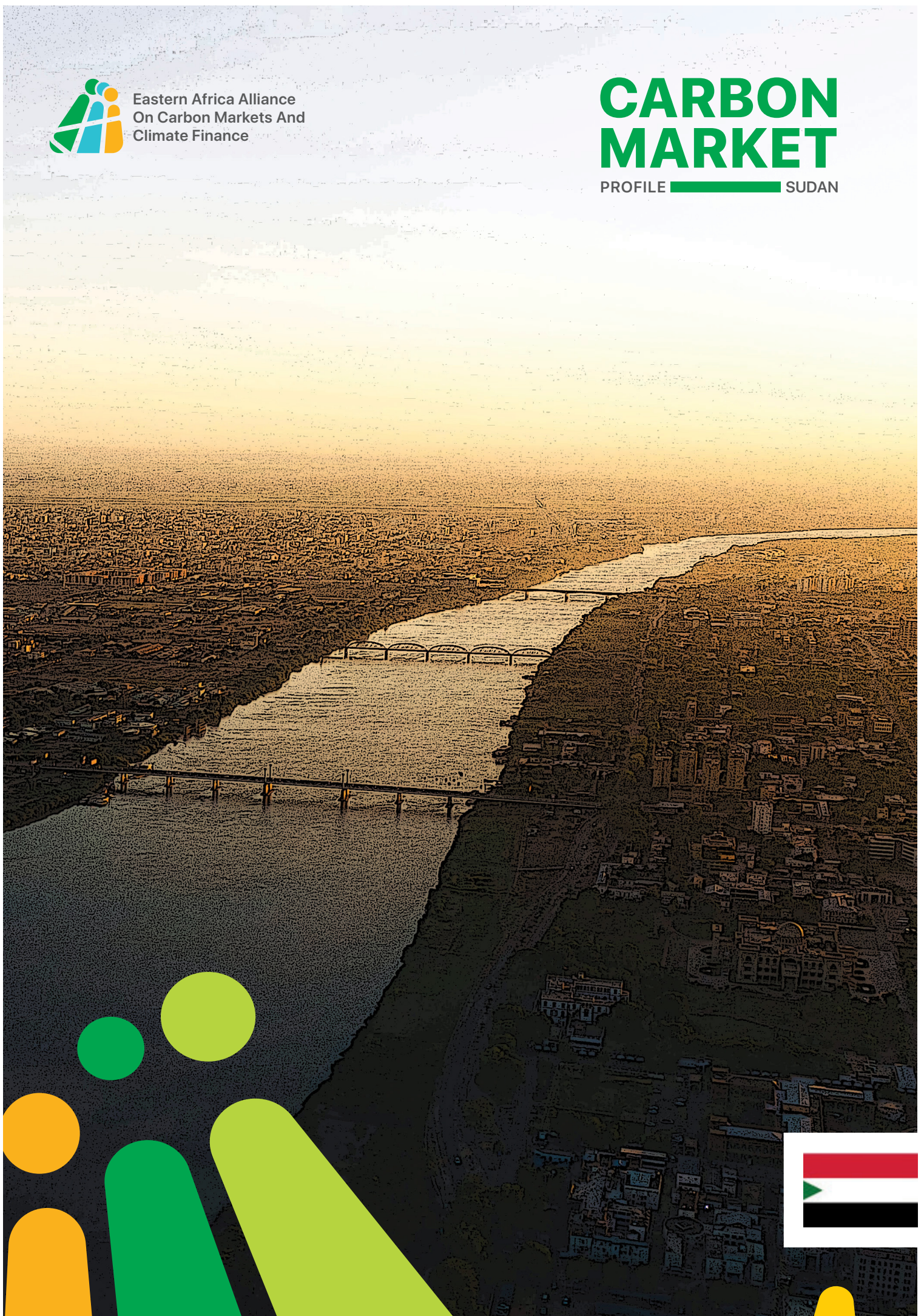




Eastern Africa Alliance
On Carbon Markets And
Climate Finance

CARBON MARKET

PROFILE  SUDAN



1. Introduction/Executive summary

Role of carbon markets in Sudan's NDC

- Sudan's updated NDC states her intention to contribute to mitigation efforts within the energy, forestry and waste sectors (Khartoum state only). This is in line with its national circumstances, development priorities and goals as stated in documents such as the Second National Communication (SNC), National Adaptation Plan (NAP) and Strategic Plan 2007-2033. Efforts aimed at transforming the NDC from a communication document into an action plan implementable within the timeframe for First NDCs (2021-2030).
- For climate action by 2030, for example, Sudan intends to integrate renewable energy in its power system by up to 20% (2610MW) (including solar rural electrification through installation of 1.1 million solar home systems), attain 25% forest coverage from the total area of Sudan (over 790,000 hectares to be planted annually) and overhaul the waste sector (collection, sanitary landfills and moving towards to zero waste).

- The country estimates that close to USD 12 billion in the form of finance, technology and capacity building will be required to support its mitigation climate actions. Regarding the use of Article 6, "*Sudan does not exclude using market-based-mechanisms in implementing its contributions if access to market mechanism is granted*".

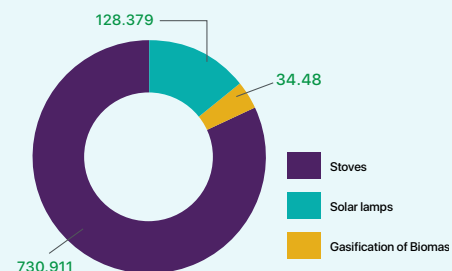
Sudan's Carbon Market Portfolio – key insights

- In total 368,399 carbon credits have been issued in Sudan from the Gold Standard (GS).
- Sudan hosts 4 registered CDM activities in wind power, biogas, and landfill composting, with the potential to generate an accumulated over 4.4 million Certified Emission Reductions (CERs) by 2025.
- There are 2 registered voluntary Gold Standard (GS) activities focused on energy efficiency through improved cookstoves

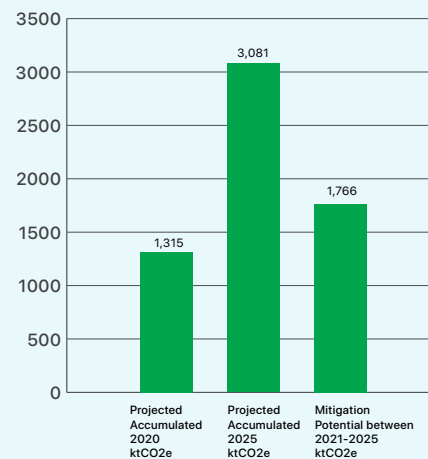
2. CDM portfolio and performance

- There are 4 registered CDM activities: 2 project activities and 2 component project activities (CPAs) within 1 single country Programme of Activity (PoA) all of which were registered after 2012.
- Sector-wise the CDM activities focus on wind power (100 MW grid connected power plant), biogas (household level treatment of animal manure and avoidance of fuel wood) and landfill composting (new composting plant next to an existing waste disposal site).
- Sudan has yet to issue any CERs.
- The total 2020 mitigation potential for registered CDM activities is 1.3 million CERs and an additional 1.7 million between 2021-2025. The registered CDM activities thus have a total accumulated mitigation potential of 3,08 million ktCO₂e by 2025.

CDM issuance by sector (kCERS)



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 2020 ktCO ₂ e	Mitigation Potential between 2021-2025 ktCO ₂ e
Overall		2	1	2	0	1,315	1,766
Wind	Wind	1	0	0	0	643	653
Landfill gas	Landfill composting	1	0	0		281	156
Methane avoidance	Domestic manure	0	1	2	0	391	957

CDM transition potential

- Sudan hosts only one registered single project, but also hosts two PoAs. The carbon credit issuance potential could be increased further if registered PoAs can be transitioned to Article 6 and new CPAs can be included. Moreover, the potential for scaling up and expanding the portfolio to additional technologies could be investigated further, focusing on NDC priority sectors.
- Most of Sudan's CDM activities may be eligible for transition, provided UNFCCC rules remain as in current draft documents. Once the Article 6.4 Supervisory Body has made available the transition process, Sudan will need to establish criteria and an approval procedure for activity transition aligned with UNFCCC rules. At the same, there is significant flexibility for host countries to determine how CDM activities may contribute to their NDC.
- Of the 2 registered single project activities, 1 (waste) expired the crediting period in 2021, which can be renewed. The crediting period of the wind project expires in 2025 and is not renewable.
- The renewal period of the PoA was until August 2021.
- All CDM activities were registered between 2013 and 2016, which enhances their likely of remaining available.

3. Voluntary carbon market portfolio and performance

Sudan has 2 VCM programmes that have issued 368,399 carbon credits, which are all registered under the Gold Standard.

Gold Standard (GS)

- Hosts 2 certified GS activities which are both improved cook stoves PoAs
- GS activities have issued over 368,399 VERs from both PoAs
- All registered GS activities have so far issued pre-2020 vintages

Showcase Activity

Fuel Efficient Stoves For North Darfur Women (GS ref no. 2896) Implemented by Haggar Holding Company (HHC) in partnership with Women Development Association Network WDAN). The EzyStove decreases cook time, facilitates 40% in wood savings, and reduces smoke emissions that are harmful to the eyes and lungs by 70%. This easy-to-assemble wood-burning cookstove has a replaceable fire chamber and the outer pot support structure has a projected ten-year lifespan. The project has issued 38,512 VERs and offers superior performance combined with a modern, desirable aesthetic, the EzyStove improves the quality of lives, preserves the environment, and saves lives for vulnerable communities (Gold Standard n.d.).



Source: Carbon Footprint n.d.

4. Article 6 readiness and piloting

Article 6 readiness

- Sudan's updated NDC stated that the country does not exclude the use of voluntary cooperation under Article 6 of the Paris Agreement.
- Sudan is actively engaging in the Eastern African Alliance on Carbon Markets and Climate Finance, and is cooperating with several development partners on Art.6 capacity building (e.g., GIZ Global Carbon Markets project).
- A key priority is the forest sector, where Sudan is planning to reforest large-scale areas.

Article 6 piloting

- Sudan has a partnership with the UN-

REDD programme. The country has recently moved from the readiness phase to the implementation phase of REDD+ at a subnational level in five states. This programme uses VCS methodologies, which will eventually result in significant post-2020 carbon credit issuances.

- Sudan is yet to host a pilot activity under the Paris Agreement article 6 pilot activities.

CORSIA Potential

- There are no CORSIA eligible carbon market activities at this time, although the PoAs could integrate new CPAs which may then be eligible.

References

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UNEP CCC (2022): CDM pipeline overview, <http://www.cdmpipeline.org/> (accessed August 2022)

UNEP CCC (2022b): Article 6 pipeline overview, <http://www.cdmpipeline.org/> (accessed August 2022)

VERRA (2022): VERRA all projects, downloaded from <https://registry.verra.org/app/search/VCS> (accessed August 2022)

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.



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