EAH 416: RIVER CONSERVATION AND REHABILITATION

MINI PROJECT 2014/2015

1.0 Background

MADA rice cultivation area has been selected as the study area. This area of paddy fields covers an area of 97.257 hectares where 77.882 hectares (80.66%) is located in the State of Kedah, while the remaining area is in the state of Perlis. MADA is one of the largest rice cultivations in Malaysia.

Topographically, most of the area in this region is flat areas and crossed by several natural and man-made channels. Most of the channels are used as a source of water for agricultural irrigation for paddy plants. A major river within the region is Pendang River. Due to the flat terrain, the area is easily flooded if the unusual of rain events occur especially from monsoon season that brings heavy rain. Flooding causes a lot of damage, especially for paddy fields and paddy crops.

2.0 Objective

The objective of this mini-project is to study the effectiveness of paddy fields for flood control under the context of sustainable paddy cultivation.

3.0 Scope of Works

1. Propose **at least two (2)** alternatives of flood mitigation works to protect areas affected by flooding and at the same time minimize damage to river environment.
2. This is a group assignment. Each member must contribute and has at least a section in the final report.
3. The report should contain:
    a. General description of river modeling.
    b. Description of the processes/steps involves in flood modeling.
    c. Discussion on the model sensitivity test and description of the results.
    d. Discussion why model calibration is important in hydraulics modeling.
    e. Discussion on the alternatives.
    f. References (minimum of 5 literatures to be cited).
4. The mini-project report to be submitted in soft and hard copies by **15th December 2014**.

Input Data

No	Description	
1	Geometric Data	Sungai Pendang, Kedah
2	Hydrograph And Rating Curve	Hydrograph November 2009
3	Manning's Constant	Assumed N = 0.03 For The River And N = 0.2 For The Floodplain