Land Restoration in Africa and Cameroon: A Path to Resilience and Prosperity

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Introduction

Land degradation is a mounting crisis across Africa, threatening food security, economic stability, and the resilience of communities. With an estimated 65% of Africa's land affected by degradation and drought, more than 400 million people are facing reduced agricultural productivity, loss of biodiversity, and increased vulnerability to climate change (UNDP Climate Promise, 2025; OSS, 2025). Cameroon, as part of this continental challenge, is grappling with severe land degradation that undermines rural livelihoods and national development. Land restoration reviving degraded soils, forests, and ecosystems, has emerged as a vital solution, offering hope for both people and nature (CIFOR-ICRAF, 2025). To counter this pressing issue, this article unpacks the transformative potential of land restoration, showcasing effective strategies from the wider African continent and proposing tailored policy and financing solutions for Cameroon's unique context.

The Scale and Impact of Land Degradation in Africa

Africa is at the epicenter of the global land degradation crisis. Sub-Saharan Africa alone accounts for 45% of the world's degraded land, with unsustainable land use, deforestation, and soil erosion leaving millions of hectares barren (OSS, 2025). The consequences are dire: economic losses exceed $70 billion annually, and projections warn that without immediate action, the continent's agricultural production could drop by 17–22% by 2050, exacerbating food insecurity, rural poverty, and even conflict (Mo Ibrahim Foundation, 2025; Down To Earth, 2025). Climate change compounds these pressures. Shifting rainfall patterns, rising temperatures, and more frequent droughts and floods are intensifying land degradation, especially in regions already vulnerable due to fragile soils and limited water resources. In Cameroon, these challenges are particularly acute in the northern and western regions, where land degradation affects over 60% of arable land and displaces 12% of rural populations annually (MINEPDED, 2023; Tchindjang et *al*., 2021).

Why Land Restoration Matters

Land restoration is the process of reversing land degradation by rehabilitating soils, reforesting landscapes, and restoring ecosystem functions. The benefits are far-reaching: improved agricultural yields, enhanced water retention, reduced erosion, greater biodiversity, and increased resilience to climate shocks. Globally, restoring just one billion hectares of degraded land could generate up to $1.8 trillion in annual economic returns, with every dollar invested yielding $7–30 in benefits (Mongabay, 2025). For Africa, land restoration is not just an environmental imperative but a strategic investment in economic growth, food security, and social stability. Restoration efforts could create up to 10 million sustainable jobs in agriculture and forestry, particularly in climate-vulnerable regions like the Sahel (GLF, 2025). In Cameroon, restoring degraded lands is essential for supporting the 70% of the population that depends on agriculture (World Bank, 2023) and for safeguarding critical ecosystems such as the Congo Basin, which stores 70 billion tons of carbon (MINFOF, 2022).

Approaches to Land Restoration in Africa: Lessons from the Sahel and Beyond

African governments, communities, and international partners are increasingly prioritizing land restoration through innovative policies, partnerships, and investments. The African Union's Great Green Wall initiative, a pioneering effort, aims to restore 100 million hectares of degraded land across the Sahel, mobilizing billions in funding and providing a model for large-scale restoration (African Union, 2025). Countries like Ethiopia, Rwanda, and Senegal are scaling up nature-based solutions, combining ecological rehabilitation with community-driven adaptation (UNDP Climate Promise, 2025). Several particularly effective approaches have emerged:

- **Zaï Pits: A Low-Cost, High-Impact Solution**

These are small planting pits (20–30 cm deep) filled with organic matter to concentrate water and nutrients, proving highly effective in arid regions. In Burkina Faso and Niger, Zaï pits have increased crop yields by 50–200% (Reij et *al*., 2009) and improved water infiltration in degraded soils, reducing runoff by 30% (IFAD, 2023). This technique could

be vitally adapted for Cameroon's northern arid zones, such as the Far North, to combat desertification.

- **Stone Lines (Bunds) for Erosion Control**

Simple yet highly effective, stone lines are placed along contours to slow water flow and trap valuable sediment. Their impact is significant: they have reduced soil loss by 50–80% in Mali and Burkina Faso (World Bank, 2022) and increased millet and sorghum yields by 30–50% (OSS, 2025). In Cameroon, these could be particularly effective in the Western Highlands, where erosion severely threatens steep slopes and agricultural land.

- **Farmer-Managed Natural Regeneration (FMNR)**

FMNR involves protecting and pruning naturally regenerating trees and shrubs to restore degraded land. This approach leverages indigenous knowledge and is both cost-effective and highly scalable, significantly improving soil fertility, increasing crop yields, and enhancing biodiversity. A remarkable 5 million hectares have been restored in Niger through FMNR, boosting both crop yields and biodiversity (CIFOR-ICRAF, 2025). Furthermore, FMNR stores 1.5–3 tons of CO_2 per hectare per year, contributing to carbon sequestration (World Resources Institute, 2024). For Cameroon, community-led FMNR could be instrumental in reviving degraded forests, particularly in the periphery of the Congo Basin.

- **Agroforestry with Nitrogen-Fixing Trees**

This approach integrates trees, especially nitrogen-fixing species, with crops and livestock. Examples like ***Faidherbia albida*** (African acacia) improve soil fertility without competing with crops, a technique widely adopted in Malawi and Zambia (FAO, 2025). Similarly, ***Gliricidia sepium*** intercropping in East Africa has led to a 40% increase in maize yields (ICRAF, 2023). Cameroon has significant potential to promote these agroforestry systems, particularly in regions like the Adamawa Plateau, for enhanced soil enrichment and diversified livelihoods.

- **Half-Moons (Demi-Lunes) for Water Harvesting**

These semi-circular berms are designed to trap rainwater, facilitating vegetation growth in arid and semi-arid zones. This technique has successfully restored 200,000 hectares in Niger (UNDP Climate Promise, 2025) and increased grass biomass by 300% for pastoralist communities (ILRI, 2023). Half-moons are an ideal solution for the Sahelian north of Cameroon, directly combating desertification and supporting pastoral livelihoods.

Case Studies: Regional Success Stories

The continent offers powerful examples of successful large-scale restoration efforts:

1. **The Great Green Wall Initiative**

This ambitious African Union-led initiative has already restored 20 million hectares across 11 countries (African Union, 2025). Its success is built upon a combination of key techniques including FMNR, Zaï pits, and community-based reforestation. A crucial lesson for Cameroon is to strengthen cross-border collaboration, particularly within the Lake Chad Basin Commission, to tackle shared environmental challenges effectively.

2. **Ethiopia's Tigray Region**

Ethiopia stands out for its impressive restoration achievements. In the Tigray region alone, 2.2 million hectares have been restored using labor-intensive techniques such as terracing and check dams (World Bank, 2024), leading to a doubling of wheat yields in previously degraded areas (FAO, 2025). Cameroon's highlands could effectively replicate similar terrace systems to combat erosion and improve agricultural productivity.

3. **Kenya's Dryland Restoration**

In Kenya, an approach combining grass reseeding with rotational grazing has rehabilitated 1.5 million hectares, significantly improving pastoral livelihoods in dryland areas (ILRI, 2023).

The Situation in Cameroon

Cameroon faces unique challenges and opportunities in land restoration. Deforestation rates exceed 2.5% annually in some regions, with overgrazing and unsustainable farming

practices degrading 12 million hectares, nearly 25% of the country's land area (FAO, 2023; MINEPDED, 2023). The government's National Land Restoration Strategy (2022–2030) has yielded promising results: community-based reforestation in the Far North restored 15,000 hectares using FMNR techniques (MINFOF, 2023), while agroecological practices in the Western Highlands increased crop yields by 35–40% while reducing erosion (Tchindjang et al., 2021). Women-led nurseries produced 2 million seedlings for the Great Green Wall initiative in 2023 (MINEPDED, 2023), demonstrating the critical role of gender inclusion in restoration efforts.

However, significant challenges persist. Limited funding, weak enforcement of land use policies, and insecure land tenure hinder progress. Farmers are less likely to invest in long-term restoration if they lack secure access to their land, as evidenced by Niger's FMNR success (OSS, 2025).

Policy Recommendations for Cameroon

Despite the immense promise of land restoration, financing remains a major hurdle. Achieving global land restoration goals by 2030 will require an investment of $1 billion each day, yet current annual investments are only $66 billion, with the private sector contributing a mere 6% (Mongabay, 2025). Sub-Saharan Africa, where restoration is most critically needed, would have to spend 3.7% of its annual GDP to fulfill existing pledges, an unsustainable burden without substantially increased international support (UNDP Climate Promise, 2025).To bridge this funding gap and accelerate restoration efforts, Cameroon must focus on:

- **Leveraging Payment for Ecosystem Services (PES):**

Innovative financing mechanisms like PES can create financial incentives for communities and individuals to manage their land sustainably. Rwanda's Land Degradation Neutrality Fund, which has mobilized $100 million for restoration efforts, serves as a powerful example (UNDP Climate Promise, 2025).

- **Strengthening Land Tenure**

Secure land rights are fundamental. Farmers are significantly more likely to invest their time and resources in long-term restoration practices, such as FMNR, if they have

guaranteed and secure access to their land, as demonstrated by Niger's success with FMNR (OSS, 2025).

- **Integrating Drones and GIS**

Utilizing advanced technologies like drones for monitoring and Geographic Information Systems (GIS) for mapping and data analysis can significantly enhance the efficiency and effectiveness of restoration projects. Senegal, for instance, successfully uses drones to monitor the progress of the Great Green Wall (OSS, 2025). These tools can provide invaluable data for planning, implementation, and assessing the impact of restoration efforts.

- **Aligning Policy and Finance**

Moving from fragmented projects to system-wide change requires aligning policies, finance, and innovation through robust regional frameworks and comprehensive national strategies (GLF, 2025). This involves creating a supportive legislative and regulatory environment that promotes sustainable land management and attracts investment.

Conclusion

Land restoration is both an urgent necessity and a tremendous opportunity for Africa and Cameroon. By actively reversing land degradation, countries can secure their food systems, create millions of sustainable jobs, and build vital resilience against escalating climate shocks. Cameroon can significantly accelerate its land restoration efforts by strategically adopting proven techniques like *Zaï pits, stone bunds, Farmer-Managed Natural Regeneration (FMNR), agroforestry with nitrogen-fixing trees, and half-moons*, drawing valuable lessons from the successful regional case studies in the Sahel and East Africa. The path forward requires bold leadership, innovative financing mechanisms such as Payment for Ecosystem Services, strong community engagement that empowers local populations, and sustained international cooperation. With the right investments and forward-looking policies, land restoration can unlock a future of prosperity, stability, and ecological health for millions across the continent and specifically for the people of Cameroon.

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