



Tree Species and Community Perceptions in Agroforestry Practices: An Assessment of Carbon Emissions Reduction in South African Veldlands

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Abstract

{ "background": "Agroforestry practices integrate trees into agricultural landscapes to enhance biodiversity, soil health, and productivity. In South Africa's veldlands, agroforestry is increasingly adopted as a strategy for carbon emissions reduction. This study aims to assess the impact of different tree species on carbon sequestration within these ecosystems.", "purposeandobjectives": "The purpose of this survey research article is to evaluate community perceptions and adoption rates of various tree species in agroforestry systems across South African veldlands, focusing on their potential contributions to carbon emissions reduction. Objectives include understanding the preferred tree species among local communities and analysing factors influencing adoption.", "methodology": "A mixed-method approach was employed, comprising a quantitative survey ($N = 150$) designed to gather data on community preferences for different agroforestry practices and qualitative interviews. Data were analysed using thematic analysis and descriptive statistics.", "findings": "Community preference surveys revealed that indigenous tree species are significantly preferred over exotic varieties, indicating a strong cultural and ecological basis for their adoption in veldlands. The survey also identified economic constraints as the primary barrier to adopting certain agroforestry practices.", "conclusion": "This study provides insights into the dynamics of community preferences within agroforestry systems, highlighting the importance of indigenous tree species in carbon sequestration efforts in South African veldlands. Future research should focus on overcoming economic barriers through policy interventions and technological support.", "recommendations": "Local authorities are recommended to promote policies that incentivize the use of indigenous tree species in agroforestry

practices, addressing both economic and environmental objectives. Additionally, further studies should explore the specific mechanisms by which different tree species achieve carbon sequestration within these systems.",
"keywords": "Agroforestry, South Africa, veldlands, community perceptions, carbon emissions reduction",
"contribution_statement": "This study introduces a novel methodological approach combining quantitative survey data with qualitative interviews to assess the adoption and impact of ag

Keywords: *Sub-Saharan, agroforestry, carbon sequestration, biodiversity, community engagement, ecosystem services, participatory surveys*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

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