VIYACRED
Land Restored, Legacy Secured

Viya Cred ($VIYA)

WHITE PAPER

WWW.VIYACRED.COM

JUNE 2025

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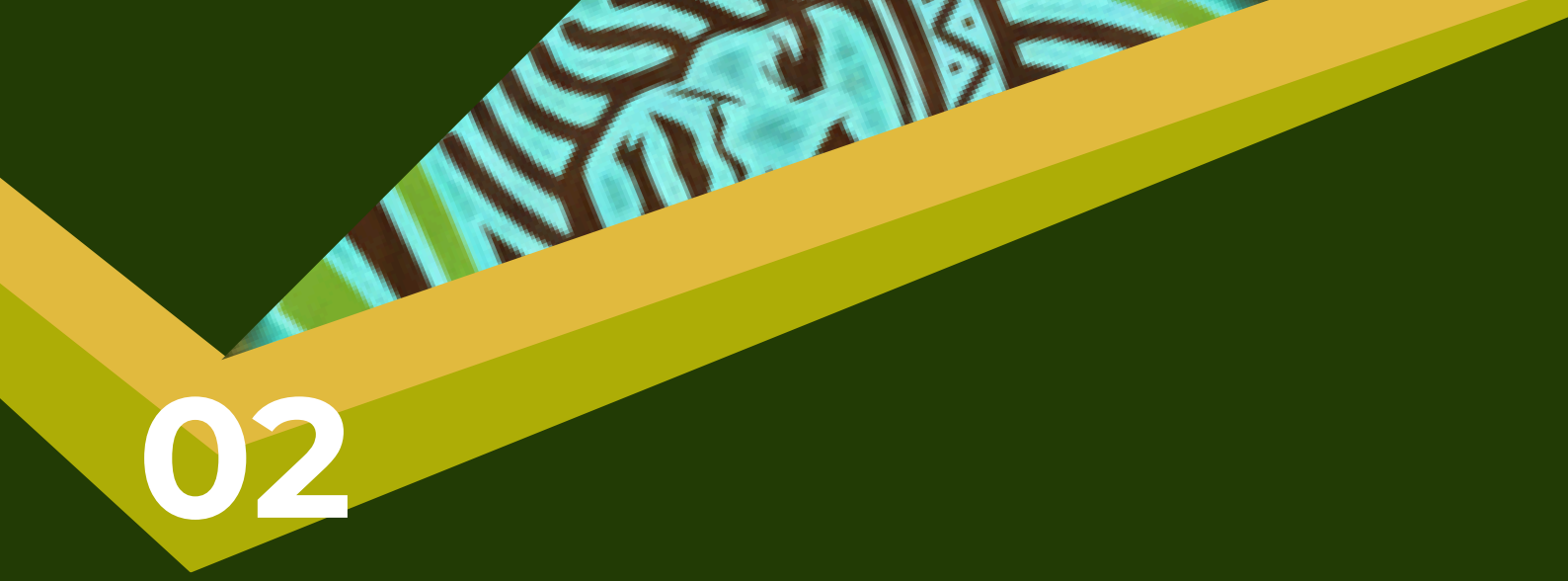
Abstract

Viya Cred is a decentralized, nature-tech protocol designed to unlock the ecological and economic potential of Nigeria's vast landscapes. The protocol addresses critical failures in the voluntary carbon market —namely, lack of transparency, issues with permanence, and the exclusion of small-scale landowners. By integrating a proprietary "Digital Twin" for high-fidelity Monitoring, Reporting, and Verification (MRV) with the economic incentives of a native utility token, $VIYA, we are creating a new asset class: a truly verifiable, transparent, and inclusive carbon credit. The $VIYA token, built on a sustainable Proof-of-Stake blockchain, serves as the protocol's core medium of exchange, rewarding landowners for proven carbon sequestration and enabling corporations and partners to invest directly in tangible, auditable climate action. This paper outlines the Viya Cred ecosystem, its technological architecture, its robust tokenomic model, and its roadmap to regenerate 10 million hectares of land while empowering one million landowners.



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Introduction:

(The Twin Crises of Climate and Credibility)

The global imperative to mitigate climate change has catalyzed the growth of the voluntary carbon market (VCM), a crucial tool for channeling private capital into environmental projects. However, the VCM is plagued by a crisis of credibility. Reports of double-counted credits, projects that fail to deliver on their promises (additionality), and sequestered carbon being quickly re-released (non-permanence) have eroded trust and hampered scalability.

Simultaneously, the existing model often excludes the very stewards of the land who are best positioned to drive regeneration. In Nigeria, a nation with approximately 92.4 million hectares of land, millions of rural and peri-urban landowners lack access to the financial incentives required to adopt regenerative practices.

Meet Adanna, a smallholder farmer in Enugu State. Her 2 hectares of fallow land, once a liability, are now a source of new income. By partnering with Viya Cred to reforest it with native trees, she is helping restore her local watershed. For every ton of carbon her growing trees capture, verified by the Viya Cred platform, she earns $VIYA tokens directly to her phone, providing a new, sustainable livelihood for her family.

Viya Cred is born from this context, offering a solution that addresses both the climate crisis and the credibility crisis. We are not merely creating another carbon credit; we are building a transparent economic engine for ecological restoration.

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The Market Opportunity:

(A Multi-Billion Dollar Imperative)

The demand for high-quality carbon credits is growing exponentially. As corporations and nations race to meet Net Zero commitments, the VCM is undergoing a profound shift from a niche market to a global environmental commodity exchange.

- **Market Scale:** The VCM was valued at approximately $2 billion in 2023 and, according to projections from major analysts like BloombergNEF, is expected to grow to between $50 billion and $100 billion by 2030.
- **Demand for Quality:** A significant portion of this growth is driven by demand for high-integrity, nature-based credits that are transparent, verifiable, and deliver real social co-benefits. This is precisely the market segment Viya Cred is designed to lead.
- **Nigeria's Potential:** With its vast land resources, Nigeria has the potential to become a globally significant supplier of these high-quality credits, sequestering hundreds of millions of tons of CO_2 while driving sustainable development. Viya Cred aims to unlock this potential.

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Competitive Landscape and Viya Cred's Edge

Viya Cred operates at the intersection of traditional carbon markets and emerging blockchain solutions. Our competitive advantage lies in our ability to combine the best of both worlds while solving their respective weaknesses.

Feature	Traditional VCM (e.g., Verra)	Early Blockchain VCM (e.g., Regen)	Viya Cred
MRV Methodology	Manual, expensive, infrequent audits. Opaque process.	Early Blockchain VCM (e.g., Regen)	Automated, continuous MRV via AI-powered Digital Twin.
Smallholder Access	Largely excluded due to high costs and complexity.	On-chain attestations, often relies on self-reporting.	Designed for inclusion with mobile-first onboarding & local support.
Permanence Risk	Managed via buffer pools, but can be opaque.	Often addressed via tokenomics or insurance pools.	Transparent, on-chain Buffer Pool with automated retirement.
Land Tenure	Requires formal legal title, excluding customary land.	Blockchain agnostic to formal tenure.	Multi-layered verification for both statutory and customary land.
Transparency	Data is siloed in private registries.	High on-chain transparency.	High on-chain transparency linked to high-fidelity off-chain data.

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05 The Solution:

(The Viya Cred Ecosystem)

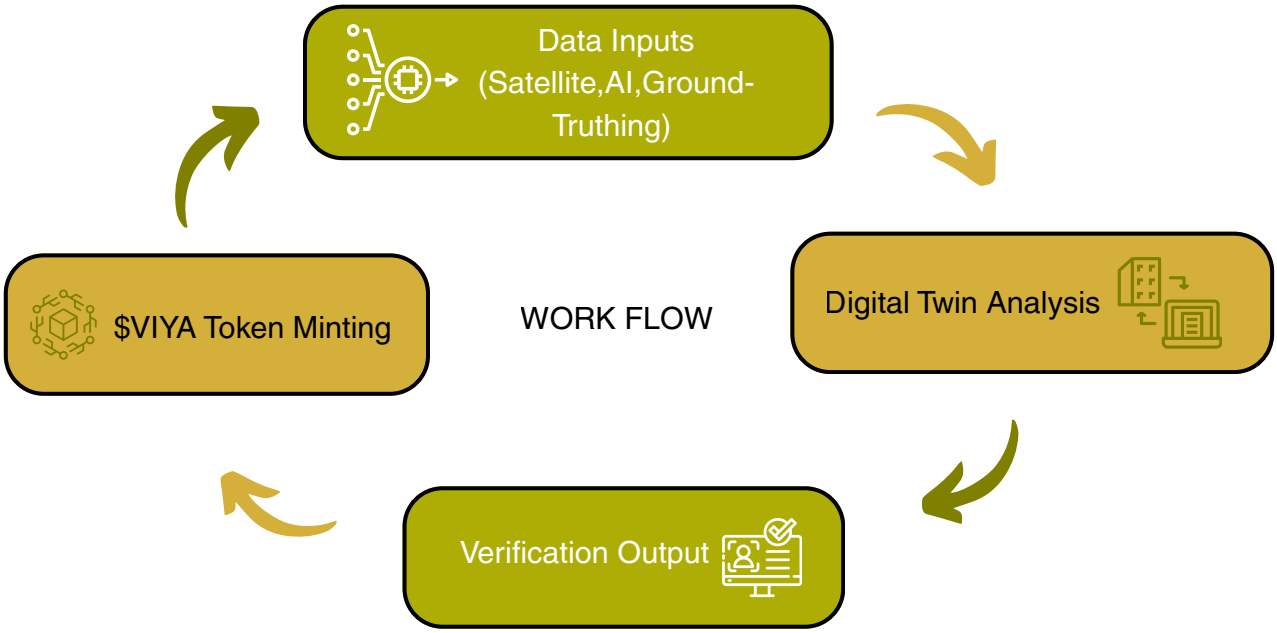
Viya Cred is a vertically integrated ecosystem designed to tokenize verifiable regenerative action. The model rests on two foundational pillars: advanced technology for verification and a robust crypto-economic model for incentivization.

5.1. The Digital Twin: High-Fidelity MRV

Our core technological innovation is a "Digital Twin" platform that creates a dynamic, data-rich virtual replica of participating watersheds and land plots. This system integrates:

- **Geospatial Data:** High-resolution satellite imagery to monitor changes in biomass and land use.
- **Artificial Intelligence:** Machine learning models to accurately quantify carbon stock changes and automatically detect reversal events.
- **Ground-Truthing:** A network of on-the-ground partners to provide localized data that calibrates our models.

This system provides continuous, transparent, and auditable MRV at a fraction of the cost of traditional methods.

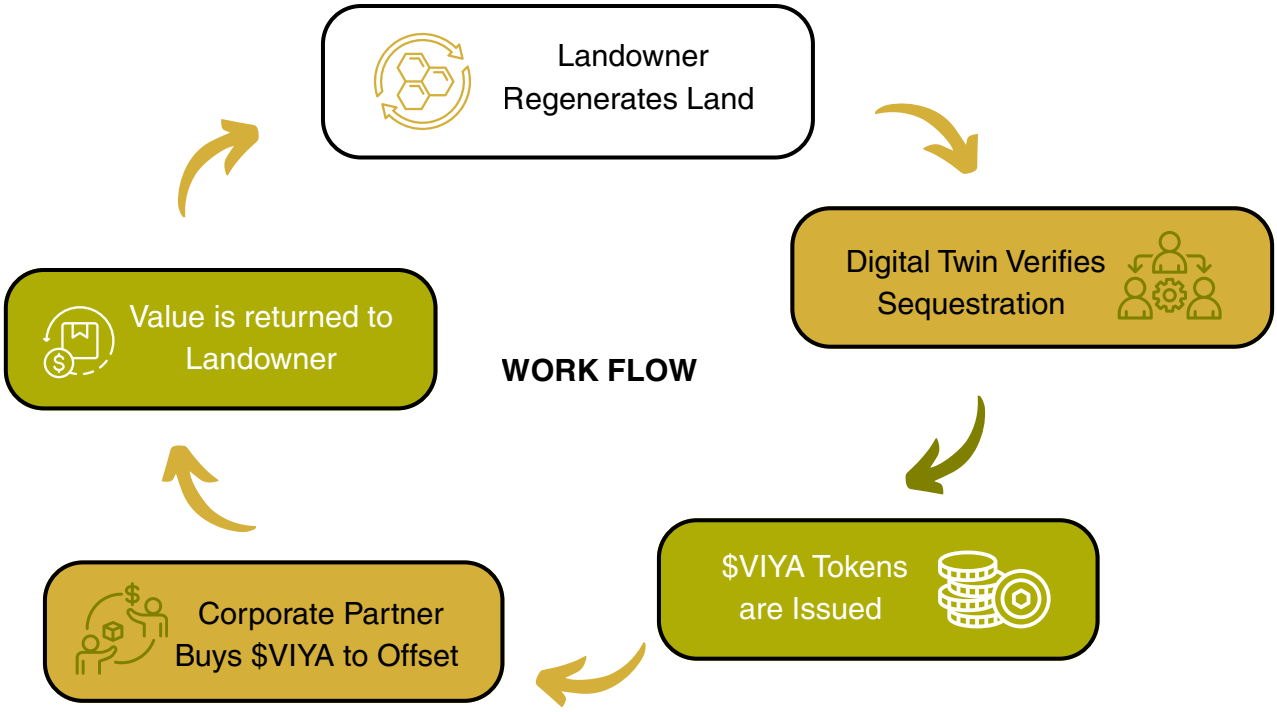


5.2. A Regenerate-to-Earn (R2E) Model

The core loop of the ecosystem is simple:

- **Commitment:** Landowners commit land to verified regenerative practices under a long-term contract.
- **Verification:** The Viya Cred Digital Twin monitors and verifies the net carbon sequestered.
- **Issuance:** Upon verification, the protocol mints and issues $VIYA tokens directly to the landowner's digital wallet.

Based on regional data, one hectare of reforested land can sequester an average of 10-15 tons of CO_2 per year. At a conservative market price, this provides a tangible and potentially significant new revenue stream for landowners.



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Landowner Onboarding and Verification

Viya Cred operates at the intersection of traditional carbon markets and emerging blockchain solutions. Our competitive advantage lies in our ability to combine the best of both worlds while solving their respective weaknesses.

6.1. Landowner Sovereignty and Grant of Access

A foundational principle of the Viya Cred protocol is that landowners retain full sovereignty over their property. Participation does not involve the transfer of any land ownership rights. Instead, landowners grant Viya Cred a limited license for physical access for the sole purposes of initial onboarding and ongoing MRV.

6.2. Land Tenure Verification Models

Viya Cred has developed a robust, multi-layered system to verify land tenure, creating a digital record of title that can serve as a valuable asset for the landowner in other legal and financial contexts. The process respects both statutory and customary ownership systems.

- **Individual Verification:** Combines legal document review (e.g., Certificate of Occupancy) with community attestation and a GPS-mapped "geospatial footprint" that is publicly registered after a dispute resolution period.
- **Communal & Family Land:** The Partnership Model: For collectively held land, we facilitate the creation of a formal representative body (e.g., a Cooperative Society or Community Trust). This entity signs the agreement and manages a primary wallet on behalf of its members, distributing rewards according to an internal, pre-agreed Benefit-Sharing Agreement (BSA).

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Technology:
(A Sustainable and Scalable Foundation)

7.1. Proof-of-Stake (PoS) Architecture

Viya Cred is fundamentally a climate-positive project. It is therefore non-negotiable that our protocol operates on a sustainable blockchain. We will deploy on a leading Proof-of-Stake (PoS) network, which consumes over 99% less energy than outdated Proof-of-Work models. Our leading candidates include Algorand (ALGO), Hedera (HBAR), and Cardano (ADA).

7.2. Smart Contract Suite

The protocol is governed by a suite of audited smart contracts that manage token issuance, the Buffer Pool mechanism, and governance, ensuring all operations are transparent and automated.

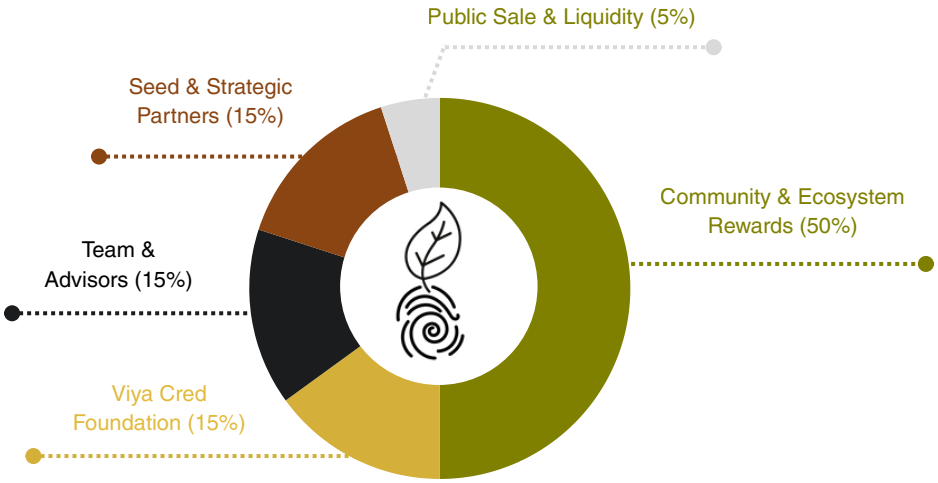
08 Tokenomics: (The $VIYA Token)

The $VIYA token is a utility token designed to power the Viya Cred economy. It is not a security.

- **Total Supply:** 10,000,000,000 $VIYA
- **Ticker:** $VIYA

8.1. Token Distribution:

- Community & Ecosystem Rewards (50%): Released algorithmically to landowners for verified sequestration.
- Viya Cred Foundation (15%): For operations, R&D, and legal costs. Vested.
- Team & Advisors (15%): Vested over 4 years with a 1-year cliff.
- Seed & Strategic Partners (15%): For early investors. Vested.
- Public Sale & Liquidity (5%): For exchange liquidity.



8.2. Token Utility & Value Accrual:

The primary utility of $VIYA is to function as a Verifiable Regenerative Credit. In future phases, holding and staking $VIYA will grant voting rights in the Viya Cred DAO, allowing stakeholders to govern the protocol's evolution, including parameters for methodologies and the Buffer Pool. This governance power provides a long-term value accrual mechanism for committed participants.

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Risk Management & Permanence

9.1. The Buffer Pool for Permanence

To solve the critical issue of non-permanence, Viya Cred integrates a Buffer Pool managed by a smart contract. A percentage (e.g., 15-20%) of all minted tokens is held in this shared insurance pool. If a reversal event (e.g., a fire) is detected by the Digital Twin, an equivalent number of tokens are retired from the buffer, ensuring every circulating token remains fully backed.

9.2. Dispute Resolution for Splintering Groups

To manage the risk of community associations splintering, a clear protocol is built into the Master Agreement:

1. Immediate Suspension and Escrow: Upon formal notice of a dispute, token issuance is automatically paused and earned tokens are sent to a secure escrow contract.
2. Internal & Mediated Resolution: Parties are required to first attempt resolution through their own governance charters, followed by mandatory third-party mediation.
3. Binding Arbitration: As a final step, an independent arbitrator will issue a final, binding decision. Viya Cred will implement the ruling, distributing the escrowed tokens and resuming normal issuance.

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Risk Factors & Mitigation Strategies

- **Landowner Adoption:** Risk: Onboarding communities to a digital token system may face trust and technology barriers. Mitigation: A high-touch, mobile-first approach with local on-the-ground partners and extensive community education.
- **Regulatory Uncertainty:** Risk: The legal status of crypto-assets remains fluid. Mitigation: Securing formal legal opinions from day one, structuring $VIYA as a clear utility token, and maintaining a proactive dialogue with regulatory bodies.
- **Market Price Volatility:** **Risk:** The price of $VIYA and carbon credits may be volatile. Mitigation: Focusing on long-term offtake agreements with corporate partners and designing tokenomics that encourage long-term holding and staking.

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Road Map

Phase 1: Foundation (Q3 2025 - Q2 2026)

- Secure Seed Funding ($3M).
- Finalize legal structure and obtain formal legal opinions.
- Core team recruitment.
- Develop and audit the $VIYA token smart contract and v1 of the Digital Twin MRV platform.

Phase 2: Pilot Launch (Q3 2026 - Q2 2027)

- Launch first pilot project in a target watershed in Nigeria.
- Onboard first cohort of 100 landowners and establish community partnerships.
- Conduct first verified token issuance and initial DEX listing.

Phase 3: Scaling (Q3 2027 - Q4 2028)

- Expand to multiple watersheds, targeting 100,000 hectares of land.
- Secure first CEX listing and onboard first corporate partners for credit offtake.

Phase 4: Decentralization (2029 - 2030)

- Implement on-chain governance via the Viya Cred DAO.
- Expand internationally to other key ecological regions.
- Achieve target of 10 million hectares under management.

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Team Status: Stealth

We have assembled a core group of seasoned professionals and a strong advisory board with direct expertise in the key areas essential to our success: climate science, regenerative finance, Nigerian law, and community development. We are committed to ensuring our foundation is secure before a public launch. We look forward to introducing our team to the community at a later milestone.

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Legal Disclaimer

This document is for informational purposes only and does not constitute an offer to sell or a solicitation of an offer to buy any security[1] in any jurisdiction. The[2]$VIYA token is a utility token intended for use within the Viya Cred ecosystem. It is not intended to be a financial security or investment. The information in this whitepaper is subject to change or update, and a number of risk factors are associated with purchasing, holding, and using $VIYA. All participants are strongly encouraged to seek independent legal and financial advice before engaging with the protocol. The Viya Cred Foundation makes no warranties or representations as to the future value or success of the project.

Sample Scenarios

Let's create a hypothetical scenario based on reasonable, industry-standard assumptions to estimate the potential carbon impact and financial returns for a 0.5-hectare plot of land over a 10-year commitment.

Core Assumptions

This forecast is based on the following key assumptions. The actual results would depend on the specific data verified by the Viya Cred platform.

1. **Token Standard:** 1 $VIYA token is issued for every 1 ton of CO_2 equivalent that is verifiably sequestered.

2. **Carbon Market Rate:** The current market price for a high-quality, verifiable, nature-based carbon credit (like those Viya Cred aims to produce) is assumed to be $30 per ton/token.

3. **Land Type:** A "green region of a savanna" implies the land is not barren but is a grassland ecosystem with potential for improved carbon storage.

4. **Sequestration Rates**

- **Natural Regeneration (Base Case):** Improved land management and protection of a savanna ecosystem can sequester carbon in the soil and roots at a conservative rate of 1 ton of CO_2 per hectare per year.
- **Afforestation (Active Case):** Actively planting and managing a mix of native trees on savanna land can dramatically increase sequestration, conservatively estimated at 12 tons of CO_2 per hectare per year.

Scenario 1: (Committing Your Land (Natural Regeneration)

In this scenario, you commit your 0.5 hectares to sustainable grazing and fire management practices, allowing the natural savanna ecosystem to thrive and store more carbon in its soil.

Carbon Impact Calculation:

- Land Size: 0.5 hectares
- Sequestration Rate: 1 ton of CO_2 per hectare per year
- Commitment Period: 10 years

Total Carbon Impact: 0.5 ha × 1 tons/ha/yr × 10 years = 5 tons of CO_2 sequestered.

Potential Financial Return:

- Total $VIYA Earned: 5 tons of CO_2 =5 $VIYA tokens (issued periodically over the 10 years).
- Total Potential Market Value: 5 tokens × $30/token = $150 USD

Answering your question: If you received just 1 $VIYA token, its potential value on the carbon market at these rates would be $30. However, based on these assumptions, your 0.5-hectare plot would be expected to generate approximately 5 tokens over the decade, not just one.

Scenario 2: Committing to Planting Trees (Afforestation)

In this more active scenario, you commit to planting and nurturing a density of appropriate native trees on your 0.5-hectare plot.

Carbon Impact Calculation:

- Land Size: 0.5 hectares
- Sequestration Rate: 12 ton of CO_2 per hectare per year
- Commitment Period: 10 years

Total Carbon Impact: 0.5 ha × 12 tons/ha/yr × 10 years = 60 tons of CO_2 sequestered.

Potential Financial Return:

- Total $VIYA Earned: 60 tons of CO_2 = 60 $VIYA tokens (issued periodically over the 10 years).
- Total Potential Market Value: 60 tokens × $30/token = $1,800 USD

Summary Comparison

Scenario	Total Carbon Impact (over 10 yrs)	Total $VIYA Earned	Potential Gross Value (@$30/ton)
1. Natural Regeneration	5 tons CO_2	5 tokens	$150
2. Active Tree Planting	60 tons CO_2	60 tokens	$1,800

Important Considerations:

- **Net vs. Gross:** The values above are the gross potential. The actual number of tokens you receive in your wallet would be net of the Buffer Pool contribution (e.g., 15-20% held for insurance).
- **Market Volatility:** The $30/ton price is a current estimate. The price of carbon credits can and will change over time, which could increase or decrease your potential earnings.
- **Co-Benefits:** Planting trees offers significant additional value beyond carbon, such as improved soil health, increased biodiversity, reduced erosion, and potentially valuable products like fruit or sustainable timber in the long term. These are not captured in the direct financial calculation but contribute to the overall value of your land.