Clean Technology Hub
energy innovation centre

# CARBON MARKET GLOSSARY

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## WHAT IS CARBON MARKET AND CARBON CREDIT

**Carbon Markets** are trading systems in which carbon credits are sold and bought. One tradable carbon credit equals one tonne of carbon dioxide or the equivalent amount of a different greenhouse gas reduced, sequestered or avoided.

Carbon credits, also known as carbon offsets, are permits that allow the owner to emit a certain amount of carbon dioxide or other greenhouse gasses.

**TYPES OF CARBON MARKET:** There are two types of carbon markets: compliance and voluntary. **Compliance markets** are created as a result of any national, regional and/or international policy or regulatory requirement. **Voluntary carbon markets** refers to the issuance, buying and selling of carbon credits, on a voluntary basis between national and international parties.

## WHY IS CARBON MARKET IMPORTANT ?

The Carbon Market is important because it is a tool that provides a flexible mechanism intended to reduce carbon dioxide ($CO_2$) emission targeted at global warming. Carbon finance will be key for the implementation of the National Determined Contributions, and the Paris Agreement enables the use of such market mechanisms through Article 6.

That's why, around the world, interest in carbon markets is growing – 83 percent of NDCs state the intent to make use of international market mechanisms to reduce greenhouse gas emissions.

Article 6 of the Paris Agreement recognizes that countries can use the route of voluntary cooperation in the implementation of their Nationally Determined Contributions to enable higher mitigation ambitions and to promote sustainable development. Article 6.2 summarizes the possibility of cooperative approaches and the transfer of Internationally Transferrable Mitigation Outcomes (ITMOs) between different actors such as countries and private sector companies, through bilateral agreements. ITMOs use a carbon dioxide equivalent ($CO_2e$) metric for a new set of market provisions or other greenhouse gas mitigation outcomes that are defined under Article 6.2 of the Paris Agreement.

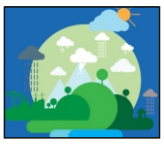
The set out mechanisms under Article 6.2 on cooperative approaches further highlights that beyond emissions reductions, climate mitigation projects can directly or indirectly capitulate many development benefits ranging from job creation, technology transfer to increase access to energy, support to livelihoods and food security, gender empowerment etc.

## LANDSCAPE MAPPING OF NIGERIA CARBON MARKET

For Nigeria, there are discussions on going towards agreeing on the processes and methodologies that the country needs to follow to access the carbon market. Nevertheless, being that it is a new space in the energy sector in Nigeria, there are challenges that are likely to occur. Some of the major challenges Nigeria may face or have concerns are on transparency, issues relating to double-counting of GHG emission reductions, human rights abuses, and greenwashing which companies may falsely market their green credentials, for example, misrepresentation of climate-neutral products or services. Therefore, for Carbon Market to succeed in Nigeria, integrity is the key, there needs to be transparency from all parties involved.

In Nigeria, Carbon Credit is impacted by the United Nations Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement. The Climate Change Act, 2021 also establishes a legal framework for Nigeria to develop climate change mitigation and adaptation strategies. In addition, with the government commitment to climate change and the introduction of the ACMI, Nigeria should be able to receive funding through the African Development Bank's Carbon Support program, which is designed to help its member nations access carbon financing in order to guarantee the profitability of their investments. Nigeria can also choose to auction its permits to companies. The resulting fiscal revenue can be reinvested in a variety of ways, such as funding clean energy initiatives, other climate action programs or compensating low-income households.

## GLOSSARY ON CARBON MARKET TERMS.



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### Adaptation

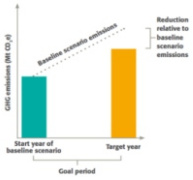
Preparing for new environmental conditions.

### Additionality

A project must demonstrate that more carbon than normal is retained.

### Afforestation

this is the planting of new forests on lands that historically have not contained forests




### Baseline Scenario

the term baseline scenarios refers to scenarios that are based on the assumption that no mitigation policies or measures will be implemented beyond those that are already in force and/or are legislated or planned to be adopted.

### Biodiversity

Biological diversity means the variability among living organisms from all sources, including diversity within species, between species and ecosystems

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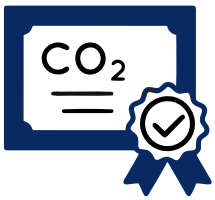
## Biofuel

Any fuel that is derived from biomass such as plant or algae material or animal waste. Since such feedstock material can be replenished readily, biofuel is considered to be a source of renewable energy.


## Blue Carbon

Blue Carbon is the term used to describe carbon captured by the world's ocean and coastal ecosystems, methodologies for carbon mangrove and seagrass.




## Cap-and-Trade

A government regulated carbon market that places a limit on GHG emissions.


## Carbon Budget

The amount of CO2 the world can emit while still having a likely chance of limiting warming to the 2°C target.

## Carbon cycle

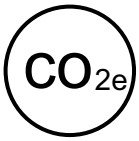
The way carbon moves through the atmosphere, oceans and land.


## Carbon credit

Standardized unit that equals one metric ton of CO2e from a carbon offset project.


## Carbon dioxide (CO2)

The most important GHG. Industry, electricity and transportation are major sources of this gas.




## Carbon dioxide equivalent (CO2e)

Amount of any GHG with similar warming to an amount of CO2.

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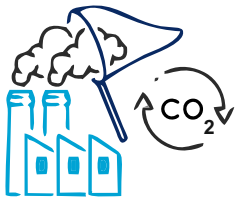



## Carbon Capture and Storage (CCS)

A process in which a relatively pure stream of carbon dioxide (CO2) from industrial and energy-related sources is separated (captured), conditioned, compressed and transported to a storage location for long-term isolation from the atmosphere. Sometimes referred to as Carbon capture and storage.

## Carbon Capture and Utilization/Use (CCU)

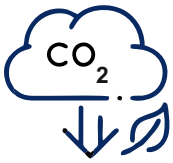
A process in which CO2 is captured and then used to produce a new product.

## Carbon flux

The fluctuations of CO2 in the atmosphere, oceans and land.

## Carbon footprint

The total amount of GHGs caused by a person or organization.




## Carbon Intensity

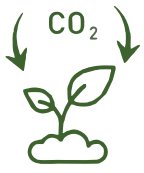
The amount of emissions of carbon dioxide (CO2) released per unit of another variable such as gross domestic product (GDP), output energy use or transport.


## Carbon market

A system to reduce GHGs by putting a price on carbon and trading carbon credits.


## Carbon Neutral

Carbon neutrality, or having a net zero carbon footprint, refers to achieving net zero carbon emissions by balancing a measured amount of carbon released with an equivalent amount sequestered, avoided or offset.




## Carbon offset

Reducing sources of GHGs, or increasing storage of GHGs, to compensate for other GHG emissions.

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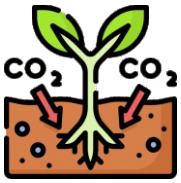
## Carbon Offset Standard

A standard that helps to ensure that carbon offset projects meet certain quality requirements, such as additionality and third party verification.

## Carbon registry

Independent authority that approves, lists, and tracks a carbon credit's ownership



## Carbon sequestration

This is the storage of carbon for a long time.

## Carbon sink

A source that removes CO2 from the atmosphere.

## Carbon source

A source that places CO2 into the atmosphere.

## Certified Emission Reduction (CER)

a carbon credit created by a Clean Development Mechanism (CDM) project. One CER corresponds to one ton of CO2e emission reductions.


## Carbon tax

A fee for GHG emissions.


## Clean Development Mechanism ( CDM)

A mechanism defined under Article 12 of the Kyoto Protocol through which investors (governments or companies) from developed (Annex B) countries may finance greenhouse gas (GHG) emission reduction or removal projects in developing countries (Non-Annex B), and receive Certified Emission Reduction Units (CERs) for doing so.

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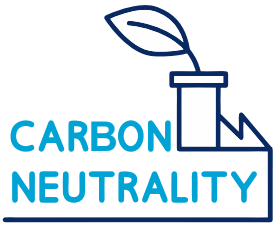
## Climate change

Changes in weather trends over time. The Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.'

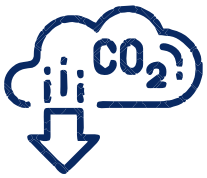



## Climate Neutrality

Concept of a state in which human activities result in no net effect on the climate system. The same concept as carbon neutrality but rather than solely focusing on CO2 emissions, it extends to zero net anthropogenic greenhouse gas emissions (i.e. including emissions beyond carbon dioxide)


## CO2 emissions

Release of CO2 into the atmosphere.




## Decarbonisation

The process by which countries, individuals or other entities aim to achieve zero fossil carbon existence. Typically refers to a reduction of the carbon emissions associated with electricity, industry and transport.

## Deforestation

Conversion of forest to non- forest

## Ecosystem services

Benefits from nature such as forest products, clean air and water, carbon storage and recreation opportunities.


## Emission Reduction Ton (ERT)

The reduction or removal of one metric tonne of carbon dioxide equivalent from the atmosphere (CO2).

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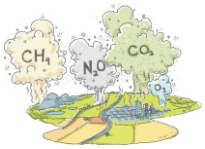
## Emission Trading

the buying and selling of allowances for pollutant emissions




## Greenhouse gasses (GHG)

Molecules in the atmosphere that retain heat, resulting in the greenhouse effect.

## Environmental, Social, and Corporate Governance (ESG)

Business and investment behaviors that promote environmental sustainability and social equity.

## Leakage

A project must demonstrate that carbon is not being released somewhere else.


## Greenwashing

The use of false or misleading promotion and marketing to exaggerate an organization's environmental or sustainable activities.

## Mandatory (Compliance) Market

Mandatory (compliance) markets are governed by national, regional, or provincial law and compel emission sources to meet GHG emission reduction targets.

## Greenhouse effect

Process that warms the planet from the sun by trapping heat in the atmosphere.

## Mitigation

Reducing sources of greenhouse gasses (GHG) or increasing storage of GHGs.

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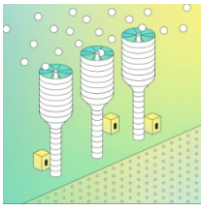


## Permanence

A project must demonstrate that carbon is retained for a long time.


## Regulated carbon market

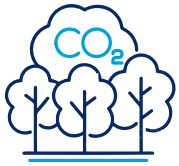
Where members are legally obligated to reduce their emissions.

## Verified Emission Reduction (VER)

Carbon credit generated by a project that has been independently validated outside of the Kyoto Protocol

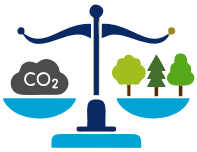

## Verification

An authorized third-party auditor conducts an impartial review of the carbon offset project design and baseline calculations prior to the start of project activity.




## Verifiable Offsets

Carbon offsets that can be quantified, tracked, and validated are known as verifiable offsets. (This is one of four factors to consider when acquiring carbon offsets.)




## Voluntary Carbon Market (VCM)

A carbon market in which members are not legally compelled to reduce their emissions but do so voluntarily.