



Restoring Ecological Integrity through Agroforestry: Survey Insights from Ghana's Forest-Fringe Communities

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INTRODUCTION

Forest-fringe landscapes in Ghana are increasingly threatened by deforestation, land degradation and biodiversity loss. Agroforestry has emerged as a promising restoration strategy that can simultaneously enhance biodiversity conservation and improve rural livelihoods. Under the EMBRACE Project, baseline ecological and socio-economic surveys were conducted across the Ashanti, Ahafo, and Western North Regions to assess biodiversity status, community perceptions, and opportunities for agroforestry-based restoration.

OBJECTIVES

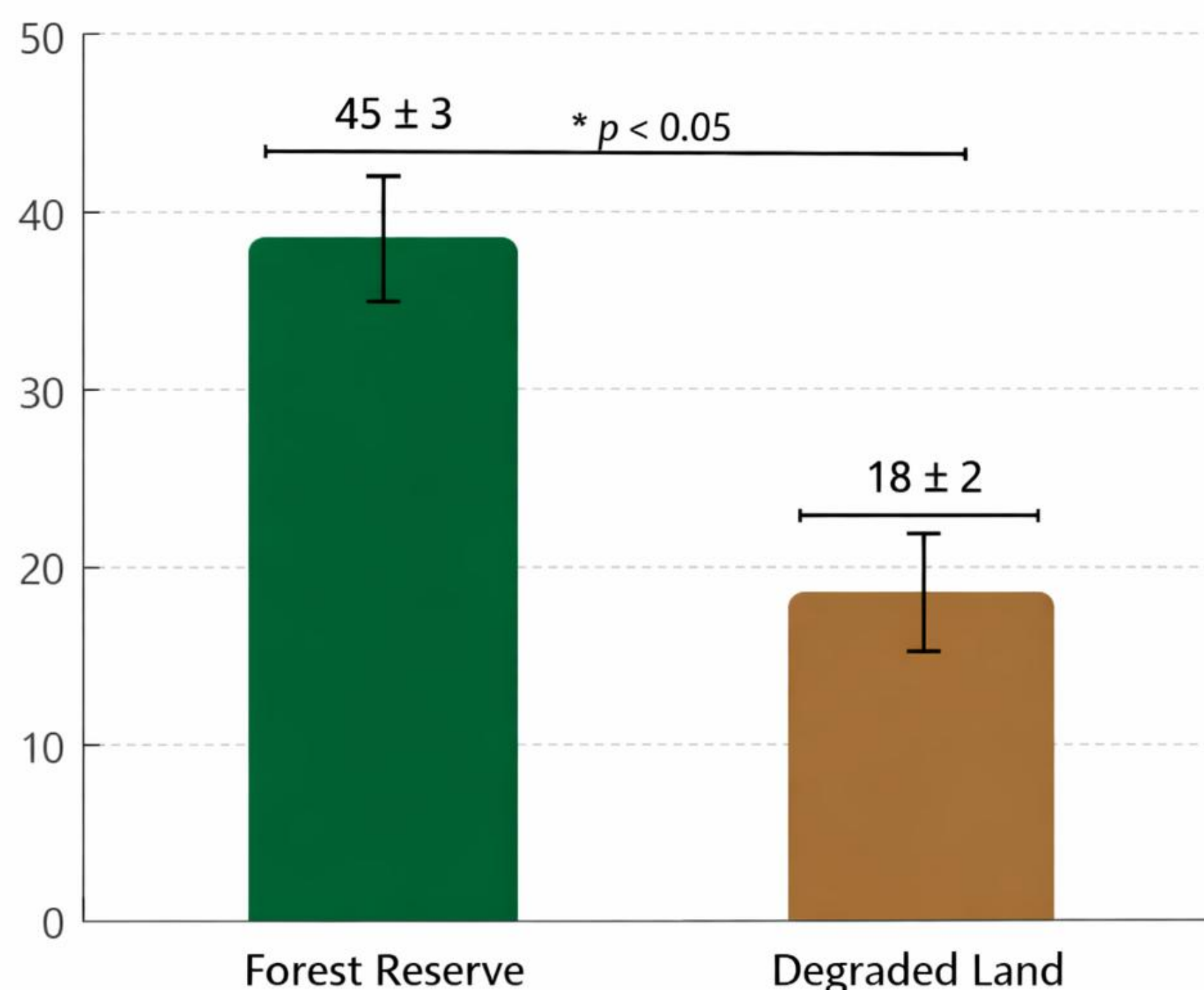
- Assess biodiversity across land-use types
- Evaluate farmers' agroforestry knowledge
- Identify restoration opportunities
- Promote community-led conservation

RESULTS & DISCUSSION

- Forest reserves support significantly greater biodiversity than degraded landscapes.
- Farmers recognize agroforestry primarily through livelihood benefits rather than cultural motivations.
- Species such as *Terminalia superba* and *Cedrela odorata* enhance ecosystem services.
- Participatory restoration strengthens long-term landscape resilience.

Species Richness across Land-Use Types

Forest reserves supported substantially more species than degraded lands.

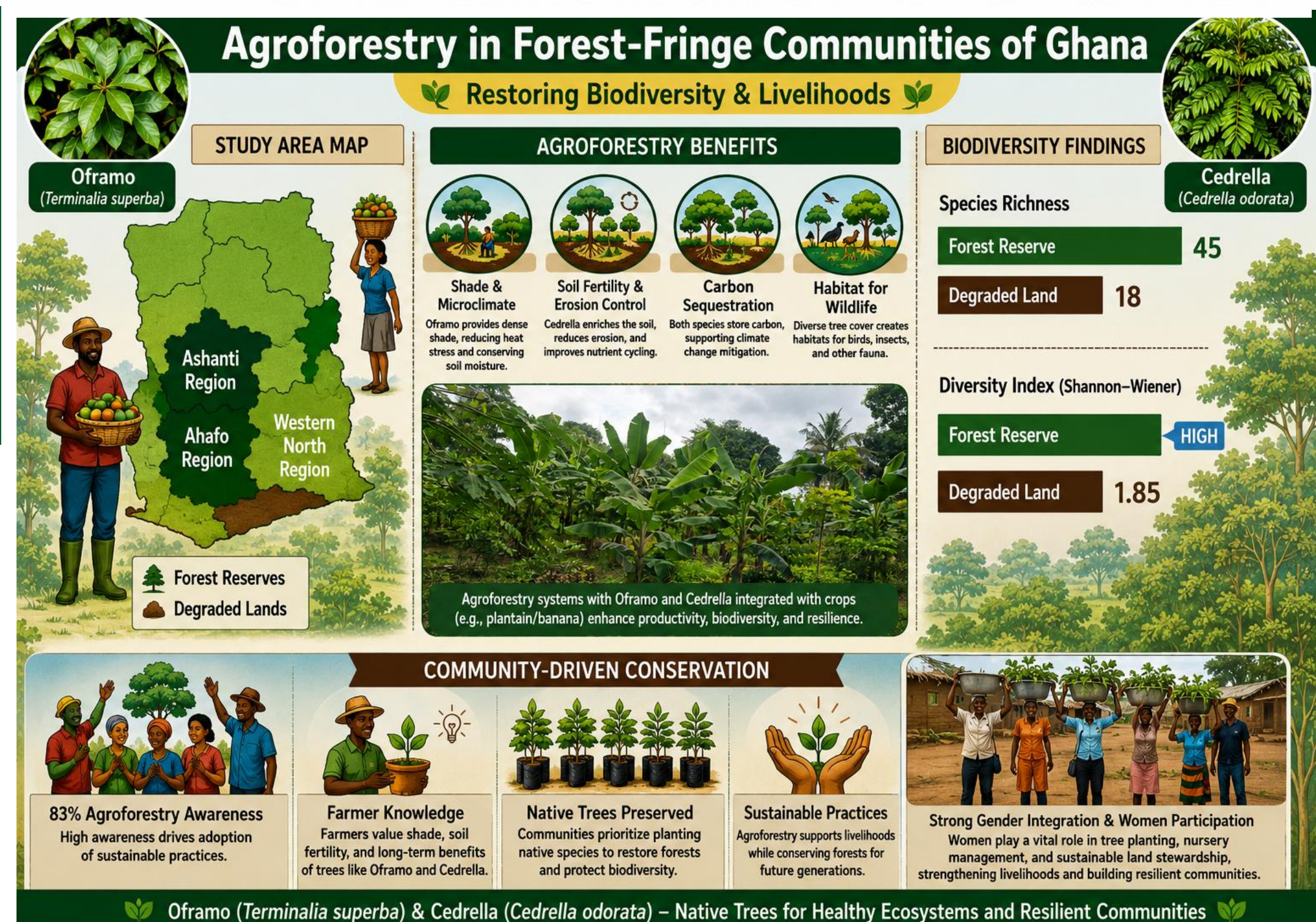
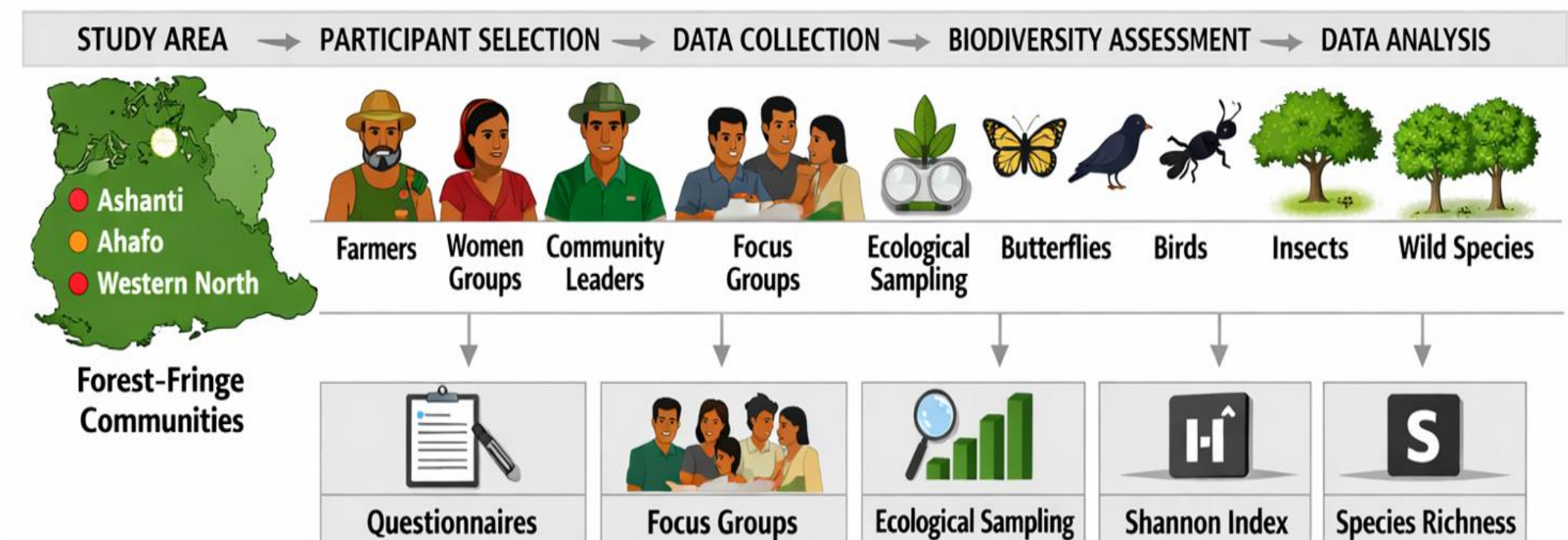


Forest reserves exhibited significantly higher species richness (mean = 45 ± 3) compared to degraded lands (mean = 18 ± 2).

METHOD

- Our participatory approach combined structured questionnaires, focus group discussions, and ecological sampling, ensuring that both scientific rigour and community voices shaped the findings.

Agroforestry Research Methodology in Ghana's Forest Fringe Communities



CONCLUSION

Agroforestry awareness was widespread (75–93 %), and more than 90% of farmers actively integrated trees into cropping systems, deliberately preserving native species during land preparation. Agroforestry represents a practical, community-driven pathway for restoring ecological integrity while improving livelihoods in Ghana's forest-fringe communities.

FUTURE WORK

- Scale community agroforestry initiatives
- Promote native tree species
- Integrate agroforestry into extension services
- Strengthen women's participation
- Support long-term biodiversity monitoring

