News

Scientists urge action as Gambian livestock grazing puts forests at risk

Threats to ecosystems must be addressed to meet environmental goals

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Cattle in Gambia. ©FAO/David Kujabi

Herders moving within Gambia and across the country's borders into Senegal in search of pasture inadvertently threaten forests and the soil landscape. If left unchecked, this activity could have lasting implications for ecosystems.

A recent study published by a team of scientists led by Lalisa Daguma and Peter Minang from the Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF) shows that the persistent practice also introduces invasive species into the affected areas, threatening the survival of the existing trees.

As pastoralists adapt to scarce grazing areas, extra measures must be put in place to protect the trees, adding to the cost of tree-based ecosystem restoration, as every seedling planted needs protection using either tree guards or fences.

"The combined effects of domestic and cross-border transhumance often affect the regeneration process both in farms and in forests,' said Duguma, lead author of the study and a scientist working on sustainable landscapes and integrated climate actions. "This means that The Gambia will not be able to meet its restoration targets in the foreseeable future."

Transhumance, which is the term for a seasonal migration of livestock and humans, is also blamed for environmental degradation in host communities where herders camp for the night and graze their herds during the day.

Both forests and grasslands in Gambia are increasingly under pressure from transhumance-related activities, such as cutting tree branches, uncontrolled use of water, farmland encroachment and damage to planted seedlings.

Read also Transhumance, Tree Growing and Ecosystem Resilience

The research found that despite the existence of a protocol established by the Economic Community of West African States (ECOWAS), which provides a framework for cross-border transhumance practices, there is weak implementation governing these activities.

“Cross-border herders move sheep numbering in the thousands in some instances, which aggressively feed on pasture and young seedlings and saplings, eventually affecting forest regrowth and ecosystem-restoration efforts,” said Minang, co-author of the brief, principal scientist and director for Africa with CIFOR-ICRAF. “The findings generated in the present study can be useful in formulating roadmaps, policies and strategies to help conserve these ecosystems.”

The experts propose developing a regional consensus and issuing guidelines on managing the large numbers of livestock involved in transhumance. It is important to adapt a cross-sectoral approach and to explore a more efficient and productive method of managing livestock, especially where ecosystem degradation is occurring, they said.

Gambia’s National Development Plan (2018–2021) stresses the need to sustainably manage the environment and natural resources to increase resilience to climate change for the benefit of all.

According to the plan, interventions will focus on strengthening environmental and climate-change policies, programs and awareness at all levels, including sustainable management of natural resources and adoption of appropriate land-use approaches.

The uncontrolled exploitation of trees and grasses by transhumance herders in the forest and farmland ecosystems of Gambia endanger ecosystem services that underpin the livelihoods of hundreds of thousands of people in rural communities.

The researchers observed that transhumance practices, which usually extend from October or November to May or June, leave a trail of forest destruction because of the herders cutting trees to feed their animals.

“Illegal tree cutting is rampant in the community forests during transhumance periods,” said Duguma. “The most common species affected are *Sterculia setigera*, *Bombax costatum*, *Lannea acida*, *Acacia* spp, *Khaya senegalensis* and *Cordyla pinata*, which all have important priority uses by communities. Acacia is a nitrogen fixer that can thrive in a diverse range of environments and provides valuable fodder for livestock. If left unchecked, the high degree of tree cutting coupled with little regeneration may eventually lead to extinction of these valuable species.”

The herds in some instances leave the soil exposed to compaction owing to livestock trampling, which may restrict pasture growth. Most communities said that the dense, compacted soil tends to change the physical condition of their soil, eventually restricting water infiltration, according to the study.

Invasive species are spread by seed dispersal, either through the fur, skin or faeces of animals, negatively affecting forests, cultivated land or grazing areas.

Most of the invasive species constitute weeds, which adapt quickly and can replace good forage species in ecosystems