

Sahakorn Phrommool 2010: Apply GIS for Fire Protection and Mitigation Planning within Bangkok Metropolis. Master of Urban and Environmental Planning, Major Field: Urban and Environmental Planning, Department of Urban and Environmental Planning. Thesis Advisor: Mr. Sarawood Pramjai, Doctorat. 153 pages.

The Study of Apply GIS for Fire Protection and Mitigation Planning within Bangkok Metropolis has three main objectives. The first is to study the Characteristic of fire occurred in Bangkok. The second is to study the spatial phenomena of fire distribution pattern. The last is to Apply GIS to the analysis of service area model for fire protection and mitigation planning includes the suggestion of suitable added to new fire station locations. The study includes and analysis of collectioned data and statistics about fires which happened between 1997-2006. It is limited to fire which have burned manufacturing and residential buildings. Most of the data collected in the field were about the position of previously burned buildings. ArcGis 9.2 program were to use analysis of fire stations service area

The study found that the fire occurred will occur with most characteristics of the building types most home 32.59% subordinate building a commercial building type and building type 21.39% and the Town House 13.93%. Diagnostic index values seasons. The only months from December to January every year the rate of fire is higher than normal 30.90 % and 20.10% respectively and timing of the afternoon when most are 12:00 to 17:59 am for analyzing patterns of distribution. caused fire in Bangkok by the year 2549 to calculate the index value other side found the nearest equivalent index value of 0.75 means that fire will occur close to the original location or nearby areas have caused. In the analysis of network services in the current number of fire stations, 35 major and 5 minor stations per region is not enough accountability. To reach the area within a period of 8 minutes. Network Analysis Model by using model average speed of 20 kilometers per hour mobile vehicle for Inner city, average speed of 30 kilometers per hour mobile vehicle for Urban fringe and average speed of 50 kilometers per hour mobile vehicle for Suburb. That the proposed research should be added to fire station for 6 stations in the urban fringe including Don Muang District, Bang Khen District, Bung Kum District, Pra-wet District, Thawi Watthana District and Bangkhae District. Will help increase efficiency of Fire Protection and reduce the chance of loss to lives and property of people in Bangkok Metropolis.

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Thesis Advisor's signature