

LEVERAGING LAND NATURAL CAPITAL TO DRIVE UGANDA'S SUSTAINABLE AND INCLUSIVE GROWTH

POLICY BRIEF BY



**CENTRE OF EXCELLENCE FOR AFRICA CLIMATE-SENSITIVE
MACROECONOMIC MODELLING (CEACM)**



KEY MESSAGES

- **Land is Uganda's most critical economic asset.** It underpins agriculture, water systems, biodiversity, and livelihoods, yet rapid land use change between 1990–2015 has led to forest loss, wetland degradation, and unplanned urban sprawl.
- **Population growth and urbanization are intensifying pressures on land.** With one of Africa's fastest rates of demographic expansion (2.9% annually) and urbanization (over 5% annually), land conversion is accelerating, especially in forests and wetlands.
- **Subsistence farming dominates but undermines resilience.** Low input farming now covers 42.5% of land, driving soil degradation and reducing climate resilience, while commercial farming remains limited, constraining rural economic transformation.
- **Regional disparities highlight severe ecosystem losses.** The Acholi sub region lost 85.5% of its woodlands, the Northern Region lost ~1.54 million hectares of forest, and the Central Region saw farmland expansion at the expense of woodlands and grasslands.
- **Urgent policy action is needed.** Uganda must shift from land extensive, low productivity growth toward planned, data driven, and productivity led land use. This requires reforestation, integrated land use planning, strict urban zoning, and stronger enforcement of environmental laws to safeguard natural capital and ensure sustainable development.

1. Background and Motivation

Land is Uganda's most critical economic asset, underpinning agriculture, water resources, biodiversity, human settlements and livelihoods. As a predominantly agrarian society, the country's prosperity is deeply intertwined with how land is utilized and managed. Its strategic importance notwithstanding, evidence from Land Natural Capital Accounts (1990-2015) show a rapid change of land use, characterized by unsustainable agricultural expansion, forest loss, wetland degradation and an unprecedented urban sprawl.

The national land accounts were developed as part of its broader program on Natural Capital Accounting covering land use and land cover changes (1990–2015). Land natural capital accounts measure the extent and condition of land (forests, wetlands, cropland, settlements), changes over time (e.g., deforestation, productivity, urban expansion) and the economic value of land-based ecosystem services.

These trends pose a direct risk to Uganda's NDP IV and the ten-fold growth strategy ambition of achieving higher household incomes, employment and socio-economic transformation, as they erode the natural capital base that supports productivity, resilience and livelihoods.

This brief generated from the Land Natural Capital Accounts study summarizes the status,

issues and challenges, of land as an economic asset, distills the key policy messages, the proposed recommendations and the required policy actions. It is against this background that this brief seeks to answer the following policy questions:

- (i) How has Uganda's land composition changed between 1990 and 2015?
- (ii) What are the implications of these changes for agriculture, forestry, and environmental sustainability?
- (iii) What policy interventions are needed to balance economic growth with ecological preservation?

2. Objectives of the policy brief

The overall objective of the brief is to generate evidence to inform; land use planning, climate resilience, sustainable land use for wealth creation and the required policy actions. Specifically, the briefs seek to:

- (i) Identify trends in land use and land cover, their key drivers and policy implications.
- (ii) Strengthen evidence for commercialization of agriculture and integrated land use planning.
- (iii) Enhance public finance and investment decisions in sustainable land management practices.

3. Methodology

This analysis utilizes the Uganda Physical Lands Account (1990-2015), the National State of Environment Reports (2018, 2020, 2022 and 2024) and the Environment Statistics Abstract 2025, Ministry of Water and Environment Performance reports and National Forestry Authority Performance, Report. The study carries out a systematic examination of changes across multiple land use and land cover categories. Quantitative techniques are employed to measure the extent and rate of change within each category, enabling the identification of significant trends in land composition. Data validation and cross-referencing with satellite imagery and national land accounts to ensure accuracy and reliability.

4. Key Findings

- (i) Between 1990-2015, Uganda experienced land use and land cover changes, driven primarily by low input small scale subsistence agricultural expansion estimated at 8.6%, rapid population growth and urbanization (5.4% per annum).

Figure 1: The National Shift from 1990- 2015



Source: UBOS (2023)

- (ii) Small scale farmland was the dominant land cover, expanding from 34.8% (8.40 million ha) to 42.5% (10.27 million ha), with about 80% of forest and wetland loss due to land conversion into agriculture.
- (iii) Grasslands remained the second largest cover at about 5.1 million ha. Woodlands, once the third largest, declined sharply by 2.76 million ha, showing no recovery during the assessment period.
- (iv) Forest cover declined from 20.4% (1990) to approximately 8–10% (2015) with 23% of forests and 70% of woodlands lost.
- (v) In contrast, plantations (broadleaved and coniferous), bushlands, and wetlands expanded, with wetlands gaining 231,450 ha compared to 1990, despite a decline from their 2000 peak.
- (vi) Built-up areas increased approximately 3–4 times.

Table 1: Land use and cover (LULC) trends, 2017 to 2023 (in hectares)

LULC categories	2017	2019	2021	2023
Broadleaved plantations	84,137	228,118	255,527	328,549
Coniferous plantations	75,801	86,236	83,028	110,401
THF high stocked	524,189	518,073	532,140	552,395
THF low stocked	102,150	156,774	125,241	101,966
Woodlands	1,239,176	1,739,958	1,464,973	1,475,136
Bushland	1,664,429	273,405	553,394	359,118
Grassland	5,121,004	5,531,494	4,561,605	5,009,370
Wetland	785,703	877,337	964,353	834,043
Subsistence farmland	10,483,258	10,607,875	11,206,541	11,097,501
Commercial farmland	182,396	165,003	172,616	189,697
Built up	138,722	259,502	279,876	301,643
Water bodies	3,746,221	3,701,338	3,734,250	3,785,019
Impediment	8,162	10,235	7,428	10,509
Total Area of Uganda	24,155,347	24,155,347	24,155,347	24,155,347

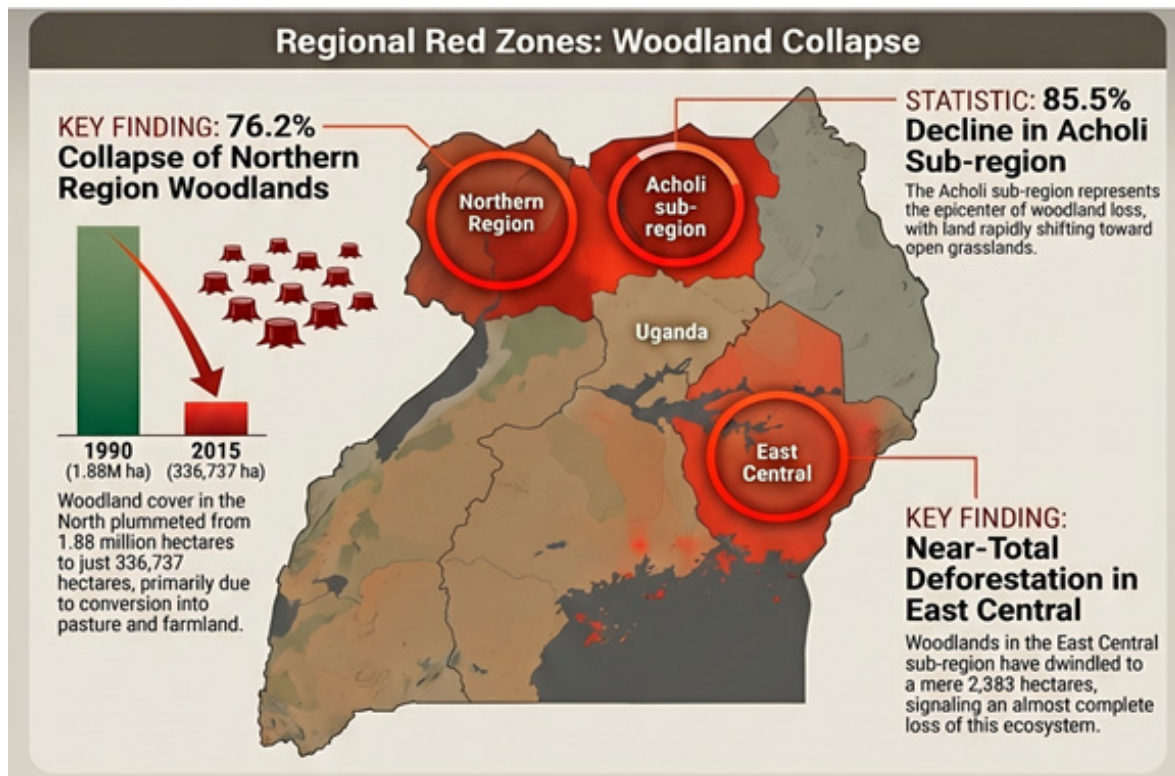
Source: UBOS (2024)

(vii) Regional and Sub-regional disparities in Land use and cover (LULC)

In addition, the land accounts revealed significant regional and sub regional disparities in land use and land cover changes, as outlined below:

- The Northern Region, which accounts for the largest share of Uganda's land area at about 35 %, has undergone dramatic shifts in land use experiencing the largest forest losses (~ 1.54 million hectares).
- The Acholi sub region was particularly affected, with woodlands decreasing by 85.5 %, while grasslands surged by an extraordinary 229 %, reflecting widespread conversion of forested land into open pasture.
- In the Central Region small scale farmland rose by 553,625 hectares, while woodlands fell sharply from 715,456 hectares to 278,479 hectares, a decline of more than 60 %. Grasslands reduced by 265,097 hectares, showing the pressure exerted by expanding farmland and settlements.
- The Eastern Region recorded steady growth in small scale farmland, expanding from 1.9 million hectares in 1990 to 2.2 million hectares in 2015. However, grasslands declined from 572,573 hectares to 330,020 hectares, reflecting a shift toward cultivation.
- The Western Region experienced both agricultural expansion and commercial intensification. Small scale farmland grew from 1.94 million hectares to 2.47 million hectares, while woodlands reduced by 55 %, showing significant deforestation. Commercial farmland tripled, rising from 26,297 hectares to 75,948 hectares, indicating a shift toward market oriented agriculture.

Figure 2: Regional Wood Red Zones



Source: UBOS (2023)

5. Key Policy Messages

- (i) Land is Uganda's largest economic production asset; the foundation of agriculture, water systems, and biodiversity. Its degradation poses serious macroeconomic risks.
- (ii) Natural capital is being converted into short-term GDP signifying a trade-off between economic growth and sustainability
- (iii) Uganda is consuming its land capital faster than it is regenerating it. The current economic growth model is land-extensive, low productivity and environmentally unsustainable. Specifically, agricultural growth is land-extensive, not productivity-driven.
- (iv) Urbanization (urban and peri-urban areas) is accelerating without planning with built up areas expanding by 3-4 times, especially around the Greater Kampala Metropolitan Areas (GKMA) and other secondary cities. It is encroaching on fertile farmland and sensitive wetlands, increasing risks of flooding, water pollution, and loss of agricultural productivity.
- (v) Agricultural trends reveal a complex dynamic where subsistence farming is expanding to meet food security needs, yet commercial farming is contracting, limiting opportunities for rural economic growth and market integration.
- (vi) The rapid expansion of commercial forest plantations, while boosting timber production and economic activity, has often come at the cost of biodiversity and ecosystem sustainability due to the dominance of monoculture species.
- (vii) Unplanned urban expansion, particularly around the Greater Kampala Metropolitan Area (GKMA), inefficient land use posing challenges in acquiring land for development of key infrastructural projects
- (viii) The alarming decline in bushland is a clear indicator of habitat destruction and fragmentation, driven by agricultural encroachment, charcoal production, and settlement expansion

6. Recommended Policy Actions

- (i) Shift from subsistence agricultural expansion to high productivity intensive commercial agriculture as a driver of economic growth and transformation.
- (ii) Protect and restore forests through agroforestry and forest landscape restoration.
- (iii) Strengthen integrated land use planning through operationalizing the National Land Use Policy (2013), enforcing zoning (balancing agriculture, conservation and urbanization), harnessing the linkages between national plans and district physical development plans and aligning infrastructure development with land use plans.
- (iv) Uganda must transition from uncoordinated, land-extensive growth to a planned, data-driven, and productivity-led land use system that optimizes economic returns while safeguarding natural capital.
- (v) Increase funding for Environment and Natural Resource Management. Operationalize the National Environment Fund and enhance the Conditional Grants for Lead Agencies including Local governments responsible for aspects of the Environment to increase efforts toward conservation, restoration and compliance enforcement.

7. Conclusion

The 1990–2015 land accounts demonstrate that Uganda’s development trajectory has been heavily driven by the conversion of natural ecosystems into low productivity agriculture and unplanned settlements, resulting in significant depletion of natural capital. This underscores the urgent need to rebalance growth toward sustainability, productivity, and resilience.

Addressing these realities requires integrated, evidence based policies that confront the multifaceted challenges of land use change. Without decisive action, Uganda risks undermining its ecological integrity and jeopardizing its long term economic prospects. A shift toward sustainable resource management and climate resilient development is therefore imperative to secure both environmental and economic stability for future generations.

References

National Land Physical Asset Account for Uganda-Technical Report, 2019. Available at https://www.ubos.org/wpcontent/uploads/publications/11_2019UG_Physical_National_Land_accounts_Tech_Report_V9.pdf

Uganda Bureau of Statistics (2023). Physical and Monetary Ecosystem Services and Asset Accounts for Uganda 1990–2015. Kampala, Uganda. UBOS.

Environment Statistics Abstract 2024/25, National Environment Management Authority.

<https://www.worldbank.org/en/news/press-release/2015/03/03/managing-rapid-urbanization-can-help-uganda-achieve-sustainable-and-inclusive-growth>

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