# MODELAGEM DINÂMICA DO DESMATAMENTO E SIMULAÇÕES FUTURAS NO BAIRRO DE GUARATIBA/RJ ENTRE 2015 E 2050

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## ABSTRACT

In the late 1990s and early 2000s, the Guaratiba Administrative Region ranked second in terms of population growth in the municipality of Rio de Janeiro, with a significant rate of urban growth, reflecting an increase in deforestation related to human actions. The present work aims to simulate deforestation in the Guaratiba region, West Zone of Rio de Janeiro, using dynamic modeling, by cellular automata, as a tool to understand the factors that affect deforestation between 2004 and 2015, as well as predict a possible scenario for the year 2015. Data on land use and land cover from Instituto Pereira Passos and a set of dynamic and static spatial variables were used. The distance to previously deforested areas was the one that showed the greatest weight in the transition. For 2050, in the best scenario, a prediction of anthropic pressure in protected areas is identified, and urban density in the central and northwest regions of Guaratiba.

**KEYWORDS**: Cellular automata; Dynamic modeling; Deforestation; Remote Sensing.

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