

**ABSTRACT**

Thesis Title : Forest Fire Sensitive Area in Erawan National Park,  
Changwat Kanchanaburi

Student's Name : Mr. Manus Panmon

Degree Sought : Master of Science

Major : Geography

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Advisory Committee :

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The research was aimed at studying the environmental factors affecting forest fire behaviors in Erawan National Park and applying the Geographic Information System to the assessment of forest fire sensitive areas in order to produce a forest fire risk map, which could be advantageous to more effective planning of the forest fire management in the area. The environment factors studied were fuel moisture, relative humidity, temperature, slope, elevation, and wind velocity. These elements were first analyzed by the SPSS program in terms of Multiple Regression Analysis to identify the specific factors contributing to forest fire. These factors were then analyzed using GIS in order to determine the areas sensitive to forest fire.

The study showed that slope, temperature as well as wind velocity had the positive influence on the rate of fire spread, whereas fuel moisture showed the negative effect.

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However, slope was the only significant factor at 0.01 confidential level. Finally, forest fire sensitive areas can be mapped and classified into 3 levels. The highest sensitive areas were located in the eastern, southern and western boundary of Erawan National Park, the moderate sensitive areas next to the highest sensitive areas on the inside and the lowest sensitive areas in the middle of the Park.