

**FINAL YEAR PROJECT REPORT  
ADVANCED DIPLOMA IN CIVIL ENGINEERING  
SCHOOL OF ENGINEERING  
MARA INSTITUTE OF TECHNOLOGY  
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**STUDY OF WATER LOSS  
IN PELAGAT IRRIGATION SCHEME**

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## **ABSTRACT**

Pelagat Irrigation Scheme in Besut , Terengganu was constructed to increase the paddy production with double crops which covers 696 hectares of rice-field. However, only 560 hectares had been cultivated due to insufficient water supply. The efficiency of the canal to supply the water is very low. Though the supply seems to be sufficient, water was seen to be lost along the way and unable to reach the intended destination. The study identified the causes of water loss and presents solutions to overcome the problem. The cause of water loss was due to the seepage. In other words the soil was very porous. Since the high cost to improve the soil, rehabilitation was emphasized on the concrete joints. The recommendations and rehabilitation proposal shall be forwarded to Northern Terengganu Rural Development Project (KETARA) for further action.

# **CHAPTER ONE**

## **1.0 INTRODUCTION**

The National Agricultural Policy has outlined that by the year 2010 at least 65 % of agricultural land must be covered by padi yield ( Ministry of Agriculture, 1993). In trying to achieve that target, an irrigation scheme at Besut , Terengganu named Pelagat Irrigation Scheme, will have to be rehabilitated. The scheme was constructed in 1977 to increase the paddy production with double cropping .

However, the efficiency of the canal to supply the water is very low ever since the construction work had been completed. The problem shall be identified and recommendations to solve it will be forwarded to the relevant authority.

The existing problem in the scheme are that only 80 % of the rice-field are cultivated with some additional engineering support such as recycling the water using booster pump from borrow-pit drain to the canal (Drainage and Irrigation Department, 1993).

It seems that , water is apparently lost through the canal lining by seepage. The focus of the study will be emphasized on the canal permeability. This study will recommends and proposes some rehabilitation measures to the Nothern Terengganu Rural Development Project (KETARA).