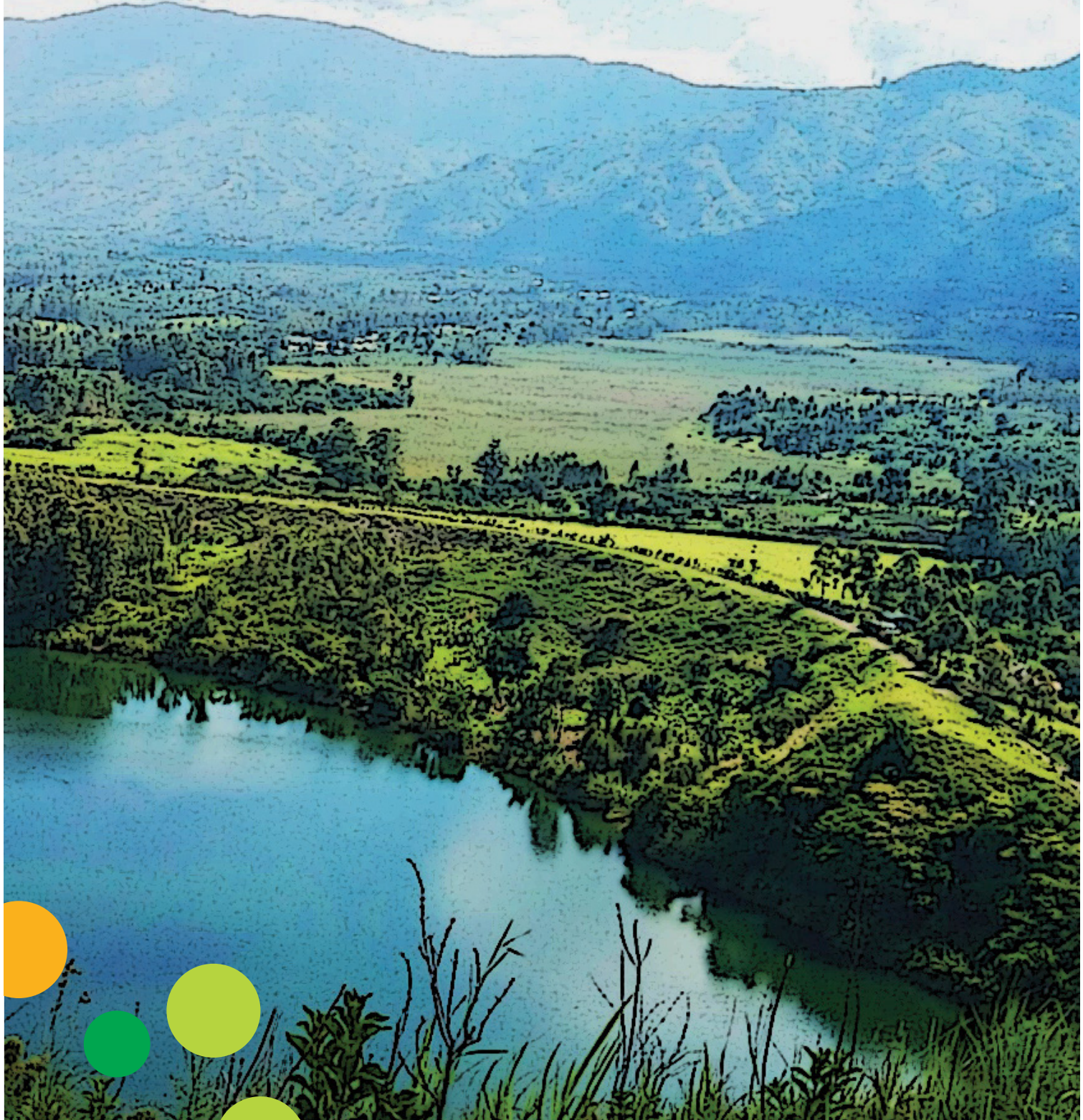




Eastern Africa Alliance
On Carbon Markets And
Climate Finance



CARBON MARKET

PROFILE ——— UGANDA



1. Introduction/Executive summary

Role of carbon markets in Uganda's NDC

- Uganda updated its NDC in September 2022 based on the country's Vision 2040 and the Third National Development Plan (NDP III) which presents an ambitious economy-wide mitigation target in 2030 of 24.7% reduction below the Business As Usual (BAU), a progression from the 22% reduction target communicated in the first NDC in 2016.
- The Uganda Climate Change Act (2021) defined climate change mechanisms as tools to deliver the NDC commitments and boost climate ambition. The Country shall use carbon markets as one of the essential channels for mobilizing private sector financing to implement its ambitions in the NDCs.
- Implementation requires USD 28.1 billion for both conditional and unconditional support of the international community via climate finance instruments and international market mechanisms.
- By 2030 the estimated cost of adaptation across all sectors is estimated at USD 17.7 billion. 14% of the total adaptation cost can be mobilized unconditionally, while 86% of these costs are conditional on international support. Also, the mitigation policies and measures across all sectors will cost USD 10.3 billion of which 15% is unconditional and 85% is conditional on international support.
- Overall, the National Climate Change Policy and Costed Implementation Strategy assume national sources to cover 30% of incremental costs of the activities in the next 15 years, with 70% from international sources. The

total mitigation costs are unknown though for example USD 5.4 billion is estimated to be required over the next ten years for renewable energy installations alone. Uganda stated its plan to build on the existing CDM pipeline.

- Uganda's updated NDC recognizes energy efficiency and the use of improved cook stoves as one of the largest mitigation potentials with approximately 6.89 MtCO₂e by 2030. The main target groups for improved cookstoves are both households and social institutions like schools who consume a lot of biomass.

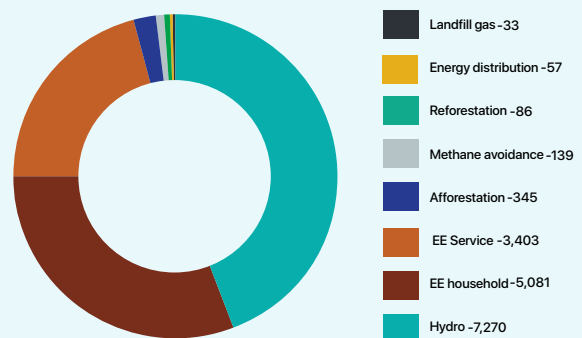
Uganda's Carbon Market Portfolio – key insights

- Uganda is one of the carbon market frontrunners in Africa, with a total of over 33 million carbon credits issued in Uganda from the Clean Development Mechanism (CDM) and Voluntary Carbon Market (VCM) standards.
- Overall Uganda has a CDM portfolio with a total of 189 registered activities which include 19 project activities (PAs) and 9 Programme of Activities (PoA) with a total of 170 CPAs. The country also has 101 VCM activities that are contributing to most of the carbon credits issued. The VCM activities are dominated by energy efficiency activities supporting improved cook stoves as well as other project types like biogas projects including forestry which were not covered by CDM.
- Uganda hosts 92 registered VCM activities (78 GS, 13 VCS, 1 Plan Vivo) with the first ever cookstove project to earn Gold Standard (GS) certification: Improved Cookstoves for Social Impact in Ugandan Communities.

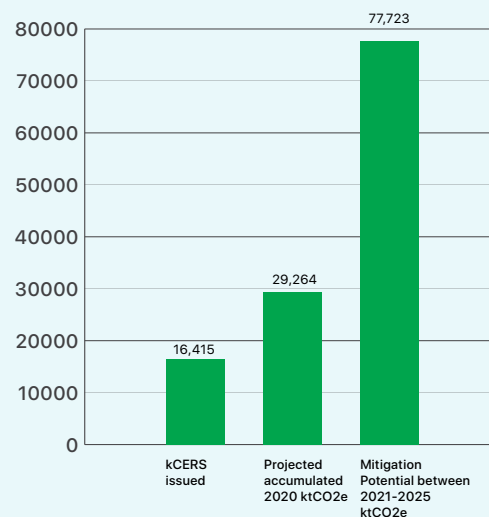
2. CDM portfolio and performance

- Uganda has issued over 16 million CERs from 189 registered CDM activities: 19 PAs and 170 CPAs within 9 PoAs. The majority of the single projects (12 - 92%) were registered pre-2012, whereas (91%, 155) of CPAs were registered post-2012. Uganda is included in 9 PoAs, 5 of which are single country and 3 multi-country.
- PAs are spread across sectors with the most prevalent being hydro (6) and reforestation (6), whereas PoAs are focused on cookstoves (96 CPAs), water purification (58 CPAs), landfill composting (13 CPAs) and energy distribution (3 CPAs).
- Uganda has issued over 16.4 million CERs from all its CDM activities being 10% PAs and 87% of CPAs. Active sub-sectors include improved cook stoves (52%), water purification (30%), run of river hydropower projects (3%), landfill composting (7%) and others.
- The total mitigation potential of registered activities by 2025 reaches over 106 million CERs, being PAs and CPAs already included in PoAs. The 2021-2025 mitigation potential could reach 77.7 million emission reductions by 2025, even without further potential PoA upscaling.

CDM issuances by Sector



CDM Pipeline, issuance and mitigation potential



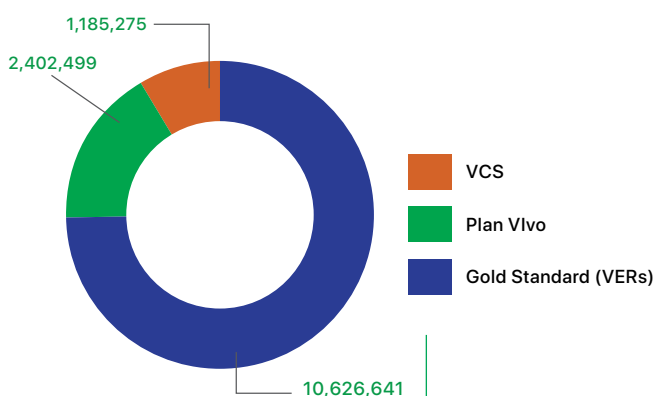
Volume of CER issuance and potential of currently registered CDM activities by sector

Activity Type	Sub-sector	No. of PA	No. of PoA	No. of CPA	kCERs issued	Projected accumulated 2020 ktCO ₂ e	Mitigation potential 2025-2030 ktCO ₂ e
Overall		19	9	170	16,415	29,264	77,723
Landfill gas	Landfill composting	0	1	13	33	-	3,208
Methane avoidance	Wastewater	2	0	0	139	447	130
Afforestation	Afforestation	1	0	0	345	352	124
EE Households	Stoves	2	5	96	5,081	8,757	41,816
Hydro	Run of river	6	0	0	7,270	8,476	2,650
Reforestation	Reforestation	6	0	0	86	520	188
EE service	Water purification	0	2	58	3,403	7,737	24,212
Energy Distribution	Connection of Isolated grid	0	1	3	57	1,750	6,190
Landfill gas	Landfill flaring	1	0	0	-	1,177	(994)
Transport	Biodiesel for transport	1	0	0	-	48	201

CDM transition potential

Many Ugandan CDM activities may be eligible for transition. Once the Article 6.4 Supervisory Body has made available the transition process, Uganda will need to establish criteria and an approval procedure for activity transition aligned with UNFCCC rules. At the same, there is significant leeway for host countries to determine how CDM activities may contribute to their NDC. Uganda has attracted a larger number of CDM projects than most other countries in the region, while most PoA CPAs have been registered only recently and could be significantly scaled up with additional CPAs if the PoA frameworks would transition to Article 6. Therefore, the post-2020 emission reduction potential may be much higher than the currently available data if several PoAs successfully transition and expand new CPAs.

- Uganda has 19 PAs out of which 6 (31%) have expired crediting periods. Of the remaining projects 5 (26%) expire in 2025, with the 8 remaining projects (42%) expiring after 2025
- The issuance rate for CERs currently stands at 56% across all registered CDM activities.
- Between 2013 and 2016 Uganda registered 5 PoAs and 6 PAs.
- 155 CPAs have been included in Uganda's portfolio of CDM PoAs between 2013 and 2020.
- The CDM has 16.4 million pre-2020 vintage credit issuances from 14 project activities and 50 CPAs; and no post 2020 vintage issuance..



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3. Voluntary carbon market portfolio and performance

Uganda has a total of 92 registered VCM activities that have issued 16,706,499 credits.

Gold Standard (GS)

- Hosts 78 GS activities (73 VPAs and 5 Standalone projects) and have issued 10,626,641 credits
- The most active sector being Energy Efficiency (92%) via cookstoves and clean water technologies
- Of the 78 GS activities, 3 projects have issued 44,870 GS CERs
- GS has 9,286,392 pre 2020 vintage credit issuances from 10 activities and a total of 1,340,249 post 2020 vintage credit issuances from 68 activities

VERRA/Voluntary Carbon Standards (VCS)

- 13 registered projects that have issued 3.6 million verified carbon units (VCU); with Agriculture and energy efficiency as the dominant sectors.
- VERRA has issued 2,887,937 pre-2020 vintage VCUs and a total of 789,422 post-2020 vintage VCUS.

Plan Vivo

- 1 registered project Trees for Global Benefits (since 2003) coordinated by ECOTRUST is a cooperative offsetting scheme that links Ugandan farmers (6000+) to the voluntary carbon market.
- The project has since issued 2,402,499 credits.
- Plan Vivo has 1,950,275 pre-2020 vintage credit issuances and a total of 452,224 post-2020 vintage credit issuances

Chart - Voluntary Standard Issuances

Showcase Activity

Trees for Global Benefits registered by Plan Vivo (since 2003) coordinated by ECOTRUST is a cooperative offsetting scheme that links Ugandan farmers (6000+) to the voluntary carbon market through Payments for Ecosystem Services agreements. It is a long-running cooperative carbon offsetting scheme in Uganda which combines community-led activities to increase carbon sequestration, encourage sustainable land-use practices, and provide farmers with performance-based payments. The TGB scheme operates as a Programme of Activities (PoA) to enable scaling up through the design of new activities and the recruitment of new farming communities



Source: Plan Vivo 2022

4. Article 6 readiness and piloting

4.1. Uganda's Article 6 readiness

- The country is at the initial preparation stages for engagement with Article 6 cooperative approaches. An Article 6 Taskforce was established to facilitate in-country capacity for the implementation of the mechanisms and to ensure that Uganda benefits from voluntary cooperation arrangements defined in Article 6 of the Paris Agreement. The Country is also in the initial stages for the development of Article 6 regulations and implementation framework.
- Other ongoing efforts include participation in AfDB's Adaptation Benefits Mechanism (Article 6.8), and is cooperating on Article 6 capacity building with various development partners (UNDP, GIZ, CFI).
- Uganda confirmed its interest to participate in the Adaptation Benefits Mechanism which was launched in 2019 by the African Development Bank (AfDB). It is a non-market approach under Article 6.8 of the Paris Agreement planning to launch 10-12 pilot adaptation projects. Concept notes, draft modalities & procedures and identification of potential pilot projects such as solar power water pumping have been prepared by AfDB, with financing from the Climate Investment Funds (CIF) and support from the Governments of Uganda and Cote d'Ivoire.
- The development of an integrated Monitoring, Reporting and Verification (MRV) tool has been prepared with support from UNDP NDC support programme. The MRV shall enable tracking of internationally transferred mitigation outcomes (ITMO's) under Article 6.
- Utilising the World Bank MAAP tool, an Article

6 readiness assessment was completed after which the Ugandan Government submitted a letter of intent to the KliK foundation. Relatedly efforts have been made with the UNDP Low Emission Capacity Building (LECB) programme.

4.2. Article 6 piloting

- Accelerated project financing for NDC implementation is one of five priority areas in the Updated NDC Partnership plan for Climate Action 2022 that include developing a project pipeline of investment-ready projects for funding and establishing strengthening national climate change funding mechanisms.
- Uganda has initiated 5 pilot activities under Paris Agreement Article 6 pilot activities. 2 projects are for rural electrification, 1 for safe water, 1 for sustainable transport and 1 for Adaptation Benefit mechanism.

4.3. CORSIA Potential

- In 2019 through the Civil Aviation Authority Uganda expressed interest to participate in the pilot phase of the International Air Transport Association (IATA) Carbon Offset Program (CAA, 2019) leading to Transafrik Uganda Ltd being registered as a CORSIA Aeroplane Operator in Uganda
- Uganda has 121 CDM activities eligible for CORSIA.

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6. Key assumptions

- Data referring to the CDM (projects and programmes) has been taken from the UNEP CCC CDM project and PoA pipelines as of August 2022. To remain conservative, we only include registered activities. We did not assess data quality regarding whether a project is still active, as UNEP is the commonly recognized database drawing directly on UNFCCC Secretariat data.
- While there is a high degree of uncertainty regarding the issuance potential of individual activities, these are difficult to assess and will be affected by future political decisions. Only PoAs which have an included component project activity (CPA) in the profiled country have been counted.
- While UNEP CCC captures estimated accumulated emissions until 2025 based on transparently available CDM activity design documents (PDD; PoA-DD, it is clear that meeting these estimations is subject to political decisions and therefore theoretical.
- Any future mitigation potential is expressed in kilotons of carbon dioxide equivalent (ktCO₂e = 1000 tCO₂e) in order not to prejudge the type of certification that post-2020 mitigation outcomes may be using.
- Voluntary carbon standard data has been taken from the official databases of the respective standards. Verified Carbon Standard data is as of August 2022. Data on Gold Standard (GS) activities have been obtained from the GS registry while Plan Vivo data was obtained directly from the standard in August 2022.
- Parties agreed at COP26 that projects will be able to transition from the Clean Development Mechanism to the new Article 6.4 mechanism. A limited number of Certified Emission Reductions (CERs) could be used towards countries' NDCs, noting that the projects will not be able to receive issuances for post-2020 emission reductions, unless they transition to the new Art.6.4 mechanism. Vintages issuances post-2021 will require corresponding adjustments.



Published By: The Eastern Africa Alliance on Carbon Markets and Climate Finance. The Eastern Africa Alliance on Carbon Markets and Climate Finance is a coalition of seven member states. The Alliance is focused on bringing member states together with a common goal of delivering an understanding of carbon markets and climate finance.

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This study is part of a project under the International Climate Initiative (IKI). The Federal Ministry for Economic Affairs and Climate Action (BMWK) supports this initiative.