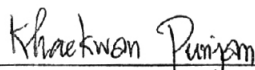


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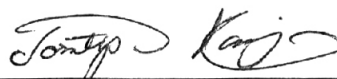
The purpose of this research is three folds. First, it attempts to investigate the land use change in Bang Khun Tian District in 1988, 1996, and 2004; secondly, to compare the District's 2004 land use with the Comprehensive Plan of Bangkok Metropolitan as proclaimed by the Ministerial Regulation 414 (B.E. 2542), following the Urban Planning Act of B.E. 2518 (First Revision), utilizing the overlay technique of the geographic information system. And thirdly, the Markov Chain model is applied for the probability of the District's land use change in 2012 and 2020.

Results from interpreting aerial photographs of Bang Khun Tian District in 1988, 1996, and 2004 indicate four land use types: agriculture and vacant land; residential and government; commercial; and industrial and warehouse. Between 1988 and 1996 agriculture and vacant land decreases whereas other land use types increase in area, especially residential and government land use. From 1996 to 2004 agricultural land use and vacant land continue to decrease while other land use types increase in area led by commercial land use, followed closely by residential, and industrial and warehouse areas, respectively. Examination of 2004 land use reveals that all four land use types are located outside the areas specified by the Comprehensive Plan of the same year. Land use type with the largest discrepancy is residential and government use. In the future, if such land use is allowed to continue, the probability of other land use types in 2012 and 2020 will be as follows. Agriculture and vacant land will decrease by 1.97 percent while other land use types will increase slightly: residential and government by 0.86 percent, commercial by 0.86 percent, and industrial and warehouse by 0.25 percent.

Investigation of land use pattern between 1998 and 2004 indicates that the built-up area has expanded along the major roads, including those areas that new roads and lanes have been constructed. Such expansion, however, does not conform to the Comprehensive Plan. Moreover, the decrease of agricultural areas in Bang Khun Tian District signifies the spatial demand for urban expansion. Therefore, without appropriate control or planning such expansion will undoubtedly have the impact on the urban environment as well.



Student's signature



Thesis Advisor's signature

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