Contribution of Remote Sensing in the Spatio-Temporal Establishment of Land Cover Maps and NDVI in the Upper Niger River Basin in the Republic of Guinea: Case of Mandiana Prefecture 2013, 2016, 2021

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ABSTRACT

Anthropogenic activities (mining in all its forms, urbanization, increasing demographic migration, agriculture and deforestation etc.) have become intense in the upper basin of the Niger River in the Republic of Guinea. These activities have a significant impact on the community and their environment, in particular water resources, vegetation and soils. This study is part of the anticipation of the effects of changes in vegetation cover and land use, due to human activity in the part of the upper basin of the Niger River covering the study area (Mandiana). The investigation method will combine the use of remote sensing and GIS as analytical tools to develop spatiotemporal maps of land use over the entire study area, and monitoring of the vegetation cover on a period of 8 years. The results of these investigations will highlight the impact of intense human activity on the degradation of plant cover and land use.

Keywords: GIS, Remote Sensing, NDVI, Mines, Environmental Impact

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