

**UNIVERSITI TEKNOLOGI MARA**

**DESIGN AND FABRICATION OF  
DRAIN GARBAGE COLLECTOR**

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## **ABSTRACT**

Malaysia has an equatorial climate with constant high temperatures and high relative humidity. The climate is influenced by the northeast and southwest monsoons. The former, prevailing between November and February, brings heavy rainfall (as much as 600 mm in 24 hours in extreme cases) predominantly to the east coast of Peninsular Malaysia and to Sabah and Sarawak. Rain-bearing winds also come with the southwest monsoon from April to September though rainfalls during these periods are generally less than during the northeast monsoon. There are, in addition, two transitional periods between the monsoons (inter-monsoon) when convectional thunderstorms are common. Clogged drains coupled with excessive rainfall from heavy downpours within a short time contributed to several episodes of flash floods reported nationwide recently. Frequently, the Environment and Water Ministry found that drainage systems were overwhelmed and clogged with solid wastes and various large objects such as furniture, electrical appliances, plastic bottles, bicycles, and toys. The idea for this project is to solve a problem regarding the flood disaster that happens in Malaysia. The main cause of flood is the sewer getting clogged by rubbish, leaves, and small branches. Even though there were many innovations that have already been created out there that block rubbish, leaves, and branch from getting clogged such as putting a net at the end of the sewer to block the substances but it still needs to be done manually to carry out the from the sewer. This project design is to make the substance collectors can be done by automatically and make the work easier. This can help to lessen the burden of worker to carry out the substances from the sewer. This project is hoping that can help to reduce the flood disaster from happening again in the future. Furthermore, this project was hoped that it will be recommended to aid the government to overcome the natural disaster so that the people in this country can relief from flood disasters.

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## **TABLE OF CONTENTS**

	<b>Page</b>
<b>CONFIRMATION BY SUPERVISOR</b>	<b>ii</b>
<b>AUTHOR'S DECLARATION</b>	<b>iii</b>
<b>ABSTRACT</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vi</b>
<b>LIST OF TABLES</b>	<b>viii</b>
<b>LIST OF FIGURES</b>	<b>ix</b>
<b>LIST OF ABBREVIATIONS</b>	<b>x</b>
<b>CHAPTER ONE : INTRODUCTION</b>	<b>1</b>
1.1 Background of Study	1
1.2 Problem Statement	1
1.3 Objectives	2
1.4 Scope of Study	2
1.5 Significance of Study	2
<b>CHAPTER TWO : LITERATURE REVIEW</b>	<b>3</b>
2.1 Benchmarking/Comparison with Available Products	3
2.2 Review of Related Manufacturing Process	5
2.3 Patent and Intellectual Properties	6
2.4 Summary of Literature	7
<b>CHAPTER THREE : METHODOLOGY</b>	<b>8</b>
3.1 Overall Process Flow	8
3.2 Detail Drawing	11
3.3 Engineering Calculation and Analysis	13
3.4 Bill of Materials and Costing	14
3.5 Fabrication Process	15
3.6 Functionality of Prototype	17

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of Study**

Malaysia has an equatorial climate with constant high temperatures and a high relative humidity. The climate is influenced by the northeast and southwest monsoons. The former, prevailing between November and February, brings heavy rainfall (as much as 600 mm in 24 hours in extreme cases) predominantly to the east coast of Peninsular Malaysia and to Sabah and Sarawak. Rain bearing winds also come with the southwest monsoon from April to September though rainfalls during these periods are generally less than during the northeast monsoon. There are, in addition, two transitional periods between the monsoons (inter monsoon) when convectional thunderstorms are common. Clogged drains coupled with excessive rainfall from heavy downpour within a short time contributed to several episodes of flash floods reported nationwide recently. Frequently, the Environment and Water Ministry found that drainage systems being overwhelmed and clogged with solid wastes and various large objects such as furniture, electrical appliances, plastic bottles, bicycles and toys.

### **1.2 Problem Statement**

One of the major problems of Malaysia is facing right now is the poor drainage system and improper waste disposal. Garbage thrown in the rivers and/or canals may not only block the water ways but it invites the rodents to infect the water thus contributed to several episodes of flash floods reported nationwide recently. These phenomena cause many damages infrastructure and need a high cost for the maintenance.