

**EFFECT OF CLIMATE CHANGE ON RICE (*Oryza sativa*)
PRODUCTION IN MALAYSIA**

**MUHAMMAD HAZWAN HASNOL
HABIBIE BIN HAYAT**

**Final Year Project Report Submitted in
Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science (Hons.) Biology
in the Faculty of Applied Sciences
Universiti Teknologi MARA**

JANUARY 2022

This Final Year Project Report entitled “**Effect of Climate Change on Rice (*Oryza Sativa*) Production in Malaysia**” was submitted by Muhammad Hazwan Hasnol Habibie bin Hayat in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Science, and was approved by

Mohd Saiful Akbar B Mohamad Sahal
Supervisor
B. Sc. (Hons.) in Agrotechnology
(Horticulture Technology)
Faculty of Plantation and Agrotechnology
Universiti Teknologi MARA
02600 Arau
Perlis

Muhammad Syukri Noor
Azman
Project Coordinator
B.Sc. (Hons.) Biology
Faculty of Applied Sciences
Universiti Teknologi MARA
02600 Arau, Perlis

Zalina Zainal Abidin
Head of Programme
B.Sc. (Hons.) Physics
Faculty of Applied Sciences
Universiti Teknologi MARA
02600 Arau, Perlis

Date: 25/7/2022

TABLE OF CONTENTS

	PAGE
TABLE OF CONTENTS	iii
LIST OF FIGURES	v
LIST OF SYMBOLS	vi
LIST OF ABBREVIATIONS	vii
CHAPTER 1 : INTRODUCTION	
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Significance of Study	3
1.4 Objectives of the Study	4
CHAPTER 2 : LITERATURE REVIEW	
2.1 Introduction	5
2.2 Rice	5
2.2.1 Rice Cultivation Environment	5
2.2.2 Region of Rice Cultivation in Malaysia	6
2.2.3 Rice as A Staple Food in Malaysia	7
2.3 Malaysia's Climate Profile	8
2.4 Climate Change	8
2.4.1 Climate Change in Malaysia	9
2.5 Effects of Climate Change in Malaysia	12
2.5.1 Temperature Change in Malaysia	12
2.5.2 Precipitation Change in Malaysia	13
CHAPTER 3 : CONCLUSION AND RECOMMENDATION	
REFERENCES	15

ABSTRACT

Malaysia's self-sufficiency programme has been centred on rice cultivation, the country's principal staple food and food crop. Rice also contributes significantly to employment and economic growth, particularly in developing nations. In a tropical climate, sunshine and rainfall are two critical meteorological factors, and fluctuations in either have a major impact on crops and yields over the seasons. For Malaysia, the effects of climate change are wreaking havoc on the agricultural sector, particularly rice, the country's primary grain. This conclusion is consistent with the findings of other research, which indicated that the effects of climate change will have a considerable influence on Malaysia's rice output.

LIST OF FIGURES

FIGURE	TITLE	PAGE
2.1	Peninsular Malaysia's eight major rice producing regions	6
2.2	PRECIS Simulation (2001-2099) Annual Temperature Anomaly driven by HadCM3	10
2.3	PRECIS Simulation (2001-2099) Annual Rainfall Anomaly driven by HadCM3	11