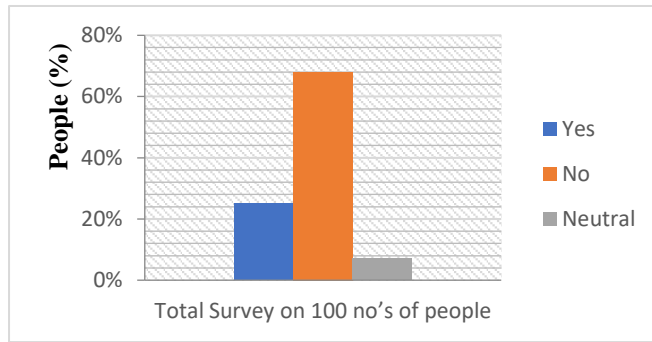


Fig. 4.4 survey report on question no. 4

**Question no. 05.** What do you think could be the way out of this problem?

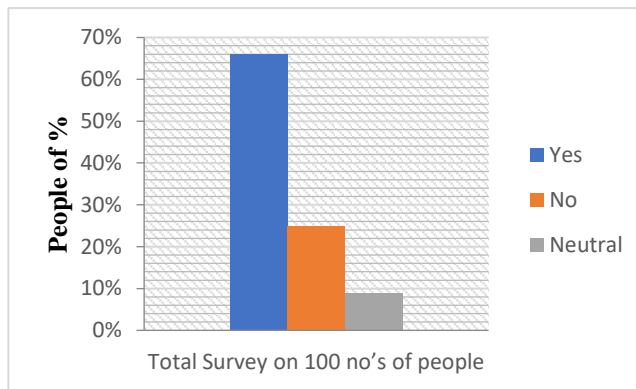


Fig. 4.5 survey report on question no. 5

## 4.5 Summary

From the analysis, an affected by this factory waste were yes 30%, no 65% and neutral 5%. Many people have been affected in last six months by this waste were no of people 41%. People said that average 8/9 people are affected, no one 57%, neutral 2%. The management of this garments factory is right were yes 52%, no 40% and neutral 8%. Waste affecting your agricultural land were yes 25%, no 68% and neutral 7%. The way out of this problem were yes 66% people are said improvement of factory, no 25% and neutral 9%.

Waste is generated from your factory were Mostly are clothing waste, waste is generated from your factory of every day were 1.5 tons approx. transport system do you have for the transfer of generated waste were transport system do you have for the transfer of generated waste, recyclable waste is generated from your factory of every day were around 90 kg, caution do you follow to protect the workers from generated waste were proper dress and fire safety, worker is affected by the generated waste were yes 0% and no 30% and future plans for improving your factory waste and management were discussing with the higher authorities to reduce this waste.

## **CHAPTER 5**

### **CONCLUSION AND RECOMMENDATION**

#### **5.1 Conclusions**

Garment waste isn't waste; it's precious and recyclable. Every component can be reused. This trash recycling has created a big business. This project was only run at ASBC and EPZ since it was too large. The importance of this industry for our country is determined by examining the collected data. A large number of people are completely reliant on this industry. It's a massive industry. It is just as significant as the clothing business. Because it is linked to our clothes industry, if the facilities in this sector can be upgraded, it can contribute more to our economy. This industry's recycled goods are used all around the country, and recycled garbage is even exported to other countries.

G Wicus (BD) Ltd., Bestway Zipper and Accessories, Ultimate Fashions Limited, FEM Accessories Ltd., Murad Apparels and Akabr Cotton Mills Ltd. These 6 garments we visited and observation that is poor collection and storage systems for garment waste. 66 % people commented that these garments need improvement.

Among the garments we visited, they are the worst in terms of producing large amounts of chemical waste, posing a threat to the environment and only a small number of people have been affected by these garment wastes. However, the good news is that 57 % of people said they had not been affected by garments waste in the previous six months.

The most obvious alternative to disposing of trash in a landfill is recycling. Recycling can at least partially benefit a variety of materials, and it may even have financial advantages. Waste recovery without any pre-processing is what is being discussed here. For instance, a) Proper waste minimization and segregation. b) Utilize environmentally friendly trash cans. c) Prepare an emergency action plan. d) Examine the Compliance Guideline. e) Conduct routine audits of waste management and disposal.

## 5.2 Recommendation

Industrial pollution control and waste management are inextricably linked. The primary goal of industrial waste management is to reduce industrial pollution. As a result, a country's industrial waste management strategy or policy for a specific area (e.g., ASBC & EPZ) has direct ramifications for a country's environmental and pollution control policies. The following recommendations could be made for the efficient and safe management of industrial waste in ASBC and EPZ.

We didn't have enough time to complete everything, thus it isn't good enough. In this area, more research is required.

- Due to lack of time, we have worked with only 5/6 garments, if we work with 10 or more number of garments, more things would have been known.
- Garments owners and the country's government should be more aware of garments waste collection and storage.

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# Appendix

## Part A

### **Questionnaire for Senior officer:**

1. What kind of waste is generated from your factory?
2. How much waste is generated from your factory of every day?
3. What kind of transport system do you have for the transfer of generated waste?
4. How much recyclable waste is generated from your factory every day?
5. What kind of caution do you follow to protect the workers from generated waste?
6. Whether any worker is affected by the generated waste?
7. What are your future plans for improving your factory waste management?

### **Questionnaire for General People:**

1. Whether you are affected by this factory waste?
  - a) YES
  - b) NO
2. Whether how many people has been affected in last six months by this waste?
3. Do you think the waste management of this garments factory is right?
  - a) YES
  - b) NO
4. Is this waste affecting your agricultural land?
  - a) YES
  - b) NO
5. What do you think could be the way out of this problem?

## Part B

### B.1 List of Questionnaire for Authorized Person (VIP People)

SI No.	Name	Address	Profession	Contact Number
01	Mohammed Kafi	Chandura, Savar	Executive Officer	01710147149
02	Al Amin	Chandura, Savar	Floor Man	01742667741
03	Md. AklasHossen	Baipayl, Savar	Writer	01738977498
04	HeadayetHossen	Baipayl, Savar	Writer	01717138776
05	Md. RaselHossen	E.P.Z Bipel, Saver	EEE(Engineer)	01747381611
06	MoradHossen	E.P.Z Baipayl, Savar	Executive Officer	01704013488
07	Md. Ahasan Habib	Ashulia ,Savar	Floor Man	01770457257
08	Abu Sayed Qamruzzaman	Ashulia ,Savar	Maintenance Officer	01711025188
09	Md. Shawon	Ashulia ,Savar	Quality man	01713877611
10	Md. Manmun	E.P.Z Baipayl, Savar	Quality In charge	01615297907
11	Norsad	E.P.Z Baipayl, Savar	Floor mam	01313012808
12	Md. NahidRomanSarke r	Chandura, Savar	Maintenance Engineer	01911005525
13	Md. Kamrul Hasan	Chandura, Savar	Admin Officer	01791098092
14	Md. Nasir	Chandura, Savar	Admin Officer	01796056236
15	Md. Al Amin	Chandura, Savar	Asst. Admin Officer	01762181730
16	Md. Rafiq	Baipayl, Savar	Maintenance Officer	01712618712
17	Md. Santo Islam	Baipayl, Savar	Engineer(EEE)	01709058714
18	Md. NurAlom	E.P.Z Baipayl, Savar	Asst. Admin Officer	01310980755
19	Md. IsrafilAlom	E.P.Z Baipayl, Savar	Engineer(Power)	01926117840
20	Md. Rhaman	E.P.Z Baipayl, Savar	Store Officer	01718471473
21	Md. Mazharul Islam	E.P.Z Baipayl, Savar	Asst. Eng.(Civil)	01992196252
22	Md. Nahidul Islam	Chandura, Savar	Floor mam	01983389103
23	Md. Rohul Amin	Chandura, Savar	Floor mam	01406363681
24	Md. Ariful Islam	Chandura, Savar	Admin Officer	01783262675
25	Md. ZahidAlom	Chandura, Savar	Floor Manager	01938370884
26	Md. Sohel Rana	Chandura, Savar	Floor mam	01744838502

27	Md. ShamshulHoque	Chandura, Savar	Quality In charge	01671542915
28	Md. KhalekMridha	Chandura, Savar	Store Officer	01740740392
29	Md. Al AminHossian	Chandura, Savar	Maintenance Officer	01912655178
30	Md. Mannan Mia	Chandura, Savar	Store Officer	01727322315
31	Md. Harun-Ar-Roshid	E.P.Z Baipayl, Savar	Floor mam	01761091069
32	Abdur Rahim	Chandura, savar	Quality In charge	01871037471

## B.2 List of Questionnaire for General People

Sl No.	Name	Address	Profession	Contact Number
01	MdNazmul Islam	Charabag, Ashulia, Savar	Garments Worker	01724264436
02	MdShoriful Islam	Charabag, Ashulia, Savar	Garments Worker	01690198633
03	NargisKhatun	Charabag, Ashulia, Savar	Garments Worker	01909303241
04	PopiAker	Charabag, Ashulia, Savar	Garments Worker	01780139988
05	ArifulHossen	Ashulia ,Savar	Garments Worker	01782138832
06	Ayesha Akter	E.P.Z Baipayl, Savar	Garments Worker	0177026727
07	Hafiza Sultana	E.P.Z Baipayl, Savar	Garments Worker	.....
08	Anwar Sharkar	E.P.Z Baipayl, Savar	Garments Worker	01952764901
09	BilkisBanu	E.P.Z Baipayl, Savar	Garments Worker	.....
10	RakibulHossen	Baipayl, Savar	Garments Worker	0177226776
11	NiluferKhatun	E.P.Z Baipayl, Savar	Garments Worker	01825273076
12	MdJohiril Islam	Ashulia ,Savar	Shopkeeper	01919457625
13	Ahsan Habib	Ashulia ,Savar	Local people	01712126648
14	Mustafizur Rahman	Ashulia ,Savar	Local people	01652428842
15	Aynamoti	Charabag, Ashulia, Savar	House maid	.....
16	Amana Begum	Charabag, Ashulia, Savar	House maid	01728139988

17	Dabashis Kumar	Ashulia ,Savar	Rickshaw puller	01752394932
18	MdHanif	Ashulia ,Savar	Shopkeeper	01750390556
19	K.M RahatNewas	Ashulia ,Savar	Local people	01952432857
20	BiplopHossan	Ashulia ,Savar	Day Labour	01770582957
21	RashedaKhatun	Baipayl, Savar	Garments Worker	.....
22	Idris Ali	Baipayl, Savar	Garments Worker	01952825319
23	SaidurRahaman	E.P.Z Baipayl, Savar	student	01765930454
24	ZiakiraShuik	Ashulia ,Savar	Garments Worker	01772544208
25	Nigger Khatun	E.P.Z Baipayl, Savar	Garments Worker	.....
26	Hafiza Sultana	E.P.Z Baipayl, Savar	Garments Worker	01828924430
27	ZiarifaKhatun	E.P.Z Baipayl, Savar	Garments Worker	.....
28	HanifShekh	Changaow, Ashulia	Farmer	01321081957
29	MdAzizul Haque	Changaow, Ashulia	Farmer	0195283701
30	Ripa Rani	Changaow, Ashulia	House wife	0172576017
31	Lotifur Rahman	Changaow, Ashulia	Farmer	01710301957
32	Reziwan Khan	Baipayl, Savar	Local people	.....
33	EmtiazAhamed	Baipayl, Savar	Local people	01778918264
34	PradipSikder	Charabag, Ashulia, Savar	Day Labour	01880524391
35	MotiurRahaman	Charabag, Ashulia, Savar	Social Worker	01719045857
36	AkashHowlaer	E.P.Z Baipayl, Savar	NGO Worker	01938370884
37	Harunur Rashid	E.P.Z Baipayl, Savar	NGO Worker	01987729772
38	Faisal Mia	Ashulia ,Savar	Rickshaw puller	.....
39	Asif Hossen	Baipayl, Savar	Day Labour	01721114688
40	AbduillahMamun	Baipayl, Savar	Worker	01729734111
41	Nur Islam	E.P.Z Baipayl, Savar	Scurity Guard	01745890151
42	BazlurRahaman	E.P.Z Baipayl, Savar	Scurity Guard	01918527119
42	Taizul Islam	Ashulia ,Savar	Farmer	.....

43	Niamul Haque	Ashulia ,Savar	Farmer	01752972097
43	MdSelen Khan	Ashulia ,Savar	Rickshaw puller	.....
44	Babul Mia	Dattopara	Farmer	
45	Abdur Salam	Charabag, Ashulia, Savar	Shopkeeper	01719203580
46	MdJahurul	Charabag, Ashulia, Savar	Shopkeeper	.....
46	Dibanur Sheik	E.P.Z Baipayl, Savar	Shopkeeper	.....
47	Ayesha Sultana	Changaow, Ashulia	Garments Worker	.....
48	DilrubaAktar	Changaow, Ashulia	Worker	.....
49	MdLokman Islam	Changaow, Ashulia	Farmer	.....
50	Md Osman Mondol	Ashulia ,Savar	Farmer	.....
51	Margan Islam	Ashulia ,Savar	Farmer	.....
52	Bakhtiar Islam	Changaow, Ashulia	Farmer	.....
53	MdAjmalHossen	E.P.Z Baipayl, Savar	Shopkeeper	.....
54	MofazzulHossen	E.P.Z Baipayl, Savar	Worker	.....
55	AfifaKhatun	Changaow, Ashulia	House maid	.....
56	Rubel Haque	Changaow, Ashulia	Shopkeeper	.....
57	Motaleb Hossain	Changaow, Ashulia	Local people	01773592819
58	AlomgirHossen	Changaow, Ashulia	Rickshaw puller	01743463340
59	Rashedul Islam	Ashulia ,Savar	Farmer	.....
60	Idris Mollah	Ashulia ,Savar	Farmer	.....
61	Md.HakimSikder	Changaow, Ashulia		.....
62	KhandakerNurul Amin	Ashulia ,Savar	Shopkeeper	.....
63	Nitai Roy	E.P.Z Baipayl, Savar	Worker	.....
64	Md.BabulMollah	E.P.Z Baipayl, Savar	Worker	.....
65	Sirajul Sheikh	E.P.Z Baipayl, Savar	Garments Worker	.....

66	Sheik Nazim Uddin	E.P.Z Baipayl, Savar	Garments Worker	.....
67	Md.Habibur Rahman	E.P.Z Baipayl, Savar	Garments Worker	.....
68	MdShaheenBhuiyan	E.P.Z Baipayl, Savar	Garments Worker	.....
69	MdSamimiul Islam	E.P.Z Baipayl, Savar	Garments Worker	.....
70	Abdullah All Noman	E.P.Z Baipayl, Savar	Garments Worker	.....
71	Anik Ahmed	Changaow, Ashulia	Worker	.....
72	Abul Basher	Changaow, Ashulia	Local people	.....
73	Md Azim Molla	Changaow, Ashulia	Rickshaw puller	.....
74	ManikBapary	Ashulia ,Savar	Worker	.....
75	Abdul Razzak	Ashulia ,Savar	Worker	.....
76	MdZubayerHossen	Ashulia ,Savar	Local people	.....
77	MdJahidSikder	Ashulia ,Savar	Garments Worker	.....
78	Md Hasan	Ashulia ,Savar	Farmer	.....
79	Utpal Das	Ashulia ,Savar	Garments Worker	.....
80	SazedulRakib	Ashulia ,Savar	Garments Worker	.....
81	Ahmed Salim	Ashulia ,Savar	Day Labour	.....
82	MdMasikoMarjan	Ashulia ,Savar	Rickshaw puller	.....
83	MdTuhin	Changaow, Ashulia	Worker	.....
84	Md Suleiman	Changaow, Ashulia	Farmer	.....
85	MahorMridha	Changaow, Ashulia	Worker	.....
86	Amana Begum	Changaow, Ashulia	Worker	.....
87	AnarulHossen	Changaow, Ashulia	Day Labour	.....
88	FirozSikder	Baipayl, Savar	Farmer	.....
89	Maruf Hossain	Baipayl, Savar	Local people	.....
90	Amit Sarker	Baipayl, Savar	Garments Worker	.....
91	Zuwel Mahmud	Baipayl, Savar	Garments Worker	.....



92	Ahmed Mahfuj	Charabag, Ashulia, Savar	Garments Worker	.....
93	Ismail Podar	Charabag, Ashulia, Savar	Local people	.....
94	Sohel Rana	Charabag, Ashulia, Savar	Garments Worker	.....
95	Mala Rani	Charabag, Ashulia, Savar	Garments Worker	.....
96	NeamulDewan	Charabag, Ashulia, Savar	Garments Worker	.....
97	Raju Das	Ashulia ,Savar	Day Labour	.....
98	MdMasum	Ashulia ,Savar	Worker	.....
99	Nakir Ahmed	Ashulia ,Savar	Local people	.....
100	MdMamunMrida	Ashulia ,Savar	Farmer	.....

**Part C**  
**Photographic Season**  
**C.1: Photograph during Questionnaire for Authorized person**



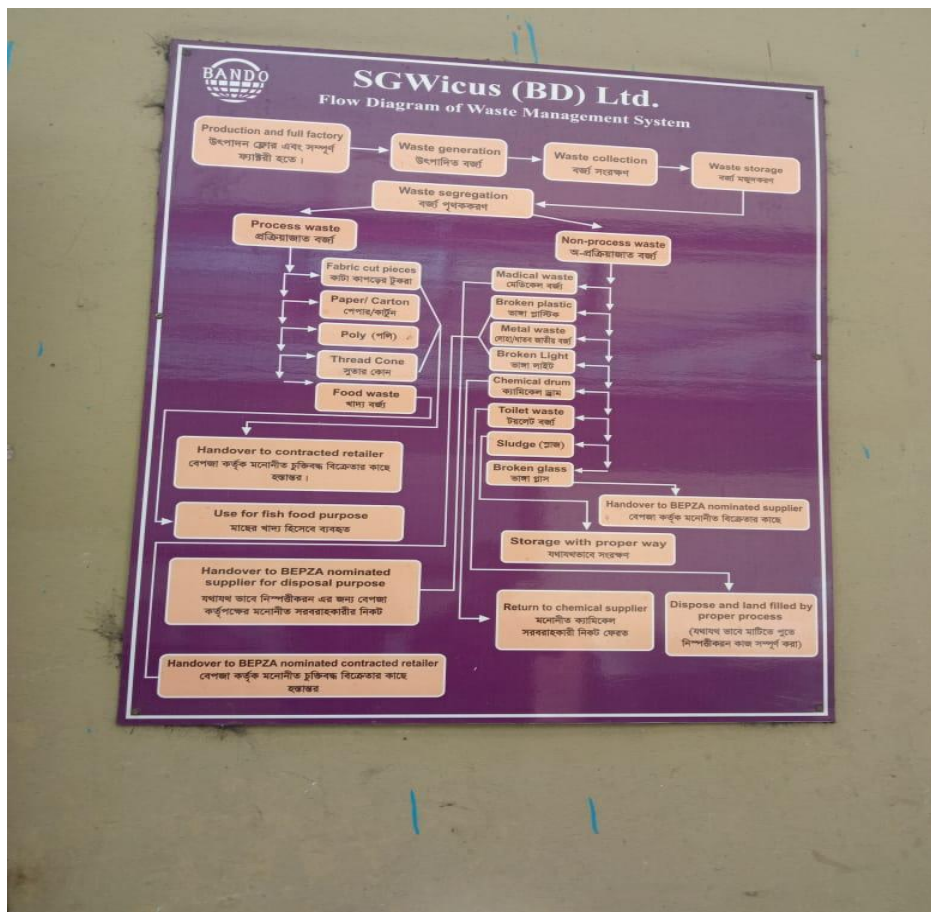
Meeting with senior officer .



Visit in inside of garments with senior officer.



Garments are leaking dirty water.



Waste management system flow chart of SG Wicus garments



Inside working of garments worker.



Waste dumping of garments factory.



Storage room of garments factory.



In front of SGwicus garments factory.

Fig. C.1 Photograph during Questionnaire for Authorized person

## C.2: Photograph during Questionnaire for General People



Talk with a farmer.



Talk with a farmer.



Talk with a tea shopkeeper.



Along the fields, there are garments waste drains.

Fig C.2 Photograph during Questionnaire for General People