MODELAGEM DA DINÂMICA ESPACIAL URBANA POR MEIO DE AUTÔMATOS CELULARES – UMA ABORDAGEM PROGNÓSTICA PARA 2030 NA ÁREA DE PLANEJAMENTO 4 / RIO DE JANEIRO

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ABSTRACT

The accelerated growth of urban areas requires new methodologies of analysis that can contribute and anticipate urban planning actions. The dynamic approach, using cellular automata, gained prominence for allowing to simulate and predict changes before they occur. The present work aims to simulate a scenario for 2030 for Planning Area 4 in the city of Rio de Janeiro. The methodology carried out in the Dinamica EGO software involves two maps of land use and occupation, from the Pereira Passos Institute for the years 2010 and 2015, in addition to explanatory variables that guide the changes. The 2015 model reached an overall accuracy of 94%. For 2030, there is a trend of anthropic change in non-forested natural areas by around 29% in 15 years. The Barra da Tijuca Administrative Region is projected as one of the region's most prone to new construction, with natural components as the main conditions for changing the present and as a key to predicting the future.

Keywords: Cellular Automata, Land-Cover Change, Simulation Model, Dinamica, Rio de Janeiro

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