

Uganda to Launch First-Ever Industrial Biochar Carbon Removal and Biochar-Based Fertilizer Production Project

Addressing Uganda's annual 10 millions tons of agriculture-waste to enhance carbon removal and biochar-fertilizer value chain through climate financing.

UGANDA, December 22, 2025

[/EINPresswire.com/](https://EINPresswire.com/) -- In a groundbreaking ceremony hosted at Kingdom Kampala in collaboration with Uganda Parliament, Stack Carbon, Jiaxing Tongao Environmental Technology Co. Ltd (China), and TerraCapX AS (Norway) signed a landmark Memorandum of Understanding to establish Uganda's—and Africa's—first large-scale industrial biochar carbon removal and biochar-based fertilizer production facility. The USD \$12 million project represents a transformative solution to Uganda's agricultural waste crisis while addressing the mounting costs and climate risks associated with chemical fertilizers.



Historic Biochar Carbon Removal Project Launch in Uganda

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We're not just addressing Uganda's challenges—we're creating a template for climate-smart agriculture across the continent”

Kenny Kaluiji

In his opening remarks, Kenny Kaluiji, Founder and Chief Growth Officer of TerraCapX AS and Executive Director of the [Nordic Climate Finance Summit](#), framed the project within Africa's broader climate imperative: "[The opportunity for Africa today is the climate crisis](#): the climate crisis that will drive us toward building resilience in critical economic sectors, health systems, supply chains, adaptation infrastructure, and education for managing climate risks."

The Nile Char Carbon Removal Project will process over 10 million tonnes of agricultural waste

over 20 years, converting biomass that would otherwise be incinerated or left degrading in landfills into high-value biochar-based fertilizer. This innovative approach tackles multiple challenges simultaneously.

"This project is not just about waste management—it's about reimagining Uganda's agricultural future," said Bashir Dan, Executive Officer of Stack Carbon. "We're transforming what was once considered waste into a resource that will strengthen our food systems, support our farmers, and position Uganda as a leader in climate-smart agriculture."

Uganda's economy is heavily dependent on agriculture, with tea and coffee serving as major export commodities. However, smallholder farmers face mounting financial and climate risks due to prohibitively high fertilizer costs. The biochar-based alternative offers:

- Cost savings: More affordable fertilizer for smallholder farmers (Uganda imports over \$300 million in chemical fertilizer annually)
- Improved soil health and nutrient retention
- Carbon sequestration: Removal of approximately 1 million tonnes of CO₂ equivalent
- Waste transformation: Productive use of 10 million tonnes of agricultural waste
- Job creation: Over 1,000 employment opportunities with technology transfer
- Yield increases: Projected 45% improvement in crop yields

Jiaying Tongao Environmental Technology Co. Ltd will supply continuous pyrolysis equipment with a production capacity of 30 tonnes of biochar per day.

"We're excited to bring our proven pyrolysis technology to Uganda," noted Nicole Yang, International Development Director at Jiaying Tongao. "This is our first step outside China and the first in Africa. This technology has increased yields in China for tea, rice, grapes, and other crops, backed by scientific research." The project includes technical training for up to 100 Ugandan operators and engineers, comprehensive installation services, and knowledge transfer to Uganda to enhance fullstack capacity building.

Chloe Hung, Co-Founder and Executive Director of Greenchar Climate Solutions Pte. Ltd. (Singapore), commented on the relevance of biochar carbon removal within emerging Article 6. The project positions Uganda to leverage Article 6 mechanisms under the Paris Agreement, opening new avenues for international climate financing by generating verified carbon credits through biochar production and soil carbon sequestration over 20-year crediting periods. "Biochar carbon removal represents a credible pathway for future alignment under Articles 6.2 and 6.4 of the Paris Agreement, subject to host country authorization and methodological acceptance. As Singapore advances its international carbon cooperation frameworks, countries such as Uganda have the potential to host high-integrity mitigation activities that combine durable carbon removal with tangible.

The MoU signing ceremony witnessed participation of key stakeholders including Uganda

Parliament Representatives, Uganda Development Bank (UDB), Parliamentary Forum on Climate Change, Uganda Bamboo Association, Ministry of Water & Environment, BioCarbon Standard, and local farmer associations. The project adheres to rigorous standards including Standard certification, DMRV and Informed Consent documentation, Environmental Impact Assessment, risk management framework, grievance mechanism, no child labor or forced labor policies, and comprehensive insurance coverage.

"We're not just addressing Uganda's challenges—we're creating a template for climate-smart agriculture across the continent," said Kenny Kaluiji. "This project proves that climate action and economic development are complementary pathways to a resilient future."

With equipment installation scheduled for mid 2026 and commercial operations launching by Q3 2026, the Nile Char Carbon Removal Project represents a tangible solution to Uganda's environmental and agricultural challenges, exemplifying how strategic partnerships, innovative technology, and climate-forward financing can create transformative impact.

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