

Enhancing landscape connectivity through agroforests: The case of Gedeo's agroforests in Ethiopia

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Summary

The Gedeo agroforests play a significant role in enhancing landscape connectivity and contribute to the integrity and sustainability of the agricultural production system.

The high degree of compositional, structural, and functional variation of the Gedeo agroforestry (AF) landscape has contributed crucially to on-farm plant conservation, guaranteeing environmental well-being, and enhancing livelihood support systems.



Introduction

- The multi-strata AF systems in the Gedeo Zone conserve a high proportion of woody plant species by offering them ideal habitats.
- Besides biodiversity conservation, it also contributes to climate change mitigation by accumulating C in biomass & soil.
- The agroforests also provide various benefits that help to improve socioeconomic conditions, support rural livelihoods, and strengthen ecosystems within land use systems.

Goal

To clearly mirror the contribition of agroforests in enhancing landscape connectivity so that identifying the profound effects



The role of agroforestry for landscape connectivity

Other ecosystem services

Circa situm conservation in the Gedeo agroforests



Biomass and carbon reserve in the landscape connectivity



Landscape connectivity through agroforests and its effect on biodiversity

Maintaining gene pools of species in fragmented landscapes



Preventing habitat degradation and habitat loss

Creating corridors and stepping stones for animal and plant species







Gedeo agroforestry with multi-strata

Local livelihood support through AF







Increasing microbial, avian, and faunal diversity



Way forward

Major challenges associated with social, economic, technological, and demographic spheres need to be solved for sustainability of the AF system

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