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**IDENTIFYING CHANGES IN ENVIRONMENTAL AMENITIES  
OF CARBON STOCK WITH REMOTE SENSING  
AND GEOGRAPHIC INFORMATION SYSTEMS**

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## **ABSTRACT**

Environmental amenities are freely available and beneficial to humans directly or indirectly. Carbon stock is one of the environmental amenities. The research objective is to identify changes in environmental amenities in the city of Banjarmasin from 1990, 2004, and 2019. The method used in this research is a spatial approach with remote sensing and geographic information systems. Carbon stocks have become environmental amenities that are focused on research. Changes in environmental amenities in the city of Banjarmasin are analyzed by observing changes in the type of vegetation land cover which are indicators of the quality of environmental amenities for carbon stocks. In 1990-2004, carbon stock environmental amenities decreased by 15% and in 2004-2019 decreased by 19%. Changes in environmental amenities for carbon stocks in Banjarmasin City from 1990, 2004, and 2019 have always decreased by an average of 17%. Changes in the environmental amenities of carbon stocks in the City of Banjarmasin are influenced by the decrease in the type of natural vegetation land cover into developed land due to the development process being massive.

### **A. Introduction**

Global warming is a phenomenon that causes the world climate change index in 2013 which states 61 countries are the highest contributors of greenhouse gases (GHG) causing climate change resulting from increased land use and decreasing vegetation land cover (Burck, Hermwille, & Krings, 2011; Sukara, Widyatmoko, & Sri Astutik, 2013). Indonesia was ranked 32 out of 61