

Yada Kotham 2010: Study on Flooding of Aquaculture Pond Using Geographic Information System and Aquaculture Farmer's Opinion on Flood Damage Protection in Phra Nakhon Si Ayutthaya Province. Master of Science (Fishery Management), Major Field: Fishery Management, Department of Fishery Management. Thesis Advisor: Assistant Professor Methee Kaewnern, Ph.D. 86 pages.

Study on flooding of aquaculture pond in Bangsai and Sena district, Pra Nakhon Si Ayutthaya province was conducted by processing and analyzing SPOT-5 imagery acquired in 2005 and RADARSAT-1 acquired in 2004 - 2006 to identify and classify flooded aquaculture ponds using remote sensing technology. The imageries was also applied with geographic information system. Meanwhile, analysis on farmer options to protect damage from flooding on aquaculture pond was conducted by interview 40 famers using questionnaire and SWOT analysis.

The results showed that numbers of flooded aquaculture pond in 2006 were highest comparing to 2004 and 2005. In 2006, the area of flooded ponds in Bangsai district was 1,457.7 rai and in Sena district was 386.1 rai which accounted for 37.2 and 39.8 of total number of aquaculture pond, respectively. The result indicated that remote sensing and GIS can be used to produce the thematic map that show flooding of aquaculture pond. Analysis on famer opinions indicated that the most practical measures to protect flooding damage were preparing important equipments for aquaculture, rearing fishes in appropriate duration that famer can harvest fishes prior to flooding, preparing green net to prevent fishes escape, respectively.

The information gathered from this study can be used as supporting data for accurate and suitable evaluation on damage and compensation for farmers and can be used for future flooding area management.

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Thesis Advisor's signature

