Uganda



Organization: Banana Industrial Research and Development Centre (BIRDC)
Location: Bushenyi District, Southwestern and Western Uganda
Solution: Picture-based index insurance for climate risks in Ugandan banana farming
Factsheet Period: First round of UNDP AFCIA funding (16 months); Second round of UNDP AFCIA funding (12 months)



In Uganda, an initiative leverages technology to transform banana resources into sustainable products @ BIRDC

Agriculture contributes to almost a quarter of Uganda's GDP, with 56-59% of agricultural households growing *matooke,* local bananas (Uganda Bureau of Statistics, 2020 and 2024). Although wind and hailstorms contribute to approximately 60% of losses for banana smallholders in Uganda (BIRDC, 2022), existing index-based insurance products only cover drought and excessive rainfall. To bridge this gap, the Banana Industrial Research and Development Centre (BIRDC), in collaboration with their consortium partners Agriculture and Climate Risk Enterprise (ACRE) Africa and Agro Consortium (AIC), is piloting a Picture-Based Insurance (PBI) solution tailored for addressing climate change-related events that damage banana crops. This innovative approach aims to help banana smallholders quickly recover from extreme climate related events, avoiding catastrophic financial losses which threaten both livelihoods and food security.

Key achievements

- Developed a customized Picture-Based Insurance (PBI) and advisory algorithms for banana crops, led by ACRE Africa
- Trained 50 Champion Farmers to operate the PBI application and help promote digital climate insurance across six new vulnerable districts
- A total of 2,000 farmers completed insurance registration
- Deployed an innovative system where farmers pay a premium (AIC provides cover), and ACRE Africa manages real time, image-based monitoring via champion support
- 1,200 hectares now utilizing the PBI and picture-based advisory infrastructure for banana and other large-leaf crops

Adaptation benefits

- Smart agriculture and agroforestry: Sustainable farming and agroforestry techniques protect banana plantations from windstorms and floods, reducing climate vulnerability
- Protection and insurance: Access to information, tailored insurance and microfinance helps farmers mitigate losses from extreme weather
- Climate solutions: A combination of resilient farming, water conservation and risk-sharing mechanisms enhances long-term stability
- Driven adaptation: Community-led approaches equip farmers with the knowledge, tools and resources for sustained resilience





Social impact

- Equips local farmers with essential knowledge and access to financial resources, fostering long-term community resilience.
- Expands insurance coverage and drives increased demand among women through the engagement of champion farmers, ensuring equitable participation and benefits while promoting inclusivity.

Innovation

- Bundles PBI with climate-smart agricultural practices, yield-increasing inputs, market access and financial services training.
- Expands access to microfinance and insurance, reducing financial risks for farmers and businesses facing climate-related losses.
- Promotes openness to innovation through champion farmers who monitor crops via smartphones and distribute seeds.
- Utilizes mobile tools, data-driven forecasting and nature-based solutions to improve climate preparedness and response.

Replication potential

- Offers the potential to reach an additional 50,000 smallholders by leveraging AIC's close working relationships with relevant government authorities and ACRE Africa's experience in designing and scaling agricultural insurance for smallholder farmers.
- Demonstrates steady growth in portfolio premiums alongside decreasing premium costs over time, supporting sustainable agricultural investment.

Funding snapshot

- UNDP-AFCIA grant: US$235,000 (initial grant: $125,000; scaling grant: $110,000)

Investability	
Sustaining criteria	UNDP-AFCIA grant supports BIRDC in building an evidence-base for its PBI, which will allow it to seek funding from insurance and resilience funds for further product development.
Financial innovation	Establishes a database of 22 registered cooperatives with 5,000 farmers, building a strong track record in enhancing smallholder productivity. Collaborates with financial institutions to bundle insurance products with smallholder loans to BIRDC farmers. Exhibits potential for direct online sales in the medium- to long-term.

ADAPTATION FUND Climate Innovation Accelerator

ADAPTATION FUND

To read their story, visit UNDP-AFCIA

To watch their video, click here

To contact the initiative, visit BIRDC