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CONTRIBUTION OF GIS TO FORESTRY MANAGEMENT IN CENTRAL AFRICAN REPUBLIC

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Abstract

The paper presents the preliminary results obtained using the Geographic information System (GIS) techniques in the study of vegetation dynamics in a peri-urban area, having as case study the forest in a region of southwestern Central African Republic. The study area concerns a zone located between 4° 00' - 4° 30' North latitude and 18° 15' - 18° 30' East longitude, having a total surface of 156,531 ha, from which 88,547 ha is exploitable area. The satellite images (Landsat TM 1984 images, captured during the dry season, March, and 2008, also captured during the dry season, April), aerial photographs and other support information from 1984 and 2008 were used to realize the two soil occupation maps, separated by 24 years. The results show that the area occupied by forest decreased during the analyzed period by more than 25%, from 148,905 ha to 109,246 ha; the data also indicate a significant increase in the proportion of the degraded forest, from 7,203 ha to 39,329 ha. Even if at this stage the tool does not allow very precise identification of the causes that led to the reduction of area occupied by forest and the decrease of its quality, the database can be completed and used as a policymaker tool.

Key words: Central African Republic, deforestation, Geographic Information System, tropical forest

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