

Flood Mitigation Study at Kg. Binjai and Kg. Kechau Tui, Lipis, Pahang.

Nadiatul Adilah Ahmad Abdul Ghani¹, Bambang Winarta², Azhani Zukri¹ and Mohamad Idris Ali²

¹Lecturer, Faculty of Civil Engineering and Earth Resources, Universiti Malaysia Pahang, Lebuhraya Tun Razak, 26300 Gambang, Kuantan, Pahang, Malaysia
Phone: +609-5492994; E-mail: nadiatul@ump.edu.my

²Senior Lecturer, Faculty of Civil Engineering and Earth Resources, Universiti Malaysia Pahang, Lebuhraya Tun Razak, 26300 Gambang, Kuantan, Pahang, Malaysia

Abstract

Flood is an overflow of water that submerges land which is usually dry. It also defines as a covering by water of land not normally covered by water. Flooding may occur as an overflow of water from water bodies such as river and lake. It also may occur due to excessive rainwater on saturated ground in areal flood. Flood is a major natural disaster to human and environment. Town of Kuala Lipis is sited at the confluence of Sg. Jelai and Sg. Lipis. In January 1971, the town and the areas alongside of the river experienced the worst flood. The flood lasted for 12 days and it inundated depth of approximately 3 meter. The river flows through a forested hilly terrain and tapping into the runoff from the fully developed agricultural lands and later passes through the moderately undulating area and later exit to Sg. Pahang. The worst hit areas include Kg Binjai (Sg. Lipis and Sg. Temperah) and Kg Kechau Tui (Sg. Lincau and Sg. Tui). The whole settlement areas were submerged in floodwater with some area as deep as 0.5 to 1.0 meter. Thousands of residents had to be shifted to evacuation centres. All major roads were also flooded, cutting off all roads leading to Kuala Lipis Town. Estimated flood damages were also high. Besides the very heavy rainfall, other factors that contributed to the severity of flooding include rapid development within the Sungai Jelai sub-catchment, human settlement within and encroachment of the flood plain and siltation of water ways. Flood mitigation study was done in this area to prevent and solve the problems. In this study the HEC-RAS and HEC-HMS were used for analysis.

Field: Flood Management (Flood mitigation and innovative control measures)

Keywords: flood, HEC-RAS, HEC-HMS