

Wanida Phlaiduang 2007: Sea Water Dike Efficiency of the Royal Pak Panang Basin Region Development Project. Mater of Science (Sustainable Land Use and Natural Resource Management), Major Field: Sustainable Land use and Natural Resource Management, Interdisciplinary Graduate Program. Thesis Advisor: Professor Irb Kheoruenromne, Ph.D. 100 pages.

The study on Sea Water Dike Efficiency of the Royal Pak Panang Basin Region Development Project aimed at assessing the efficiency of the sea water dike, the distribution of salt effect behind the dike and agricultural land use sustainability behind the dike of the Royal Pak Panang Basin Region Development Project. The method of study included field study and sampling, laboratory analysis of soil samples, farmer interview and analysis based on framework for valuating sustainable land use in the study area.

Results of the study revealed that the soils mainly have clayey to silty clay loam textures with neutral to slightly alkaline reaction (pH 6.8-7.7). Their electrical conductivity values range from 0.06-10.10 decisiemens per meter, sodium adsorption ratios are lower than 13 in a range of 0.85-4.60 and their exchangeable sodium percentages range between 17.13 and 47.56 indicating that they are saline sodic soils. The dike is not totally efficient to limit the distribution of salinity but the salinity shows a decreasing trend at 300 meters distance from the dike. Since the area behind the dike is used for commercial paddy rice production and rice is known as a relatively salt tolerant crop so farmers can grow rice in the area behind the dike without observable effect on capital and yield. Besides, most farmers accept that the dike helps increase efficiency of crop production so it alleviates conflict between rice farmers and shrimp farmers.

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Thesis Advisor's signature

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