MARKET OPPORTUNITIES FOR FORESTRY AND WOOD PRODUCTS: BENEFITTING FROM CARBON SEQUESTRATION – LESSON FROM GREEN RESOURCES

IRINGA FORESTRY INVESTMENT FORUM

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This presentation (content)

1. The Carbon Emission Concept (What?)
2. Carbon Credit Cycle and Process (How?)
3. Offset mechanism and standards (How?)
4. Additionality and other condition
5. Carbon Pricing
6. Business Opportunities
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8. Offsetting Challenges
9. Potential Obstacle of Realizing Credits in TZ
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Carbon Emissions Trading – What is this beast?

- **A carbon offset (offsetting)**
  - A way to reduce unavoidable emissions funding emissions reductions in a different location.
  - Support transition to low carbon future
  - providing a source of finance for carbon reduction projects
  - Achieved by purchasing and cancelling carbon credits.
  - 1 Carbon Credit = removal of 1 tonne of CO_2 (tCO_2e) from the atmosphere
- **Carbon emissions trading i**
  - Targets **carbon dioxide emissions** (calculated in tCO_2e)
  - It currently constitutes the bulk of emissions trading.
  - common method countries utilize in order to meet obligations of reducing emissions
  - A polluter purchase **the right to emit** and
  - the entity/country having fewer emissions **sells right to emit** carbon to other countries/entities
- Vital to companies and individuals unable to reduce emissions to zero
- Examples of Carbon Credits:
  - CER - Certified Emission Reductions certified by the UNFCCC CDM
  - VER - Verified Emission Reductions certified by the Gold Standard
  - VCU - Voluntary Carbon Unit certified by Verra VCS

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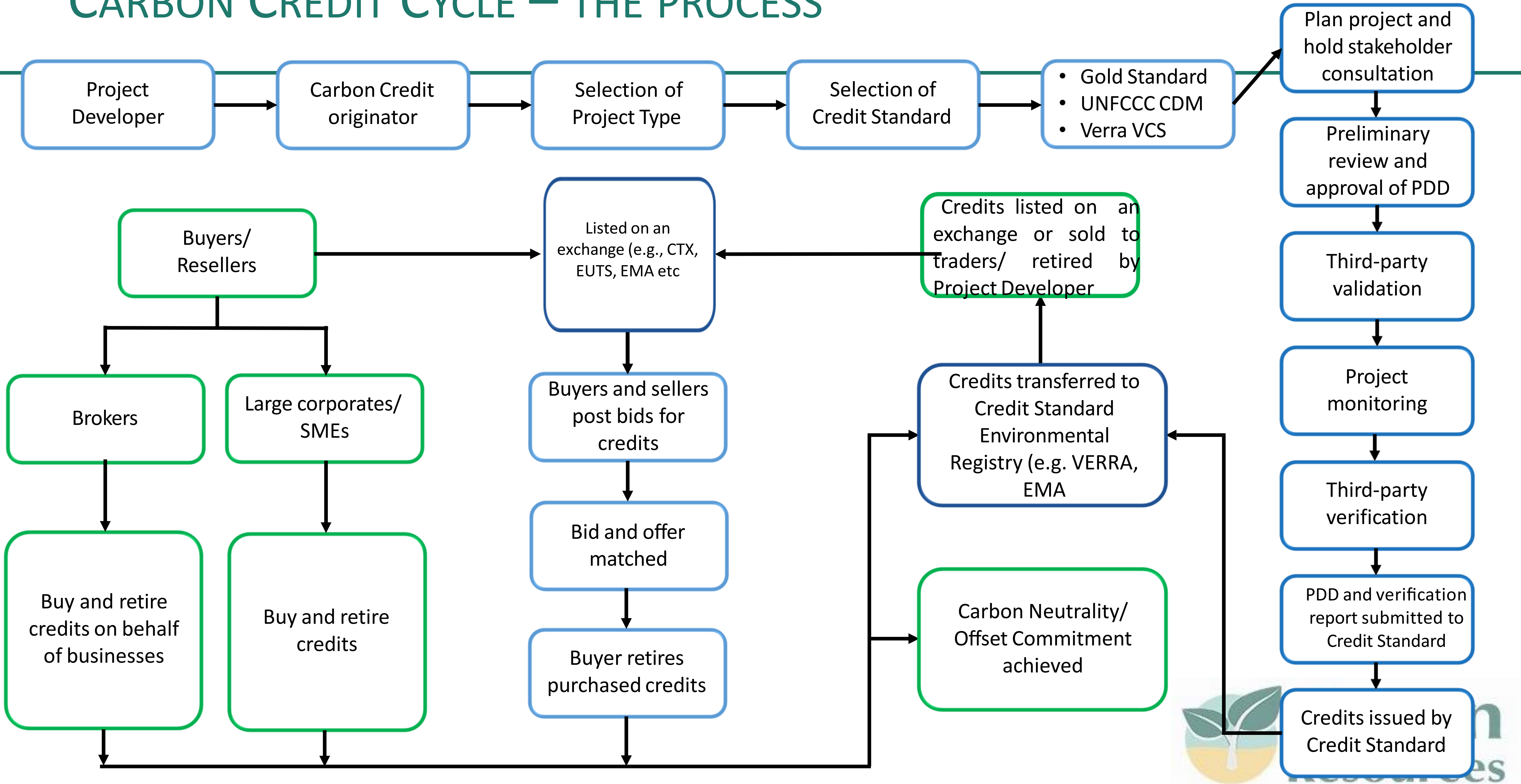
CARBON CREDIT CYCLE – THE PROCESS



Carbon Offset Mechanisms & Standards

- Each project has to be approved and aligned to a particular carbon scheme and standard
- 2 types of carbon mechanisms with various standards under them,
  - Mandatory (compliance) &
  - Voluntary programs

Compliance markets (Produces CERs)

  - Created and regulated by mandatory national, regional or international carbon reduction regimes e.g the UN Kyoto Protocol
  - Aimed at 'energy intensive' emitters
  - Only accepting afforestation / reforestation projects
  - CERs can be traded on voluntary market but VERs cannot be traded on compliance market
  - Highly regulated / complicated administration
  - EU ETS by far the biggest CER market but does not allow

Carbon Offset Mechanisms & Standards

- **Voluntary market (produces VERs)**
  - Allows **companies and inviduals** to purchase carbon offsets to fulfill their neutrality pledges
  - Several verification standards (VCS leading standard)
  - Lower transaction costs, allows smaller projects to enter
  - Accepts all forestry carbon projects (including REDD+)
  - Positive outlook on both market size and selling price, driven by net zero commitments
    - LULUCF and "natural climate solutions" are expected to form a bulk of demand for VERs (currently 30-50%)
    - CORSIA (compulsory for aviation industry) → likely to increase demand post-Covid
- Vital to supplement national commitments falling short of Paris Agreement ambition

2019

	VOLUME $MtCO_2e$	AVERAGE PRICE	VALUE
FORESTRY AND LAND USE	36.7	$4.3	$159.1M
RENEWABLE ENERGY	42.4	$1.4	$60.1M
WASTE DISPOSAL	7.3	$2.5	$18.0M
HOUSEHOLD DEVICES	6.4	$3.8	$24.8M
CHEMICAL PROCESSES/ INDUSTRIAL MANUFACTURING	4.1	$1.9	$7.7M
ENERGY EFFICIENCY/FUEL SWITCHING	3.1	$3.9	$11.9M
TRANSPORTATION	0.4	$1.7	$0.7M

hat didn't provide price data.

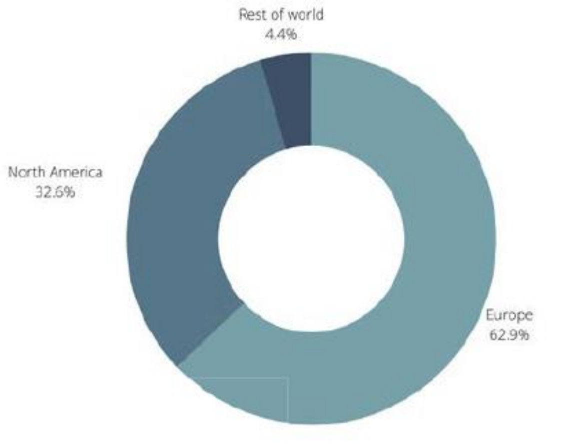


Figure 1. European & North American Buyers' Share of 2019 Voluntary Offset Purchases

ADDITIONALITY CRITERIA

- “Additional” encompasses several criteria:
  - Not required by law.
  - Could not **have been built without the existence of a carbon market (revenue from credits)**.
  - the **technology** underlying the project produces less greenhouse gas than the technology that is typically used in comparable circumstances

- How to test Additionality with critical questions:
  - **Without offset revenues**, is the **return on project investment too low** for the project owner to make the investment?
  - **Without offset revenues**, does the **project owner lack access to the capital to make the investment**?
  - Are there **other barriers to implementation**—technical barriers, for example—that offset revenues can overcome?
  - Is the project the **first or substantially the first of its kind** in the particular market or region?

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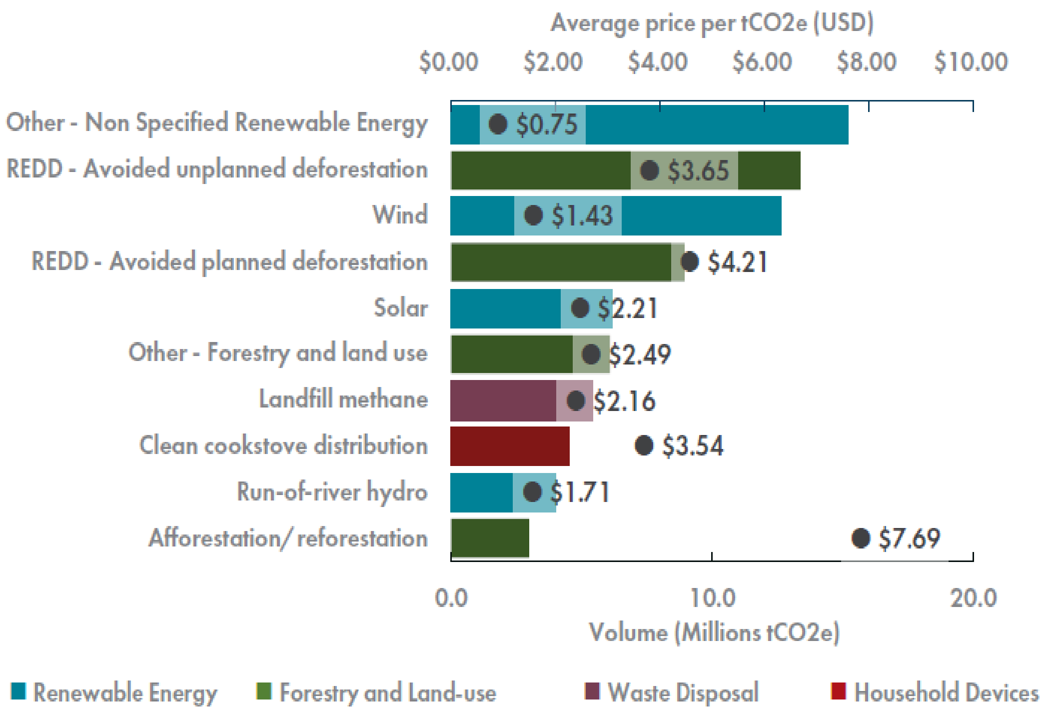
CARBON PRICING

- Pricing ranging from $2-10/ton
- Unregulated market and
- pricing often confusing
- Most VERs sold via brokers (25-30% commission)
- but possibilities exist for direct transactions
- The VCS market seems to base its pricing on a number of factors:
  - Vintage & volumes”, i.e. when was the credit generated
  - Project type/sector”
  - SDGs and social Impacts” –Secondary benefits
  - NGO criticism
  - Geographical region/country
  - Markets dynamic – supply and demand

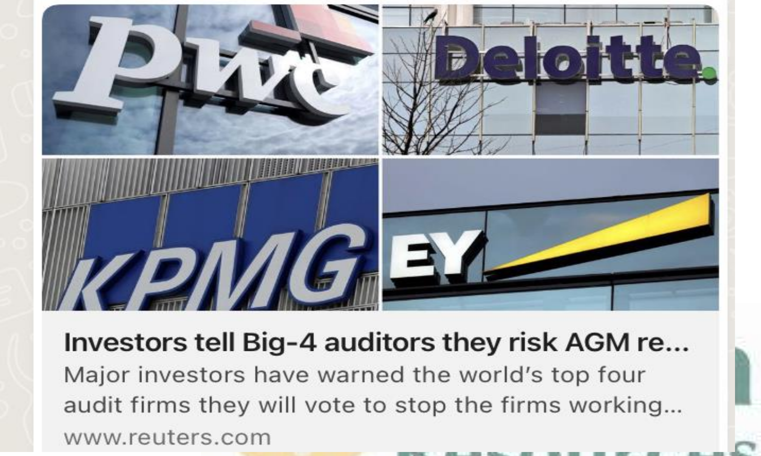
Figure 6. Top 10 Project Types by Volume Voluntary Carbon Credits, 2019



Source: Forest Trends’ Ecosystem Marketplace.

Business opportunities

- Market liberalisation in international carbon trading
- Increasing global demand & Higher demand in A/R project
- 42% of credit market is forestry (World Bank, State and Trends of Carbon Pricing 2020)
- Increased commitments to finance low-carbon development projects
- UN 2019: "130 Banks with $47 trillion in assets commit to Responsible Investment Principles including ESG's"
- 20% of the world's largest 2000 publicly traded companies have set net-zero commitments
- Voluntary offsets need to grow 15-fold by 2030 in order to meet demand
- Dalberg estimates that Tanzania has a potential to supply 10 million tCO_2e annually worth TSh 120bn or



OFFSETTING CHALLENGES

- Voluntary market highly fragmented (traders, agents, price flactuations)
- Time consuming to obtain project, volume and pricing information
- High costs of carbon assessments and verification (+/- USD 100,000)
- Low experience/inadequate experts – carbon accounting methodologies
- ESG Compliance
- NGO criticism on exotic monoculture plantations (A/R)

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POTENTIAL OBSTACLES ON REALIZING CREDITS IN TZ

- Community revenue sharing inaccurately treated as profit sharing by TRA instead of operating expenditure
- Legal uncertainty: Legally define VERs as service and VERs transaction as the supply of an exported service in VAT policy
- Low developers margins: Developers and investors cannot afford VAT on domestic VERs – need to considered it as zero-rated supplied services in Tax Act
- Any additional tax charges will disincentivized developers and investors

TAPPING THE OPPORTUNITY-TANZANIA

- Government-Private Sector Partnership (PPP)
- NPs and GRs are included in the NDC
- Finance Blending: TZ qualify to access global climate finance to deliver Nationally Determined Contributions (NDCs)

"....and so we call upon an urgent unlocking of climate financing that will trigger planned targets and implementation of the NDC. The time to act is now..."
-H.E. President Samia Suluhu Hassan, November 2021 at COP26

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