

# APPLICATIONS OF GIS AHP IN ASSESSMENT OF LAND FOR ORANGE TREE (CASE STUDY IN TAN PHU COMMUNE, TAN KY DISTRICT, NGHE AN PROVINCE, VIETNAM)

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## ABSTRACT

*Based on the FAO land evaluation theory (1976, 1993b, 2007), application of GIS technology to the establishment, stacking of maps and AHP to determine the weights of indicators, Land evaluation for orange trees has been done quickly and accurately.*

*Case study in Tan Phu Commune, Tan Ky district identified 28 units of land on the basis of overlapping 9 component maps (irrigation, elevation, slope, thick layer, fertility). The weight of the indicators is determined by the Expert choice AHP method with the first level indicator group: land characteristics (0.660), terrain (0.140), fertility (0.200) and 7 level indicators. The research identified 12 most adaptable land units (1,162,341ha), 11 medium adapted land units (1216,573ha), 4 less adaptive units (209,672 ha) and 1 non-adaptable unit adapting (0.254ha).*

# DAMAGE MONITORING AND ADAPTATION IN CASE OF BANG RAKAM FLOODING, PHITSANULOK PROVINCE, THAILAND

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## ABSTRACT

*In 2011, Thailand suffered a great flood as well. The source of this condition is from the northern region of both Ping, Yom and Nan river basin. Of course, nearly 100% of Bang Rakam district, Phitsanulok province has been in heavy flood for more than 4 months, that he local people has suffered a living, occupation and health.*

*Since that year, I have continued to study in the area. To see the important things should be handled properly to meet the needs of the people. Using geographical concepts and GIS tools, it is possible to draw 3 conclusions:*

*1. The houses were flooded so badly that they were damaged. In the short term LAOs provided repairing equipment to enable them to live temporarily. But long-term homeowners must carry out and pay for themselves as they can. There are a number of houses raised high above the water. Then fill the ground with the same level of road. The cost is about 54,000 - 120,400 Thai Baht.*

*2. The 37 schools were damaged and lost their physical structure. But the survey found that the experience, preparation and assistance from the community, these are important for schools to quickly recover from floods.*

*3. The immersion of water in the area over 4 months created a lot of problems for farmers in Bang Rakam district. After 2011, I found many farmers who change their rice cultivation calendar. They accelerate growing time faster to be able to harvest before the last of August that a mass of water flooded this area. This is a model for the Thai government to encourage farmers in the area to do the same.*

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Abstract