

# Strengthening Forest Governance in Ethiopia through Integrated Geospatial Analysis and Inclusive Institutional Reform

Shabu Jemal Abakorma<sup>1,\*</sup>

<sup>1</sup>Wollega University, Faculty of Natural and Environmental Science, Department of Forestry, P.O. Box 044, Gimbi, Ethiopia \* **Correspondence:** tourshabu@gmail.com; ORCID: <https://orcid.org/0000-0001-8836-843X>

**Source Note:** *Source Note: \*This brief synthesizes key policy insights from a comprehensive review manuscript entitled "Integrated Forest Governance in Ethiopia: Bridging Deforestation Policy Fragmentation and Livelihood Vulnerabilities," forthcoming at Elsevier/Environmental Sustainability (Manuscript ID: CRSUST-D-26-00002). This version is structured as a policy-focused brief report.\*.*

## **Abstract**

*Ethiopia's forests are vital for climate resilience, biodiversity, and livelihoods, yet remain threatened by weak enforcement, institutional fragmentation, and inadequate monitoring. This brief proposes actionable reforms: institutionalizing local policy performance evaluation, integrating geospatial tools into governance, and improving cross-sectoral coordination. It introduces Community-Based Forest Heritage Hubs to pilot agro-ecotourism, linking community stewardship to sustainable revenue. Prioritizing transparency and inclusion will align forest management with national climate goals and equitable development. Strengthening institutions, technology, and community collaboration will secure Ethiopia's forests as pillars of sustainable development. This policy brief uniquely integrates geospatial forest monitoring, institutional performance evaluation, and community-based nature enterprises into a single governance framework tailored to Ethiopia's forest–climate–livelihood nexus.*

**Keywords:** Forest governance, Ethiopia, geospatial analysis, policy integration, community adaptation, sustainable development.

## **1. Introduction**

Forests underpin Ethiopia's Climate-Resilient Green Economy (CRGE) and Nationally Determined Contributions (NDCs). However, deforestation persists due to weak local enforcement,

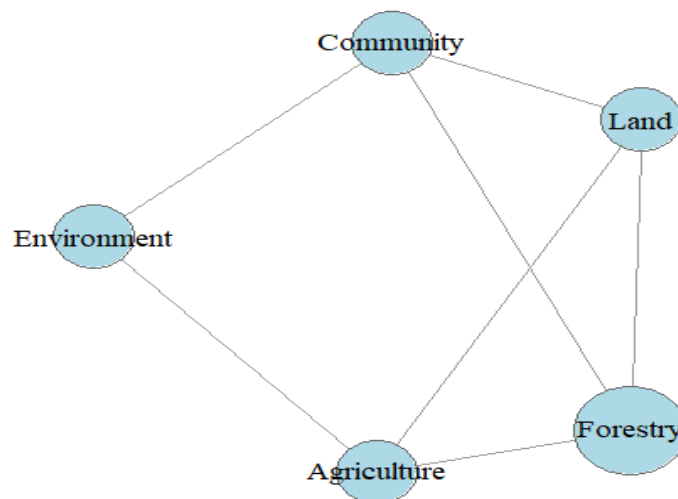
conflicting sectoral mandates, and inadequate use of scientific data. This erodes ecosystem services and increases community vulnerability.

## 2. Key Evidence-Based Findings

- **Local-Level Gaps:** Forest policy performance is rarely evaluated at community or district levels.
- **Underused Tools:** Geospatial data (e.g., satellite monitoring) is not integrated into governance or enforcement.
- **Coordination Failure:** Overlapping mandates in forestry, agriculture, and land sectors hinder integrated landscape management.
- **Community Marginalization:** Local adaptation strategies and knowledge are insufficiently incorporated into policy design.

To systematically address these gaps, the integrated analytical framework in **Figure 1** is proposed.

### Institutional Coordination in Forest Governance



**Figure 1:** Integrated Forest Governance Framework for Ethiopia. *This conceptual framework was synthesized by the author based on evidence and principles drawn from multiple sources.*

## 3. Policy Recommendations

1. **Institute Local Policy Performance Monitoring.** Mandate regular, multi-metric (social, ecological, institutional) evaluations at district levels.
2. **Mainstream Geospatial Forest Governance.** Build government capacity to use satellite data for real-time monitoring and link it to enforcement and land-use planning.
3. **Create an Inter-Ministerial Forest Platform.** Harmonize policies and data-sharing across forestry, agriculture, and climate institutions.
4. **Enhance Transparency.** Ensure public access to forest data, maps, and decisions; strengthen community grievance mechanisms.
5. **Formalize Community Governance Roles and Nature-Based Enterprises.** Integrate local knowledge into planning and **establish Community-Based Forest Heritage Hubs.** These hubs will pilot **community-led agro-ecotourism and non-timber forest product enterprises,** creating a sustainable revenue model directly tied to forest stewardship and providing a transparent mechanism for benefit-sharing from certification and climate finance.

#### 4. Implementation Pathway

- **Short-Term (1–2 yrs):** Pilot integrated geospatial-governance monitoring; establish cross-sectoral task forces.
- **Medium-Term (3–5 yrs):** Scale monitoring nationally; institutionalize open-data platforms.
- **Long-Term (5+ yrs):** Embed adaptive governance into national systems; link outcomes to international climate and biodiversity finance.

#### 5. Conclusion

Closing the implementation gap in Ethiopia's forest sector requires shifting to evidence-based, transparent, and inclusive governance. Integrating geospatial tools with strengthened institutions and community collaboration will secure forests as pillars of sustainable development.

1. **Conflicts of Interest:** - The author declares no conflicts of interest.
2. **Data Availability Statement:** No new data were created for this policy brief. All evidence and findings are synthesized from the publicly available literature and policy documents cited in the reference list.

## References

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