

Thesis Title	Application of Geographic Information System to Land Use and Land Suitability Studies : A Case Study of Huai Tang Watershed, Amphoe Mae Chan, Changwat Chiang Rai.	
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Abstract

The " Application of Geographic Information System (GIS) to Land Use and Land Suitability Studies : A Case Study of Huai Tang Watershed, Amphoe Mae Chan, Changwat Chiang Rai", consists of three objectives. The first objective is to study land use pattern and its influenced factors. The second is to compare the land use of the area with the suitability of land according to its physical aspects. The last is to apply the geographic information system and use of remote sensing data in land suitability study and land use planning on the highland.

The results from the analysis of land use patterns in Huai Tang watershed show that there is a land rotation of field crops on the lower-slope, mid-slope and upper-slope areas. There exists also the permanent land use type as paddy and tree crops on flood-plain and terraces. The future trend of land use in the area tends to increase in permanent land use type due to government's development policy,

increasing number of hilltribe population and the limitation of suitable agricultural area.

The results of land suitability studies show that most of the land used by the hilltribe people are not conformed with the physical suitability of the land. There exists land rotation for field crops in the area where it should be conserved as forest for water resource. Most of the cultivated area have been used for field crops without awareness of problems on soil erosion. The results also show that if there is a proper use of land according to physical suitability of the area, the Huai Tang watershed could support more than two times the number of population in 1992.

Application of geographic information system and remote sensing data to land use and land suitability study provides facilities for the creation of the thematic data base. Retrieving, updating and modification of the data can be done easily. In addition the complication of work can be reduced. Technique or methodology used in this study can be considered as an useful basis to improve the methodology for land use planning in other areas.