

Suchada Wangananon 2006: Impact of Sea Water Invasion on Water Quality and Aquaculture in Bang Pakong River Basin. Master of Science (Watershed and Environmental Management), Major Field: Watershed and Environmental Management, Department of Conservation.  
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The study on impact of sea water invasion on water quality and aquaculture in Bang Pakong river basin has 3 objectives; 1) Impact on water quality 2) Impact on aquaculture and 3) Selection of appropriate aquatic animals to culture in river basin. Fourteen water sampling stations were selected from 3 types of land use; forest, agriculture and community. Water was collected in wet and dry periods and analyzed 11 parameters of water quality index (WQI). Analyzed WQIs were used to compare with surface water standard and aquatic animals living standard. Sea water invasion and proper aquaculture areas were analyzed by GIS tool. When selection of aquatic animals were considered by WQIs, economical benefits, geographical locations and the nature of aquatic animals.

The result showed that some WQIs at some stations at lower river basin were out of the standards. However, water quality was 3-4 level. Some WQIs were changed by sea water invasion especially in dry period such as Conductivity, pH, Dissolved Oxygen and Biochemical Oxygen Demand, and sea water invasion were found at 116, 117 km, the distance from the mouth of Bang Pakong river to Prachin Buri river and Nakhon Nayok river, respectively. Six months in dry period from November to April, the water in river was brine water at 7 km from mouth of Bang Pakong river, and brackish at 99 km, the highest salinity was 28.50 ppt. The appropriate fish species that can be cultured at upper river basin in floating basket in wet and dry period are Soldier river barb, Giant guaramy, Catfish and Marbled sleepy goby, and in dry period are yellow mystus, Nile tilapia, red tilapia, sea bass and grouper at middle and lower river basin.

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