

Evaluating Urban Land Expansion Using Geographic Information System and Remote Sensing in Kabul City, Afghanistan

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Abstract : With massive population expansion and fast economic development in last decade, urban land has increasingly expanded and formed high informal development territory in Kabul city. This paper investigates integrated urbanization trends in Kabul city since the formation of the basic structure of the present city using GIS and remote sensing. This study explores the spatial and temporal difference of urban land expansion and land use categories among different time intervals, 1964-1978 and 1978-2008 from 1964 to 2008 in Kabul city. Furthermore, the goal of this paper is to understand the extent of urban land expansion and the factors driving urban land expansion in Kabul city. Many factors like population expansion, the return of refugees from neighboring countries and significant economic growth of the city affected urban land expansion. Across all the study area urban land expansion rate, population expansion rate and economic growth rate have been compared to analyze the relationship of driving forces with urban land expansion. Based on urban land change data detected by interpreting land use maps, it was found that in the entire study area the urban territory has been expanded by 14 times between 1964 and 2008.

Keywords : GIS, Kabul city, land use, urban land expansion, urbanization

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