

Refugees' cooking fuel crisis leaves environment bleeding

The influx of refugees into Uganda from conflict areas of neighbouring countries has intensified pressure on natural resources that were once exclusively utilised by the local populations, resulting in significant environmental degradation.

BY TOBBIAS JOLLY OWINY

Communities of South Sudanese refugees in northern Uganda are heavily dependent on traditional biomass for cooking, leading to rapid loss of tree cover and escalating concerns about environmental sustainability in the region.

Firewood has persistently remained a primary source of cooking fuel among the refugees, with over 90 per cent using it.

The dominance of firewood is attributed to accessibility, affordability and cultural familiarity.

Inside the nine-year-old Palabek Refugee Settlement in Lamwo District, the environment today stands severely stripped of its tree cover, as the refugees not only cut the trees for cooking fuel but also use them for construction.

The settlement that spans across Palabek-kal, Palabek-gem, and Palabek-ogili sub-counties currently houses approximately 90,000 refugees.

Recently, an assessment of zones 1, 2 and 3 by the *Daily Monitor* revealed the scale of depletion, with refugees facing serious difficulties in accessing poles for construction purposes.

Refugee women and children trekked long distances to harvest firewood and reportedly clashed with locals (the host community) into whose land they stray in search of firewood and construction materials.

"Within the settlement, you barely see a tree to be cut into a pole for building; they are no longer there because they are cut down, and the demand is very high. To get firewood, we go about 6km outside the settlement," Ms Esther Akot, a refugee, said in an interview.

According to Akot, some businesspeople now travel into deep villages to buy firewood and charcoal that is brought to the settlement and resold.

"There are individuals who buy them from the market here because they cannot afford to travel, or they fear the confrontation involving the local community," Akot says.

Mr Christopher Omal, the Palabek sub-county chairman, says incidents involving clashes between the host community and refugees over tree cutting are rampant.

"These complaints and reports of clashes are a very common thing; trees that used to be within the settlement have been exhausted over the years, so the refugees are forced to stray into the neighbourhood to harvest," Mr Omal said.

Some of these refugees get into the host community and cut down planted trees like eucalyptus and

pine woodlots because they assume these trees occur naturally. We have recently held mediations and dialogues among our people, including refugees, Omal stated. Zones within Palabek-ogili sub-county alone host approximately 26,000 refugees who rely on wood fuel for their daily cooking needs, Mr Omal said.

"Of the about 96,000, we host about 26,000 refugees, including humanitarian workers, the host community and businesspeople. Every day, they need to eat, and wood fuel is the most required for cooking; the trees are depleting at a very rapid rate," Omal added.

Whereas the entire landscape is being stripped of tree cover at an alarming rate, Mr Omal decried the limited efforts by the government and humanitarian bodies to carry out restoration.

"The most alarming bit is that we are losing much more than we can replace at a time, and little is being done to plant back and replace the depleted tree cover in these places, and the consequences will be severe on the climate in the near future," Omal added.

Uganda's distinguished refugee policy has been praised globally as it prioritises integrating refugees into their host communities instead of confinement.

Whereas this approach allows refugees access to land for farming, health, education and other services, it has come under criticism for dispersing environmental burden over host environments.

While the use of wood fuel (burning of biomass) for cooking has led to significant depletion of forests and tree cover, resulting in increased levels of greenhouse gas emissions, wood fuel emits smoke, which exposes household members to respiratory infections.

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Meanwhile, a 2025 research by Energy for Sustainable Development on the environmental impacts of household cooking fuels in refugee settlements in Uganda revealed that cultural beliefs strongly influenced household cooking choices, with significant implications for environmental degradation.

"Many (refugees) believe that food prepared on a three-stone open fire using firewood tastes much better than food cooked with briquettes or other improved fuels and that this type of stove cooks faster than others," the researchers said.

Cooks prepare a meal for learners at Pagirinya refugee settlement in Adjumani District. PHOTO BY TOBBIAS JOLLY OWINY



In many cases, perceptions related to food taste and cooking performance take precedence over environmental or health considerations; consequently, demand for firewood remains high, perpetuating extraction pressure on nearby forests, they detailed.

The research also revealed increasing weather variability manifested through rising temperatures, flooding, prolonged droughts and the drying up of rivers; largely attributed to deforestation.

"Soil degradation characterised by reduced crop yield over the past years, was prevalent among refugees and the host community. Deforestation exposes the soil to erosion, leading to the depletion of fertile topsoil. The reduction in soil fertility was reported by about 14 per cent of refugees and 8 per cent of hosts, further indicating threats to agricultural productivity," it stated.

In Adjumani, the severe deforestation rates are said to be more than double the reforestation rate, according to environmentalists.

The trend is linked to the impact of thousands of refugees (population pressure) spread across 19 settlements in the district.

The study also portrayed refugees' greater reliance on charcoal and crop residues, reflecting firewood scarcity and charcoal's avail-



Shea trees chopped and heaped into a kiln before burning into charcoal at Mile, Ofua Sub-county, Adjumani District.

ability as a traded commodity with women and children, particularly among refugees, facing greater hardships in accessing firewood.

In the study conducted in Rhino and Imvepi refugee settlements in Terego and Madi-Okollo districts in the West Nile sub-region.

"The use of crop residues was more common among refugee households (30 per cent) compared to households in the host community (14 per cent). This was likely due to refugees' restricted access to forests and their need

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tion that takes pressure off natural forests. Developing "eco-charcoal" or briquettes from agricultural residues or sawmill waste provides a circular bioenergy alternative. He stated.

Of Africa's approximated 14 million refugees (nearly one-third of the global refugee population), Uganda alone hosts over 1.8 million refugees, with settlement apportioned on small (50 x 50m) plots of land.

However, for over a decade, this number, exacerbated by pressure from the host communities, has exerted pressure on natural resources and accelerated environmental degradation.

The accessibility of firewood and charcoal has now come under question following reported shortages among the refugees, with many now resorting to crop residues to cook food in the absence of firewood and charcoal.

But Mr Amanzuru says the situation is further exacerbated by ineffective policy and governance, characterised by inadequate enforcement of regulations that guide wood fuel harvesting.

Despite the existence of regulations on tree harvesting, as outlined in the National Forestry and Tree Planting Act (2003), these regulations are often disregarded.

The local government authorities responsible for enforcing tree-harvesting permits typically lack logistical capabilities, while others are vulnerable to corruption or political influence and therefore large-scale illegal felling dominates, he says.

Today, accessibility and affordability of clean cooking energy options among both refugees and host communities across the country remain significantly low despite the government's efforts to promote its consumption for nearly a decade.

Meanwhile, Uganda's energy sector is dominated by biomass (organic matter used as fuel), with 87% of households using either firewood or charcoal for cooking.

According to the Ministry of Water and Environment, Uganda's forest cover has reduced from 24% in 1990 to just 12% in 2017, and if deforestation continues at the present rate, Uganda risks losing its forests by the year 2033.

Challenges

According to the United Nations High Commission for Refugees (UNHCR), Uganda's refugee-hosting districts today face interlinked environmental, energy, and climatic challenges due to high reliance on woody biomass, which is accelerating deforestation, with 99 per cent of all refugee households relying on woody biomass.

While up to 73 per cent of refugee households use firewood (8.5kg of firewood is consumed per day per household on average) and 26 per cent use charcoal

for cooking, this translates to 4 per cent of rainforests lost each year from unsustainable use, increasing carbon emissions, and reducing carbon sinks.

"The environmental situation influences protection risks in refugee-hosting districts. Women and girls are increasingly exposed to SGBV as they walk further to collect wood, competition for resources (land, wood, water) and inequalities in assistance increase tensions between refugee and host communities." The UN refugee body says in its 2024 Environment, Energy, and Climate in Uganda's Refugee Response document.

It also details how limited knowledge of the existence and benefits of clean technologies and cooking fuels, coupled with the high initial cost of renewable energy products, improved cook stoves, and electricity tariffs have curtailed the refugees from embracing clean energy options.

Whereas it says increased demand from population growth outpaced regeneration rates of forest and the gains made from transitioning to energy-efficient cook stoves, the document revealed that limited availability of land in settlements and limited plot sizes for tree growing, lack of clear ownership of established woodlots and low survival of trees due to damage and lack of aftercare discouraged refugees from engaging in restorative efforts.

Encourage the adoption of more efficient cooking technologies, while increasing access to cleaner fuels over the long term, promote the consistent use of clean alternatives in order to displace traditional fuels and stoves and discourage fuel stacking, which prolongs the use of inefficient methods, it is recommended.

Recently, locals living around Nyumanzi refugee settlement in Dzaipi sub-county, Adjumani District, have petitioned the district

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While launching the drive at Pangira Primary School in Lamwo District, Ms Doreen Namara, the Environment and Social Safeguards Officer at the ministry, said the intervention is essential for sustaining water sources since trees play a vital role in groundwater recharge and climate resilience. By the end of 2024, Uganda was hosting approximately 1.8 million refugees and asylum-seekers - the largest refugee population in Africa - reflecting a 10% increase from the previous year. The country also continues to receive new arrivals that have continued to enter the country, mainly from the DRC, Sudan, and South Sudan, due to ongoing intercommunal violence and deteriorating socio-economic conditions in their countries.

authorities to take action against refugees who stray into homesteads to illegally cut down trees and graze their livestock.

Mr Richard Adrawa, a resident of Angwarapi East village in Dzaipi sub-county, says that unless the sub-county and district leaders introduce tough measures to restrain refugees from indiscriminate tree cutting, it could risk throwing them into deeper conflicts and severe climate impacts.

"There are homesteads where you barely see a tree; they cut everything. The bigger ones are used for construction and cut down the young trees for firewood.

Meanwhile, when you plant your crops, it is hard to harvest anything because animals will destroy them, the refugees forcefully graze their animals into our gardens," Mr Adrawa said.

We have petitioned the district as a community that is hosting these refugees, who claim that all the land in the district belongs to the United Nations High Commission for Refugees (UNHCR) and that they are free to graze their animals anywhere without interference, he said.

At Agojo refugee settlement in Ciforo sub-county, the situation has now escalated into physical violence between the refugees and their host, according to Mr Peter Arape, the refugee welfare officer 2, Agojo refugee settlement.

"In a space of 60 days, we mediated a total of 14 different cases of conflicts between refugees and the host communities. Refugees think all the land belongs to the Office of the Prime Minister (OPM) and UNHCR, and they think they can harvest trees from anywhere," Mr Arape said.

Under its broader water and sanitation project that seeks to improve access to clean and safe water while restoring degraded ecosystems, the Water and Environment ministry rolled out a multi-billion tree planting initiative in both Lamwo and Adjumani districts.

The project, which integrates environmental restoration as a critical constituent of water sustainability, seeks to restore depleted forest cover and protect critical water catchment in these overstretched areas, the ministry says.



Traders load charcoal onto a truck at Paloro Trading Centre, Paloro Sub-county, Gulu District.