

# Temporal dynamics of land use and occupation changes in the Municipality of Alfenas, Brazil

Alvanil Miranda de SOUZA<sup>1</sup>, Rodrigo Santos MOREIRA<sup>1</sup>, Guilherme Henrique Exedito LENSE<sup>1</sup>, Ronaldo Luiz MINCATO<sup>1</sup>

<sup>1</sup>Universidade Federal de Alfenas; Alfenas, Minas Gerais, BRAZIL

## INTRODUCTION

The work aimed to evaluate the in land use and occupation changes in the years 1985, 1995, 2005, 2015, and 2018 in the Alfenas Municipality, Minas Gerais state, Brazil, and identify the social and environmental impacts of these changes.

## MATERIAL AND METHODS

The municipality covers 850,446 km<sup>2</sup>. Using the MapBiomas (<https://mapbiomas.org/>) project data between 1985 and 2018, we elaborated maps of the study area to assess the effect of the temporal evolution of different land uses in the municipality.

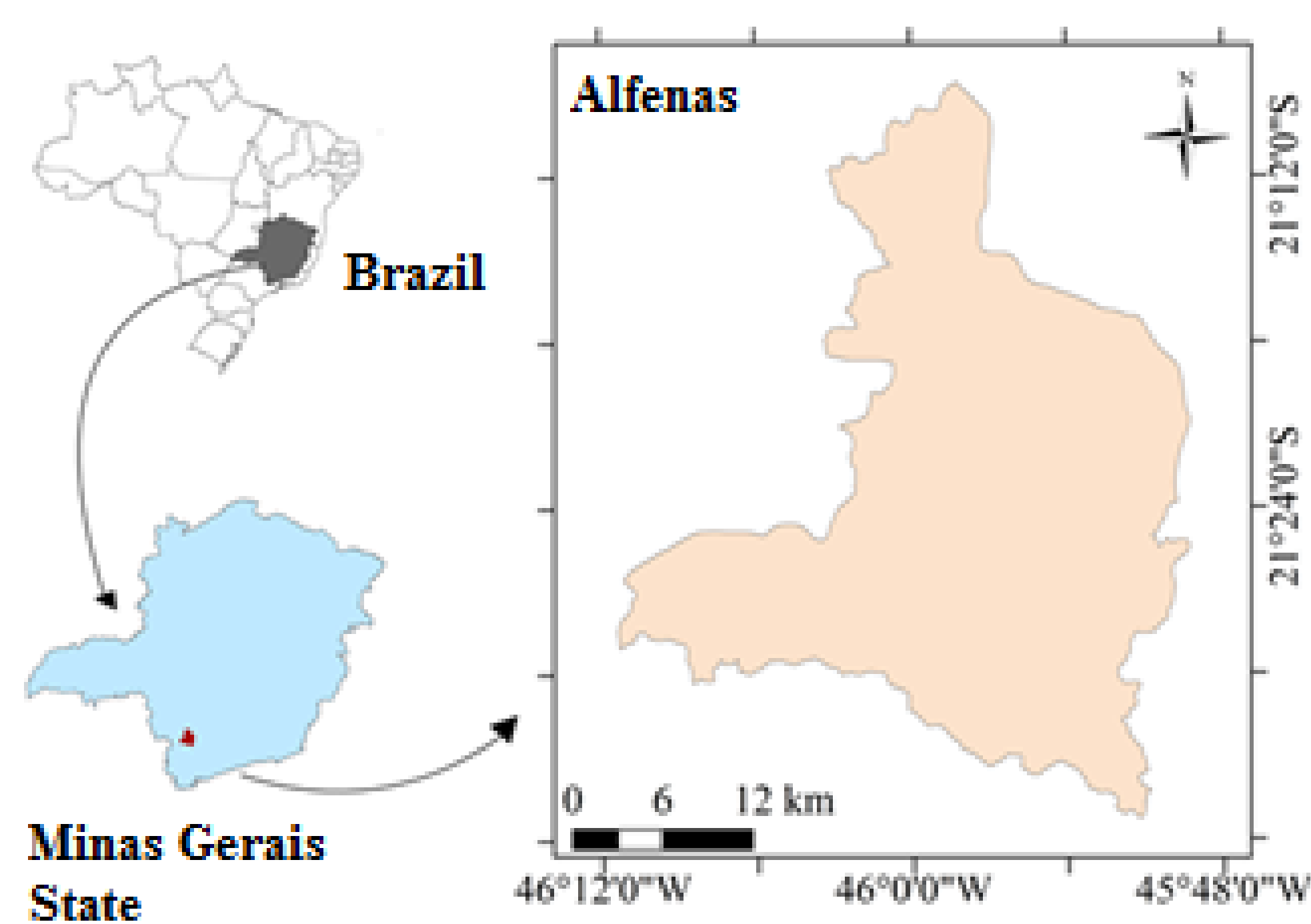


Figure 1. Location Municipality of Alfenas, south of Minas Gerais, southeastern Brazil.

## RESULTS AND DISCUSSION

We found an increase of 330% in the urban area during the studied period. There was also a reduction in the area of pasture (68%) and an increase in the area destined for agricultural crops (83%). There was an increasing expansion of the area destined to the production of sugarcane (1200%) as well as silviculture/eucalyptus (48%), which is a consequence of the economic interest that these activities have gained in the last decades.

## CONCLUSIONS

Land use and occupation in the Alfenas Municipality has changed significantly over time, and these changes must be accompanied by public policies that encourage the preservation of the environment and natural resources. Thus, in the future, the community may have a better quality of life in both urban and rural areas.

## ACKNOWLEDGEMENTS

To the “Coordenação de Aperfeiçoamento de Pessoal de Nível Superior” (CAPES), for the financing of the study - Financial Code 001.