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# Carbon Credits for Planting Trees

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# Introduction: What is Carbon Credit?

- A carbon credit is defined as “a quantified environmental benefit that is designed to compensate for impacts to habitat, environmental functions, or ecosystem services.”  
– ***Arbor Day Foundation;***
- “A carbon credit is a tradable permit or certificate that provides the holder of the credit the right to emit one ton of carbon dioxide or an equivalent of another greenhouse gas – it is essentially an offset for producers of such gases. The main goal for the creation of carbon credits is the reduction of emissions of carbon dioxide and other greenhouse gases from industrial activities to reduce the effects of global warming” – ***Corporate Finance Institute;***
- :A carbon credit represents either the permanent removal of a tonne of CO<sub>2</sub>e from the atmosphere, or the avoidance of one tonne of CO<sub>2</sub>e being emitted in the first place, through changes in land use or energy generation” – ***Forest Carbon Ltd. UK***
- Carbon credits specifically refer to the reduction of the equivalent of one metric ton of carbon dioxide, avoided or sequestered by an entity to compensate for emitting that metric ton elsewhere;

# Introduction: What is Carbon Credit? (contd.)

- Carbon credits are market mechanisms for the minimization of greenhouse gases emission;
- Governments or regulatory authorities set the caps on greenhouse gas emissions. For some companies, the immediate reduction of the emission is not economically viable. Therefore, they can purchase carbon credits to comply with the emission cap.
- The introduction of such credits was ratified in the Kyoto Protocol. The Paris Agreement validates the application of carbon credits and sets the provisions for the further facilitation of the carbon credits markets.
- One of the most effective ways of removing carbon from the atmosphere is planting trees, which as they grow turn CO<sub>2</sub> into solid carbon stored in their trunks and roots.



# Carbon Credits from Trees



- Carbon credits are realized when trees take in carbon from the atmosphere and store it in the tree and soil.
- For a forestry carbon project to qualify as a verified emissions reduction and be claimed as an offset, stringent rules must be met.

# Carbon Credits from Trees (contd.)

- **Permanence:** Simply stated, this makes sure the project will last.
- **Risk Buffer:** The percentage of carbon credits that are withheld from the marketplace and reserved in a buffer account to compensate for any unanticipated loss of verified carbon benefits due to natural disasters or human-caused events down the road.
- **Additionality:** This refers to the amount of carbon dioxide captured, stored, or prevented from reaching the atmosphere compared to what would happen without the project.
- **Measurement and Monitoring:** Periodic field measurements of forest growth and associated capture and storage of carbon as well as, in some cases, analysis of satellite imagery and models of forest growth and deforestation are required.
- **Verification:** Carbon benefits must be verified by an accredited independent third party. This typically occurs annually throughout the life of a project to ensure it meets its intended goals of carbon storage and that all additionality, measurement, leakage, and permanence requirements are being met.
- **Leakage:** Carbon leakage occurs when the emissions avoided or reduced by one project or one region are pushed to another area that does not have rigorous climate policy.

# Carbon Credits from Trees (contd.)

- There are three forestry options available for verified carbon credits **afforestation/reforestation, improved forest management, and avoided conversion**
- **Afforestation** - Creating forests on land that was previously un-forested;
- **Reforestation** - Restoring forests on land that was once forested;
- **Avoided Conversion** - Preventing the loss of existing forests to non-forest use by protecting or enhancing the forest cover.
- **Improved Forest Management** - Quantifying the greenhouse gas removals generated from preventing logging of forests that would have been logged in the absence of purchasing the forestry carbon credit;
- **Urban Forestry Carbon Credits** - Receiving carbon credits and other quantified benefits (stormwater runoff, energy savings, etc.) for urban tree planting while helping cities fund investments in healthy urban tree canopies.

# Carbon Trading/Carbon Markets

- Carbon trading is a market-based system designed to reduce the greenhouse gas emissions that contribute to global warming, especially carbon dioxide, by creating a financial incentive to do so;
- **Carbon markets** aim to reduce greenhouse gas (GHG, or “**carbon**”) emissions cost-effectively by setting limits on emissions and enabling the **trading** of emission units, which are instruments representing emission reductions;
- “The term carbon trading is most often used to describe the compliance market that exists for carbon credits within a regulated scheme, such as the European Union Emissions Trading Scheme (EU ETS), California’s greenhouse gas scheme or the Regional Greenhouse Gas Initiative (RGGI) in the north eastern United States” – ***Native Energy Corporation***;
- These mandatory schemes require businesses whose emissions exceed a defined threshold, or who operate in specific industry sectors such as fossil fuel-fired power plants, to obtain an allowance, or credit, for each tonne of carbon dioxide equivalent that they emit annually;
- Participants may receive an initial allocation of **carbon** credits free of charge, or enter an auction to buy them. Businesses who subsequently reduce their emissions can sell their excess **carbon** credits to other participants whose emissions have increased, thereby commoditizing **carbon** and creating a **market**;



# Types of Carbon Markets

- Two types of carbon markets exist: the ***Regulatory Compliance Market*** and the ***Voluntary Market***;
- The Regulatory Compliance Market - used by companies and governments that by law have to account for their GHG emissions. It is regulated by mandatory national, regional or international carbon reduction regimes;
- The three Kyoto Protocol mechanisms are very important for the regulatory market: Clean Development Mechanism (CDM), Joint Implementation (JI) and the EU Trading System (ETS);
- Developing countries can only participate in the CDM, usually through small-scale AFOLU projects;
- The CDM market has quite complex procedures and methodologies for project registration and the majority of agriculture and forestry and “Reducing Emissions from Deforestation and Degradation” (REDD) projects are excluded under the Kyoto Protocol;
- However, these have been included in the Paris Agreement.

# Types of Carbon Markets (contd.)

- **The Voluntary Market** - trade of carbon credits is on a voluntarily basis;
- The voluntary carbon market relies on the creation of carbon offsets, which can be bought by any business, organization or individual to offset their own greenhouse gas emissions on a voluntary basis.
- The buyers in the voluntary carbon market are often organizations that have already implemented carbon reduction plans to minimize emissions from their business activities as far as possible. To achieve 'zero emissions', carbon neutrality, or other corporate social responsibility (CSR) targets, they choose to buy carbon offsets from a scheme that has reduced or avoided emissions elsewhere.
- The sellers in the voluntary carbon market are project developers who design and implement real-world carbon reduction projects in accordance with the requirements of one of the voluntary standard bodies. Each tonne of CO<sub>2</sub> emissions avoided can be sold as a carbon offset, compensating for a tonne of CO<sub>2</sub> emitted elsewhere.
- Because the voluntary market is global and fragmented, many project developers sell offsets through a retailer or broker, who takes responsibility for promoting the offsets and finding buyers.

# Types of Carbon Markets (contd.)

- The voluntary market has become very important for agriculture and forestry projects;
- Carbon credits on the voluntary markets are called Verified Emission Reductions (VER);
- Voluntary carbon credits (VER) are mainly purchased by the private sector;
- Corporate social responsibility (CSR) and public relations are the most common motivations for buying carbon credits;



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# Reducing Emissions from Deforestation and forest Degradation

- REDD+
- Reducing carbon emissions from deforestation;
- Reducing carbon emissions from forest Degradation;
- +
- Conservation of forest carbon stocks;
- Sustainable management of forests; and
- Enhancement of forest carbon stocks.



## Reducing Emissions from Deforestation and forest Degradation (contd.)

- **Phase 1: Readiness:** Countries design national strategies and action plans with relevant stakeholders, build the capacity to implement REDD+, work on REDD+ related policies and measures, and design demonstration activities;
- **Phase 2: Demonstration:** National strategies, policies and action plans proposed in Phase I are demonstrated and tested. This may include results-based demonstration activities and may require additional capacity building, technology development and transfer.
- **Phase 3: Implementation:** Results-based actions are implemented at the national level and results are fully measured, reported and verified. Countries can access results-based payments (Carbon Credits) when they have completed the reporting, assessment and analysis processes under the UNFCCC.

# Opportunities for Nigeria

- Carbon Offsets;
- REDD+; And
- To earn carbon credits from planting trees, there must be:
  - Projects;
  - Carbon Standards;
  - Carbon Markets;
  - Regulations (backed by legislation);

# Concluding Remarks

- **We cannot solve the issue of climate change without restoring our forests globally;**
- Forests and trees are not the only way to solve complex local and global issues;
- However, forests and trees may be the simplest solution;
- They form part of Natural Capital.



**THANK YOU**

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**Making our Future the Cause of the Present**