

EUTROPHICATION IN LAKES

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ABSTRACT

An experimental study was conducted on the Kelana Jaya Lake behind Kelana Jaya Seafood Restaurant (Figure 1) to test for the water quality and a second lake the Bandaran Lake (Figure 2) was also studied. This lake was used as a control . The purpose of the study is to investigate the effect of landuse from Kelana Jaya Seafood Restaurant, housing area and golf courses on the eutrophication of the Kelana Jaya Lake.

The importance of the study is due to the following reasons :-

- I) Current and global issues, as lakes pollution are environmental problems that should be given top priorities.

- ii) Landuse has a complex characteristic which poses a threat to the environmental and is a potential hazard for human health if it is not properly controlled.

- iii) The effect of eutrophication to lakes could cause on lot of problem to water body ecosystem and effect the vital uses of water.

TABLE OF CONTENTS

ACKNOWLEDGMENT	i
ABSTRACT	ii
TABLE OF CONTENTS	iv
LIST OF FIGURES	vii
LIST OF TABLES	x
LIST OF PLATES	xii
CHAPTER 1.0 INTRODUCTION	
1.1 BACKGROUND	1
1.2 DEFINITION AND ORIGIN OF THE TERM EUTROPHICATION	2
1.3 OBJECTIVE	4
1.4 SCOPE OF WORK	5
CHAPTER 2.0 LITERATURE REVIEW	
2.1 LAND USE AND DIFFUSE POLLUTION	6

CHAPTER 1.0 INTRODUCTION

1.1 BACKGROUND

Accelerated eutrophication, both in fresh and marine water, has emerged in the early 1960s and has been developing over the past two decades as one of the most relevant anthropogenic causes of water quality deterioration in the world.

The word “ eutrophication ” literally means “ the process of becoming well fed ” , but for the purpose of this document the term refers to the excessive fertilization by nutrients (primary phosphorus and nitrogen compounds) of lakes, reservoirs, slow flowing rivers and certain marine coastal waters which results in the nuisance growth of aquatic plant material, such as algae and macrophytes. This in turn leads to water quality deterioration, taste and odour problem. oxygen depletion, reduced transparency, decline of fisheries, possible fish kill, clogging of waterways and toxic effects on animals and human beings.

Eutrophication of lakes is in fact a naturally occurring process of ageing in a time-span of several of thousands of years, simply because a lake functions as a sink for nutrients. Input and output of nutrients are not equal and accumulation of nutrients is the result. During the time-span of thousands of years, the growth of plants materials is generally in