

Wisits Kasornmala 2010: The Comparative Study on Water Management Performances of Water User Groups in Phetchaburi Irrigation Project. Master of Engineering (Irrigation Engineering), Major Field: Irrigation Engineering, Department of Irrigation Engineering. Thesis Advisor: Associate Professor Jesda Kaewkunlaya, Ph.D. 125 pages.

This study was to conduct a comparative analysis on water management performances of water user groups in the Operation and Maintenance Section No.2 (Ton Peang), Phetchaburi Irrigation Project. The study was carried out by using the data starting from June 2007 up to July 2008, which covered wet season 2007 and dry season 2008.

The results of study indicated that the total inflows was 345.43 MCM. during the study period. The water needed for salt water protection was 157.25 MCM. which was rather high proportion. The process depletion for beneficial use was 104.08 MCM, mostly used in agricultural sectors. They had 3 indicators which were suitable on this study. There were as : Depleted Fraction of Gross Inflow (DF_{GI}), Depleted Fraction of Available Water (DF_{AW}) and Process Fraction of Available Water for Agriculture (PW_{AW-ag}). The results of 3 indicators, at the section level, showed insignificant difference among 3 study periods as wet and dry seasons and the whole period. There were 2 cases on comparative study of 6 water user groups. Case 1 considered water for salt water protection flow through all 6 water user groups. Case 2 considered water for salt water protection just flow into Baan Leam Pattana group (BLP). Case 1 could explain the study results more clearly. It showed that Thayang Baanlad Pattana group (TBP) and Phetchaburi Ratchdon Suksumran group (PRS) where located upstream, had higher performance; whereas the others had lower. BLP, located on downstream end, seemed to have higher performance than a upstream group. The results of field investigations also found that the water user group of BLP had more function and very active. It might be because of lacking of water and having a problem on salt water, especially during the dry season.

Student's signature

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