



Built-up Land Expansion in Urban China

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Since the implementation of the reform and opening-up, rapid expansion of built-up land has caused a rapid reduction of arable land. The Ministry of Land and Resources of the People's Republic of China has strengthened the management of built-up land through the basic arable land protection and the quota allocation of built-up land to control the urban sprawl. In addition, the general land use planning and the annual land use plan have been used to further ensure the effectiveness of land use management and control. However, the trend of built-up land expansion has not been effectively restrained. The built-up land expansion increased from 31.92×10^6 hm² in 2005 to 38.89×10^6 hm² in 2012. The rapid expansion of built-up land has been the major feature of land use changes in China and has led to built-up land vacancy and inefficient land use. This paper used a Data Envelopment Analysis (DEA) model to analyze the changes in built-up land efficiency in 336 cities in China from 2005 to 2012 during the implementation of National General Land Use Plan (2006-2020) (NGLUP). The results showed that the built-up land input-output efficiency of most cities declined, and more than half of the cities had excessive inputs of built-up land. Even in the most developed region of China, the built-up land efficiency was relatively low. The paper argues that the NGLUP failed to control the expansion of built-up land and to promote intensive land use. The allocation of built-up land designated by the Plan was not reasonable, and economic development has greatly relied on land inputs, which need to be improved. The paper finally suggests that the built-up land indices should be appropriately directed toward economically underdeveloped regions in central and western China, and the establishment of a withdrawal mechanism for inefficient land would better promote the efficient allocation of built-up land.