

Author's Declaration

UNIVERSITI TEKNOLOGI MARA

Project entitled "Assessment of Environmental Impacts Due to Deforestation on Human Health in Uluai Puncak Alam" is a presentation of my original research work. Wherever contributions of others are involved in every effort is made to indicate this clearly, with research and discussions. This project was done under the guidance of Dr. K. Subramaniam, Sciences in Environmental Health and Safety (EH&S). And this work up is not being submitted for any other academic award.

**ASSESSMENT OF ENVIRONMENTAL
IMPACTS DUE TO DEFORESTATION ON
HUMAN HEALTH IN PUNCAK ALAM**

NUR DIYANA BINTI SHAHARUDDIN

Student's Signature

**BACHELOR (HONS.) OF ENVIRONMENTAL HEALTH
AND SAFETY**

(Nur Diyana Binti Shaharuddin)

2012634189

JUNE 2015

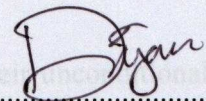
910519-14-3410

Date: June 2015

Author's Declaration

Project entitled "Assessment of Environmental Impacts Due to Deforestation on Human Health in Uitm Puncak Alam" is a presentation of my original research work. Wherever contributions of others are involved in every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Dr.K. Subramaniam as Project Supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons). And this write up is not being submitted for any other academic award.

Student's Signature



(Nur Diyana Binti Shaharuddin)

2012634184

910519-14-5410

Date: June 2015

ACKNOWLEDGEMENT

Alhamdulillah, all praises to Allah S.W.T for the strengths and his blessing in completing this thesis. A major research project like this is never the work of anyone alone. The contributions of many different people, in their different ways, have made this possible. I would like to extend my appreciation especially to the following.

LIST OF TABLES

vii

Dr K. Subramaniam, for making this research possible. His support, guidance, advice throughout the research project, as well as his pain-staking effort in proof reading the drafts, is greatly appreciated. Indeed, without his guidance, I would not be able to put the topic together. I could not have imagined having a better advisor and mentor for my degree study.

CHAPTER 1: INTRODUCTION

Besides my advisor, my sincere thanks go to the UiTM lecturers, laboratory staff, clinical instructor and management facilities for their kind help towards my research affair. Their willingness to spare their time for my research is deeply appreciated.

1.4 Study Justification

7

Sincere thanks, to all of my friends for their assistance during my water sampling and lab analysis. My deepest gratitude goes to En Afiq for his coaching; indeed without him I would not be able to run my data smoothly.

1.6 Hypothesis

9

Last but not least, I would like to thank my family for their unconditional support, both financially and emotionally. In particular, the patience and understanding shown by my mother, sister, brother, aunt, grandmother and Hasif during the honours year is greatly appreciated. I know, at times, my temper is particularly trying.

CHAPTER 2: LITERATURE REVIEW

TABLE OF CONTENTS

2.1	Introduction	12
2.2	Conceptual and Operational Definition	13
2.3	Study Requirement and Guideline	20
	TITLE PAGE	i
	AUTHOR'S DECLARATION	ii
	ACKNOWLEDGEMENT	iii
	TABLE OF CONTENTS	iv
	LIST OF TABLES	vii
	LIST OF FIGURES	viii
	LIST OF APPENDICES	ix
	LIST OF ABBREVIATIONS	x
	ABSTRACT	xi
	CHAPTER 1: INTRODUCTION	12
1.1	Introduction	1
1.2	Background Information	1
1.3	Problem Statement	6
1.4	Study Justification	7
1.5	Study Objectives	8
1.5.1	General Objective	8
1.5.2	Specific Objectives	45
1.6	Hypothesis	9
1.7	Research Questions	9
1.8	Study Conceptual Framework	9
1.9	Conclusion	11

ABSTRACT

Assessment of Environmental Impacts due to Deforestation on Human Health in Puncak

Alam

Nur Diyana Bt Shahrudin

Introduction: The increasing rate of deforestation activities in Malaysia has become an alarming issue as it lead to the rising output and a main contribution of accumulated pollution. The objective for this study is to evaluate the impact of deforestation towards the environment and human health in Puncak Alam area.

Methodology: Lake water was tested to identify the impact of deforestation to the selected lakes of which a total of 120 samples were collected. Wetpond 10 and 11 is located near to construction activities (deforested area), whereas Wetpond 9 and 3 is located far from the construction activities (non-forested area). Two analyses done for this study are physical and chemical analysis. Copper (Cu) and Iron (Fe) were analyzed using Atomic Absorption Spectrophotometer (AAS), while pH meter, turbidimeter, dissolved oxygen meter and conductivity meter were used to measure pH, temperature, turbidity (NTU), dissolved oxygen (DO), salinity and conductivity. Data obtained were then analyzed using SPSS. While health impact assessment were done by using to the available questionnaire.

Results: Results obtained shows no violation except for turbidity (22 NTU) when it is compared with National Water Quality Standards for Malaysia (5 NTU). The independent T-test showed a significant ($p < 0.05$) in the water quality between forested and non-forested area except for conductivity ($p > 0.05$). The correlation test showed a negative strong significant correlation between pH and Fe ($p < 0.05$, $r = -0.911$) in deforested area, conductivity and Fe ($p < 0.05$, $r = -0.917$) in deforested area and TDS and Fe ($p < 0.05$, $r = -0.858$) in deforested area. There is positive strong significant correlation between conductivity and Cu ($p < 0.05$, $r = 0.802$) outside deforested area. From the health impact assessment on water quality ($p < 0.01$, $f^2 = 7.143$),