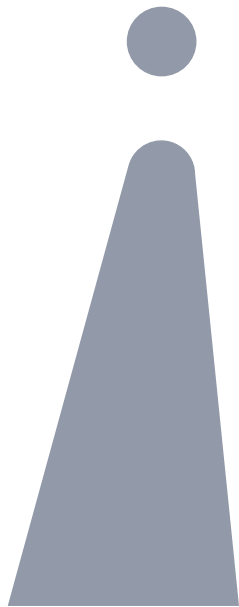
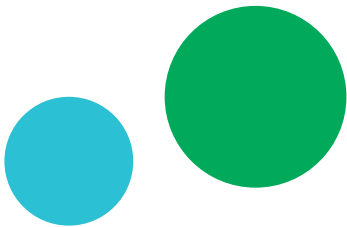




Eastern Africa Alliance
On Carbon Markets And
Climate Finance

CARBON MARKET

PROFILE ————— ETHIOPIA





Key assumptions

- Data referring to the CDM (projects and programmes) has been taken from the UNEP DTU CDM project and PoA pipelines as of April 2020. In order to remain conservative, we only include registered activities. We did not assess data quality with regard to 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 with regard to the issuance and upscaling potential of individual activities, these are difficult to assess and will be affected by future political decisions. = 1000 tCO₂e) in order not to prejudge the type of certification that post-2020 mitigation outcomes may be using.
- While it is clear that in particular the 2030 potential is subject to political decisions and therefore theoretical, it is included as the numbers are based on current CDM activity documents. Whilst all emission reductions may be highly unlikely to be achieved under the CDM, the emission reduction volume may still be relevant e.g. for own NDC contributions by host countries. Moreover, PoAs may experience significant upscaling if carbon market demand increases, which would add further mitigation potential, since we only included emission reductions from actually included CPAs.
- Any future mitigation potential is expressed in kilotons of carbon dioxide equivalent (ktCO₂e)
- Voluntary carbon standard data has been taken from the official databases of the respective standard. Verified Carbon Standard data is as of May 2020. Data on Gold Standard (GS) activities have been obtained from the GS registry and complemented by information provided directly from the GS in May 2020.
- Assumptions on CDM transition are based on the current status of the COP25 draft decision documents. While these may change, the delay of COP26 to November 2021 rules out that a final decision can be taken before. Therefore, we give a brief indication of what the proposed cut-off dates for CDM transition may mean on a country level. A recent short study on CDM transition and its relevance for Africa explains key issues in detail.
- Due to the lack of a definition or common understanding of what an Article 6 pilot is, we also include initiatives that aim at implementing carbon market activities beyond the CDM. This includes readiness activities and others aiming at emission reduction transactions.

Introduction

EXECUTIVE SUMMARY

Ethiopia's Nationally Determine Contribution (NDC), which is currently being updated, aims at reducing greenhouse gas (GHG) emissions by 64% by 2030 compared to the business as usual (BAU) scenario - i.e. a reduction of around 255 million tCO₂e. The NDC builds on the Climate Resilient and Green Economy (CRGE) strategy, which defines a roadmap for transforming Ethiopia into a carbon neutral middle-income country by 2025, and the country's second 5-year Growth and Transformation Plan (GTP II).

Full NDC implementation requires USD 150 billion, though does not yet distinguish between conditional and unconditional elements. The NDC clearly states Ethiopia's interest in participating in market mechanisms, while highlighting the importance of environmental integrity. Ethiopia has established a CRGE Facility for resource mobilization.

In total over 1.6million carbon credits have been issued in Ethiopia from the Clean Development Mechanism (CDM) and the Voluntary Carbon Market (VCM) standards.

Despite significant efforts, Ethiopia hosts only two CDM projects and seven Programme of Activities (PoAs) with a focus on improved cookstoves, total Certified Emission Reductions (CERs) issuances reaches over 1 million.

Ethiopia has 29 registered VCM activities that have issued close to 600,000 emission reductions. The VCM activities have also focused on improved cookstoves, though in addition have expanded the Ethiopian carbon market portfolio through a strong focus on forestry and water projects that were not supported by the CDM.

Improved cookstoves have the largest mitigation potential in the NDC, aiming at reducing over 50 million tCO₂e annually by 2030. These cooking initiatives also represent dominant sub-sector in the Ethiopian and African carbon market portfolio (CDM and VCM standards).

Carbon market portfolio

There are 9¹ registered CDM activities: 2 projects (methane avoidance, municipal waste) and 7 PoAs (5 improved cook stoves, 1 biomass and 1 solar program) with a total of 16 CPAs.

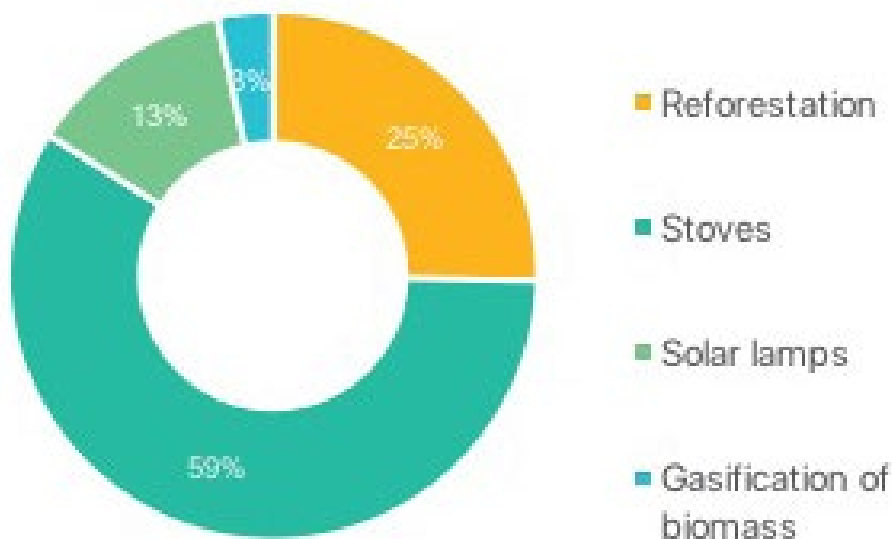
The country has issued Letters of Approval for 10 PoAs in total.

Four PoAs have successfully issued over 750,000 CERs, whilst one additional project, which has since de-registered from the CDM, previously issued over 250,000 CERs.

For all CDM activities, improved cookstove PoAs have issued over half of the CERs (59%, from 4 PoAs) followed by reforestation (25%), solar lamps (13%), and biomass gasification (3%).

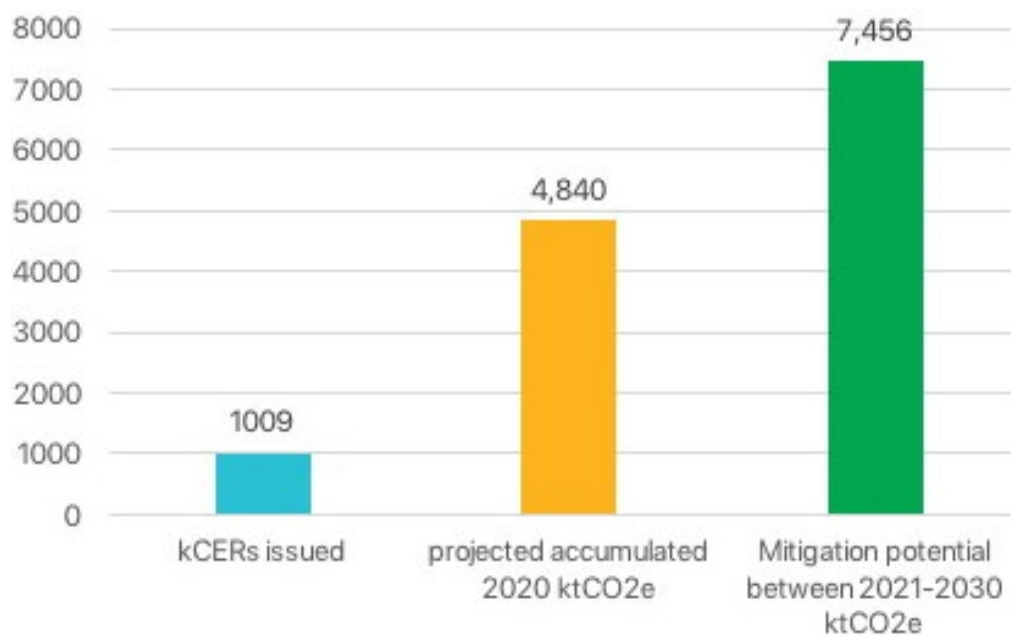
Total mitigation potential of registered activities by 2020 reaches 4.8 million CERs, including around 3.8 million CERs from PoAs and 1 million CERs from projects. The 2021–2030 mitigation potential could reach 7.4 million emission reductions of which 6 million are from PoAs and 1.4 million from projects, which shows the upscaling potential of PoAs

CDM Issuance by sector



¹ The Humbo Ethiopia Assisted Natural Regeneration Project (ref no. 2712) was deregistered from the CDM in May 2020

Issued CERs and 2020&2030 mitigation potential



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

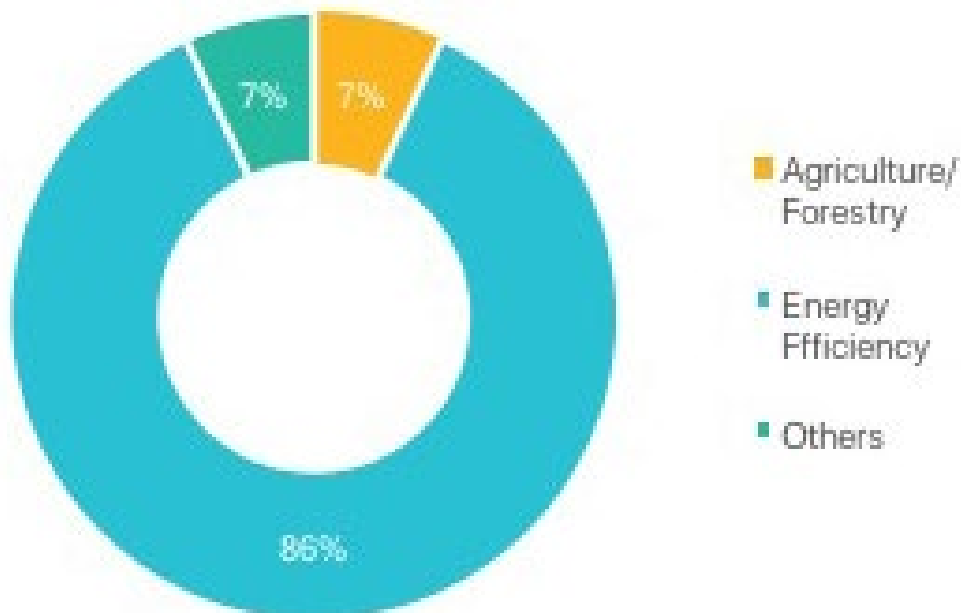
Activity Type	Sub-sector	No. of PA	No. of PoA	No. of CPA	Total issued kCERs	Projected accumulated 2020 ktCO ₂ e	Mitigation potential between 2021-2030 ktCO ₂ e
Overall		2	7	16	1009	4840	7456
Landfill gas	Landfill flaring	1				735	234
Methane avoidance	Waste water	1				285	1141
Reforestation	Reforestation				255		0
EE Households	Stoves		5	11	591	3,233	4510
	Solar lamps		1	3	128	215	633
Biomass energy	Gasification of biomass		1	2	34	371	939

Voluntary carbon standards

Key statistics/facts

- Ethiopia has 29 VCM activities that have issued close to 600,000 credits.
- Gold Standard (GS)
 - Hosts 27 GS activities (23 VPAs and 4 standalone projects);
 - 19 GS activities have issued 556,017 verified emission reductions (VERs)
 - Additionally there are: 24,458 issued GS CERs; 57,862 issued Planned Emission reductions (PERs).
 - The majority of GS activities (92%) are in the energy efficiency sector.
- VERRA/Voluntary Carbon Standard (VCS)
 - One project registered ,Bale Mountains Eco-region REDD+ project, with no issuance yet;
- Plan Vivo
 - One registered project, with 38,600 credits issued .

Registered Voluntary Carbon Standard activity by sector



Showcase Activity



Source: World Vision Ethiopia n.d.

The Energy Efficient Stoves Program (Ref no. 9769) is one of the first registered PoAs in Ethiopia , with 3 CPAs included. World Vision Australia is the Coordinating and Managing Entity (CME). The PoA focuses on distributing locally produced fuelwood-efficient stoves. The PoA issued more than half of the total CERs issued in Ethiopia, over 580,000 to date. It has an estimated mitigation potential of over one million tCO₂e by 2020 and an additional 0.78million tCO₂e between 2021- 2030 from existing CPAs. This could be significantly upscaled if new CPAs are added. The improved stoves deliver significant sustainable development benefits in terms of reducing deforestation, indoor air pollution, and time spent for collecting fuel wood.

CDM transition

What is at stake?

Most Ethiopian CDM activities may be eligible for transition, provided UNFCCC rules remain as in current draft documents. While Ethiopia has only attracted few CDM projects, but several PoAs which could be significantly scaled up with additional CPAs if the PoA frameworks would manage to transition to Article 6. Therefore, the post-2020 emission reduction potential may be much higher than the currently available data since several PoAs have been registered for a wide range of technologies, but only included a small number of CPAs. Moreover, we only count registered activities, whereas further activities have been applying for LoAs recently.

- Only 1 CDM project registered before 2012 (reforestation), that has since been de-registered. Between 2013 until 2016, 2 projects and 7 PoAs were registered. The latest CPA inclusion occurred in 2018.
- The 2 CDM projects will reach the end of their non-renewable crediting period in 2023 and 2026.
- 14 of the registered CPAs have a renewable crediting period of 7 years, 2 CPAs have 10 year crediting periods.
- Further CDM activities are currently undergoing validation, or are preparing CPA inclusions. In particular PoAs could be significantly upscaled in light of ambitious sectoral NDC targets.

In 2013, Ethiopia and Japan agreed to cooperate through the Joint Crediting Mechanism (JCM). 3 methodologies have been approved (2 renewable energy, 1 biomass combined heat and power plant) but no project has been registered so far (JCM Ethiopia – Japan, n.d.).

The World Bank Carbon Initiative for Development (Ci-Dev) is considering to apply the Standardized Crediting Framework to 2 pilot activities based on registered CDM PoAs (biogas and rural electrification) (UNEP DTU, 2020b). The Development Bank of Ethiopia (DBE) is the CME. Ci-Dev has agreed to purchase carbon credits generated by around 42,000 biogas digesters. Carbon revenues from Ci-Dev will support the National Biogas Program of Ethiopia to promote the use of biogas digesters, make them more affordable, and improve consumer confidence. Similarly, Ci-Dev has signed an emissions reduction purchase agreement (ERPA) with the DBE on July 14, 2016 for the purchase of approximately 800,000 CERs to be generated through to the end 2024 under the Ethiopia Off-Grid Renewable Energy PoA (Ci-Dev n.d.).

The African Development Bank has provided technical assistance to Ethiopia to develop a prototype methodology for the Adaptation Benefit Mechanism (ABM), which aims to be included under PA Art.6.8

Ethiopia's NDC update is expected to elaborate on the role of Article 6 for reaching NDC targets.

Role of CORSIA

CORSIA eligible activities: CDM: 1 project (waste water) / 7 CPAs (2 stoves, 3 solar lamps and 2 biomass gasification), GS: 12, VCS: 1

Ethiopian Airlines is the largest airline in Africa (CAPA, 2019) and could generate significant domestic demand for carbon credits. It is currently supporting REDD+ projects through its 'Plant one tree for every passenger flown' project' (UNEP 2018).

As of December 2020, Ethiopian Airlines has not yet decided whether to participate voluntarily in CORSIA's pilot phase (2021-2023) and first implementation phase (2024-2026).

While COVID19 is likely to delay CORSIA implementation, Ethiopian Airlines managed to retain a significant flight capacity through innovative approaches (e.g. retooling passenger planes to transport cargo).

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