

TEEBAGRIFOOD

KENYA

Making the Economic Case for Sustainable Food Systems in Cherang'any, Mau Forest Complex and Loita Hills Water Towers

CONTEXT

Kenya's water towers, including the **Mau Forest Complex, Cherang'any and Loita Hills**, provide essential ecosystem services that are critical to communities, particularly through water filtration and soil and water retention. However, a severe loss of forest cover, driven by population growth and expanding agriculture, is threatening these services. Agriculture contributes 33 per cent to Kenya's national GDP and employs over 70 per cent of the rural population, but unsustainable agriculture expansion has degraded ecosystems, which in turn threatens biodiversity and undermines food security.

The impacts of unregulated land use, climate pressures, and rapid population growth are evident, especially in the study areas, where water scarcity and food insecurity are acute. To address these challenges, recent initiatives, including Kenya's Vision 2030, prioritize environmental sustainability through reforestation and conservation efforts, and a 2023 Presidential Directive proposed to establish an Integrated Ecosystem-based Natural Resource Conservation Policy.

Agriculture, in turn, is facing unprecedented challenges, including soil degradation, rainfall irregularity, rising fertilizer costs and competition with wildlife conservation.

LOCATION

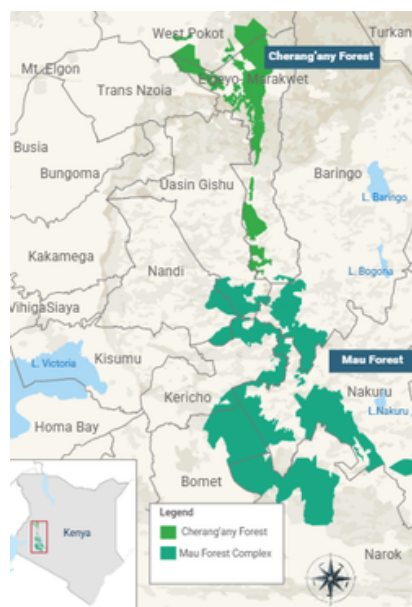


Figure 1.0) Cherang'any Forest and Mau Forest Complex.
Source: Strathmore Business School (SBS), 2025



A farmer on an agroforestry plot in Western Kenya

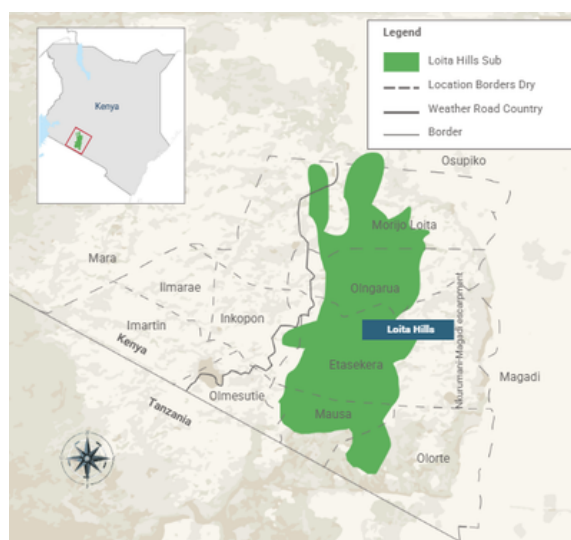


Figure 2.0) Loita Hills, Source: Strathmore Business School (SBS), 2025

FACTS AND FIGURES



over 35,000 species

Biodiversity and Livelihoods:

Kenya is one of the world's ten mega-biodiverse nations. Natural resources contribute about **42 per cent GDP** and **support livelihoods for 70 per cent of the population** particularly in rural areas



Forest Loss Impact:

Since 1960, deforestation has led to a **25 per cent reduction in forest cover** in some areas, impacting water availability, wildlife corridors, and local economies dependent on forest resources



According to the **2024 Economy Survey**, the performance of the agriculture sector **improved to 7.0 per cent** in 2023 from **- 2.3 per cent** in 2022. This is partly due to government intervention through the fertilizer subsidy program

OBJECTIVES

The TEEBAgriFood Kenya project aims to transform food systems for sustainability by assessing the full range of human and natural costs and benefits in food production and comparing “Business as Usual” with sustainable land use policy scenarios.

During the first phase in the Mau Forest Complex, launched in 2017, the value of natural, social, human, and produced capital stocks that underpin food systems was measured, and alternative sustainable governance approaches were assessed.

The current phase, funded by the IKEA Foundation, builds on these insights by modeling potential environmental and economic indicators within each of the three water towers.

● Ecoregion Analysis, Policy Development, and

Stakeholder Engagement: By mapping the diverse ecoregions within the project area and the stakeholder networks involved in food production, the project identifies regional needs for nature-positive actions, informed by data from community consultations and government partnerships. Through these, the project enhances resilience against climate impacts and economic stressors .

● **Scenario Modeling and Economic Valuation:** National researchers will evaluate trade-offs of alternative future land use scenarios by quantifying the benefits and costs of climate adaptation, forest conservation, and sustainable agriculture policies, supporting Kenya's 2030 climate targets and Vision 2030 goals.

EXPECTED OUTCOMES

- 1.Enhanced understanding and integration of ecosystem services into policy frameworks to guide sustainable land management.
- 2.Actionable recommendations for policies and programs that will support food security, biodiversity conservation, climate adaptation, and economic resilience.
- 3.Strengthened local governance structures and community-driven initiatives to protect biodiversity and enhance ecosystem health.

Project Duration: AUGUST 2023 - JULY 2027

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