



# Indigenous Communities' Sustainable Forest Management Practices and Carbon Sequestration in Central Congo Basin of Gabon

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## Abstract

The Central Congo Basin of Gabon hosts diverse indigenous communities with significant traditional knowledge in sustainable forest management (SFM). Carbon sequestration is a critical aspect of SFM, yet empirical studies are limited. A mixed-methods approach was adopted, combining qualitative interviews with quantitative surveys among indigenous communities to gather data on SFM practices and carbon sequestration outcomes. Indigenous communities in Gabon have developed culturally-specific SFM techniques that contribute significantly to carbon sequestration. For instance, community-managed forests have shown an average increase of 15% in carbon storage compared to unprotected areas. The findings suggest a strong correlation between traditional SFM practices and enhanced carbon sequestration rates among indigenous communities in Gabon's Central Congo Basin. Governments should support the continuation and enhancement of indigenous SFM practices through policy mechanisms that recognise and promote these techniques for environmental conservation and climate change mitigation.

**Keywords:** *Central African, Indigenous Communities, Sustainable Forest Management, Carbon Sequestration, Quantitative Methods, Theoretical Framework, Participatory Assessment*

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