

AgroReGenerations

Carbon Offset

Position Paper V2.1

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Bi-weekly updates ongoing

Co-authored by:

Michael Jones & Diemas Sukma Hawkins

Peer Review & Contributions:

Subhi Salman, PhD — Researcher & Consultant (Biochar, Soil, ERW, Regenerative Agriculture; MRV & Carbon Markets; Carbon Dioxide Removal), Universidad de Santiago de Compostela

Introductory Note

This updated position paper outlines the latest model for AgroReGenerations' carbon offset implementation—currently underway at small scale in Kenya (our country of registration, with intentional reach into East Africa) and Indonesia (Lombok, NTB). Deployment is aligned with available biomass cycles through September and the autumn equinox, with expansion projected through our one-year pilot. This document will be updated bi weekly during the ramp up phase.

Our direct partners in this effort include:

- Centre for Science and Technology Innovations (CSTI) – Kenya
- Clauzy Farms – Kenya
- MOOF Africa – Kenya
- PT EndoCircular – Indonesia
- Trash Rangers Indonesia – Indonesia
- PT Geovest Capital Asia – Indonesia
- Penjaga Pulau – Indonesia (blue carbon implementation)

1. Our Stance: Carbon Offsets with Integrity

AgroReGenerations is openly anti greenwashing. Carbon offsets are not a license to pollute. However, we recognize that for individuals and organizations seeking to achieve true net zero, offsets—when designed and governed responsibly—do have a place.

Our aim is to deliver a holistic and ethical offset model that addresses multiple SDGs, embeds equity and inclusion, and involves all local stakeholders.

Carbon sequestration is not a market tactic. It is a community obligation.

We prioritize:

Both models begin with:

- Immediate biochar use on smallholder land
- Farmer led and village driven solutions
- Regenerative practices and dignified local labor
- Transparent, decentralized tracking
- Infrastructure and ecosystem co benefits

We are currently fabricating kilns in both regions. Biomass has been secured, and farmer training is active.

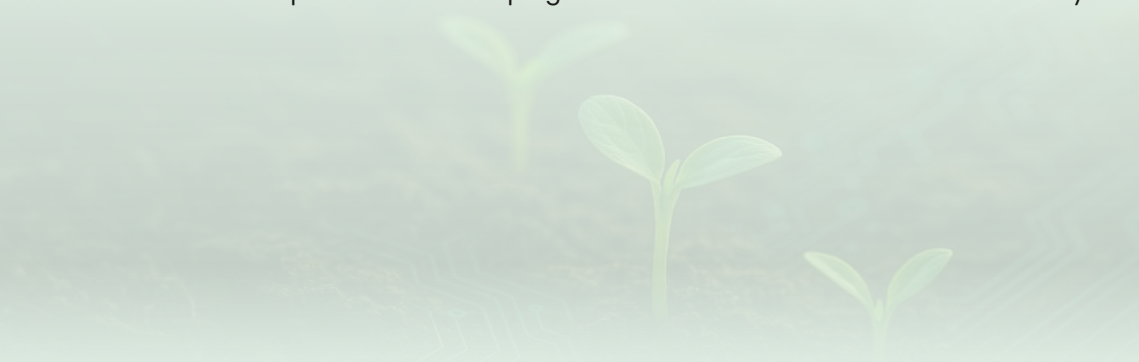
1. Our Stance: Carbon Offsets with Integrity

We are setting a new standard for offsets that is community first and verifiable across multiple dimensions—not just CO₂ accounting:

Clarification:

Differential Offset Model (refinement)

- Community first beneficiaries and land stewards
- Anti greenwashing, Web3 layered, multi validated, multi SDG
- Beyond CO₂ per ton: includes biodiversity, soil health, waste reduction, and community benefit metrics
- Permanent sequestration focus—no “license to pollute”—while helping entities reduce and reach net zero ethically



2. Deployment Models: Parallel Tracks for Replication

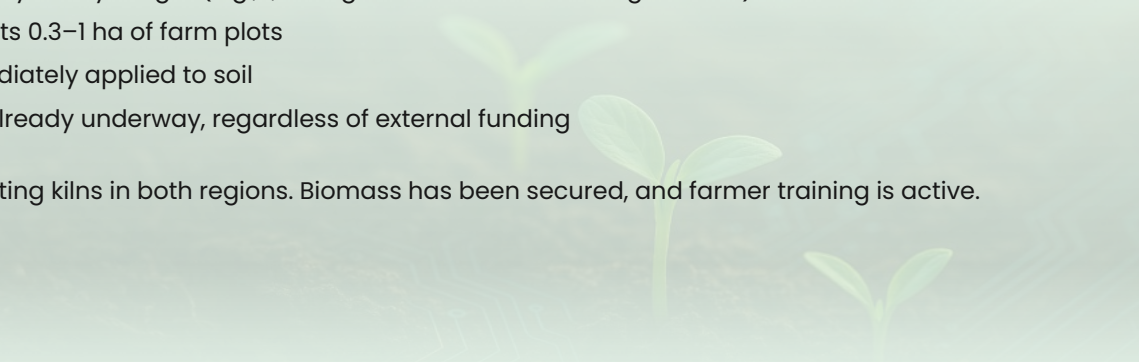
Our two starting pilots—Kenya and Lombok (Indonesia)—follow similar lean deployment models designed for fast replication and long term scalability. The models share one architecture and diverge only where local realities demand it.

2.1 Shared Lean Foundation

Both models begin with:

- Upcycled kilns fabricated locally
- ~\$20–30 USD in Kenya
- ~\$40–60 USD in Indonesia
- ~20–30% biochar yield by weight (e.g., 1,000 kg biomass → 200–300 kg biochar)
- Each kiln supports 0.3–1 ha of farm plots
- Biochar is immediately applied to soil
- Deployment is already underway, regardless of external funding

We are currently fabricating kilns in both regions. Biomass has been secured, and farmer training is active.



Deployment Models: Parallel Tracks for Replication

2.2 Kenya: Farmer-Led, Node-Based Expansion

Kenya has a mature biochar ecosystem, strong institutional partnerships, and a growing regenerative agriculture movement. Our work spans three county level pilot regions, each anchored by a lead farmer partner node. (Kenya is our base of registration, with deliberate but secondary expansion across East Africa.)

These anchor partners:

- Serve as coordinators and field trainers
- Can support up to 50+ farmers per region
- Operate as long-term knowledge hubs

Our on-the-ground framework is supported by:

- Clauzy Farms, MOOF Africa, and CSTI
- Community buy-in and embedded agricultural networks
- Compatibility with Kenya's biochar certification and carbon standards trajectory

As demand grows:

- We will establish county-scale pyrolysis hubs, modeled as learning centers and cooperative service facilities
- These will follow methodologies aligned with hydro-paralysis kilns held by our IP partners
- They will also serve as localized waste processing hubs for wet and mixed biomass inputs
-

Kenya's established infrastructure enables us to eventually:

- Scale biochar volumes for infrastructure-level deployment, especially for road construction
- Partner with public works and local governments to improve rural road networks using biochar-stabilized substrates

These roads offer permanent carbon storage, reduced flood risk, improved water retention, and enhanced heat resilience—all critical for market access and long-term adaptation.

2. Deployment Models: Parallel Tracks for Replication

2.3 Indonesia (Lombok): Waste-Centered, Co-op Driven

Lombok presents a more complex waste environment. While we begin with the same individual kiln model, village governance and infrastructure gaps require a collective approach.

- Rural communities in Lombok operate under chiefdom and collective farming systems
- Individual kilns are still deployed per plot, but scalability happens quickly through village collectives
- With partners including PT EndoCircular, Trash Rangers Indonesia, and PT Geovest Capital Asia, we are already:
 - Fabricating kilns and hydroburners
 - Engaging government and village leaders
 - –Planning village scale pyrolysis hubs to process both farm waste and household biomass

Why waste management matters in Lombok:

- No unified, government run waste system
- Handling is inconsistent (private firms, village efforts, open burning)
- Result: air pollution, poor soil quality, public health threats

Our partners already have:

- Direct lines to the provincial government
- Institutional mandates to scale circular systems
- IP for hydro kilns and plastic-to-building material conversion
- Plans for multi-village waste consolidation centers

2. Deployment Models: Parallel Tracks for Replication

2.3 Indonesia (Lombok): Waste-Centered, Co-op Driven

Clarification (revenue line & fit): In Indonesia we are positioned to deliver regional waste management solutions as a revenue generating service, with biochar forming the bridge to infrastructure (e.g., embedding char in road base for sequestration). Plastic Bank collaboration is a future option if scaled and aligned.

While AgroReGenerations will not be the lead on these systems, we will support, verify, and embed our offset logic into any waste processing initiative that improves farmer well being, prevents pollution, and generates viable carbon sinks.

As in Kenya:

- Once surplus biochar exceeds farm soil needs, it will be used in road-building and public infrastructure
- These roads serve as distributed carbon sinks, improve community access, and provide a long-term local benefit
- The island's current lack of biochar infrastructure positions us to be the primary implementers of this solution

All three Indonesian implementation partners—PT EndoCircular, PT Geovest Capital Asia, and Trash Rangers Indonesia—are actively pursuing parallel funding pathways to scale this model.

2. Deployment Models: Parallel Tracks for Replication

2.4 Global Replication Potential

These two models, while distinct, are modular and globally replicable:

Factor	Kenya Model	Indonesia Model
Biochar maturity	High	Low
Community structure	Farmer led / distributed	Chiefdom / collective
Infra readiness	Higher	Lower
Waste issues	Regional biomass surplus	Urgent unmanaged waste
Replication focus	Learning nodes	

As we pilot both:

- Our methodologies can be extended to other contexts (e.g., Sub Saharan Africa, SE Asia, Latin America)
- Replication will depend on local infrastructure, farmer autonomy, and waste governance systems

While some aspects are protected via partner IP (e.g., specific kiln design), we remain committed to our open source, audit first approach, and we invite other groups to adapt or replicate this work under similar ethical standards.

3– Codified Offset Pools: Existing & Priority

Our eight core offset pools from Position Paper V1.0 remain in place. In 2025, three new priority pools are now active or ready for codification:

3.1 Blue Carbon Pool – Mangrove Restoration (Sumbawa)

In partnership with Penjaga Pulau, we've opened our first blue carbon pool via a mangrove regeneration site in Sumbawa.

Key advantages:

- Extremely fast-growing and high-sequestration ecosystem
- Naturally protects coastal communities from erosion and flooding
- Supports SDG-aligned biodiversity outcomes
- Easily replicable across other tropical coastal zones

This is our most deployment-ready pool with live partners and seasonal progress tracking underway.

Additional exploration (Kenya): In Mombasa County, we are engaging with a UNDP supported mangrove restoration site (~5M planted, 10–14 years old). We are maintaining/monitoring this mature site and evaluating the launch of a new mangrove restoration to feed a Kenya blue carbon pool.

3.2 Large-Scale Rewilding / Agroforestry Pools

We are in confidential dialogue with multiple land custodians and rewilding projects covering hundreds of hectares across Europe, South America, and sub-equatorial zones.

These potential pools:

- Align with permanent carbon removal goals
- Offer natural co-benefits: biodiversity, soil health, community resilience
- Will only be codified if stakeholder alignment, land protection, and monitoring are confirmed

No pools will be opened without:

- Verified ground partners
- Equitable stakeholder representation
- Public eligibility criteria for offset buyers

3– Codified Offset Pools: Existing & Priority

3.3 Geo-Conservation Pool – Quarry Preservation Model

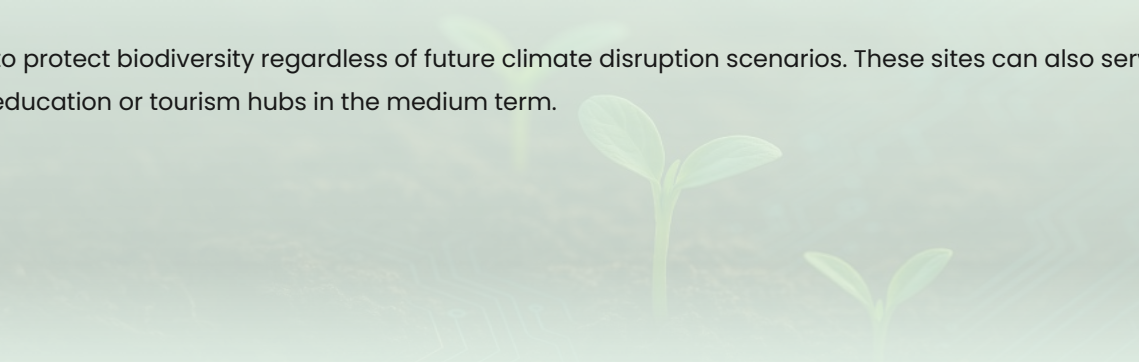
As a long-term, climate-stable failsafe, we are piloting carbon offset pools based on disused quarries and dormant rockbed sites.

Our first site—already bookmarked—represents a geologically stable, non-reactive zone suitable for permanent carbon sinks.

These sites:

- Are hotbeds of long-term life protection
- Provide stable, low-erosion conditions for permanent sequestration
- Are ideal for scientific data gathering and educational access

This model allows us to protect biodiversity regardless of future climate disruption scenarios. These sites can also serve as revenue-generating education or tourism hubs in the medium term.



4. Governance, Matching, and Buyer Flow

The offset system operates as follows:

- 76% of tokens are burned post-pool lock
- 16% go to verified farmers (via AgroConnect), with an 80/20 stablecoin/EPiD split
- 8% to tooling + validator fund for MRV and auditing

Buyers:

- Select a pool
- Receive a non-transferable badge NFT
- Gain optional access to regional whitelists or project insights

Farmers:

- May opt into a seasonal staking pool to compound rewards

Matching:

- AgroReGenerations matches up to 2% of total token supply to offset contributions
- 20% from operations
- 80% from founder reserves
- Refill mechanism subject to review every four years

5. Infrastructure Integration & Field Assets (clarity + new supporting visuals)

We rely on locally fabricated kilns (upcycled metal & earthen designs) and hydroburners to convert biomass/waste to biochar.

In all cases, biochar is applied first to soils; once soil demand is met, surplus biochar is used in road building to form distributed, permanent carbon sinks that also improve climate resilience (cooler, flood resistant, water retaining roadbeds).

These benefits are local, community level—not national mega projects.



Figure A. Parallel Deployment Models – Kenya vs. Indonesia

This flowchart highlights the structural differences between our Kenya and Indonesia pilot models. Kenya follows an individual kiln approach aligned with innovation hubs and a robust biochar marketplace. Indonesia uses a collective, waste-centered village model led by co-ops and local governance. Both pathways converge at biochar creation (**20–30% yield**), local soil restoration, and ultimately community-driven road building.

These roads are designed not only for mobility but for long-term carbon sequestration, food security, and climate resilience—including flood-resistant and heat-resilient infrastructure. They serve as critical infrastructure in rural communities we work with, supported by local institutions and verified partnerships.

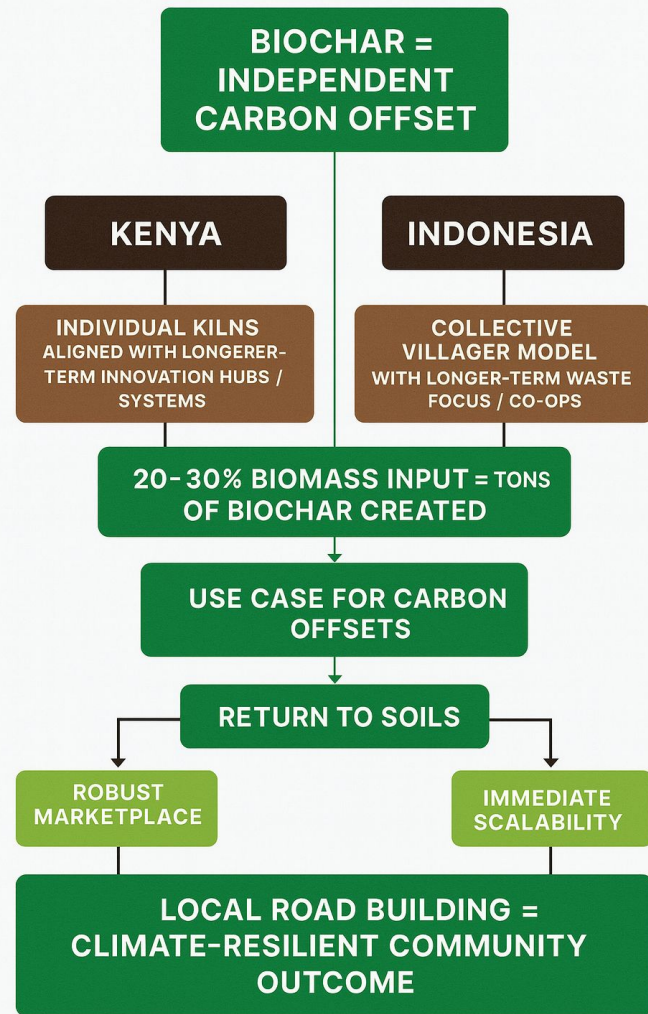


Figure B. Mid-Sized Hydroburner Kiln Deployment – Indonesia (Trash Rangers IP)

Pictured: Trash Rangers Indonesia team with a deployed Mid-Sized Hydroburner Incinerator (village-scale unit).

Unit Specifications

- Capacity: 1000 L
- Ash Output: 10–15 kg of ash per cycle
- Water Requirement: 10–15 liters per cycle
- Cycle Duration: ~3–4 hours per burn

Function: Local pyrolysis of mixed farm and household biomass waste

Micro Hydroburner Incinerator (comparison)

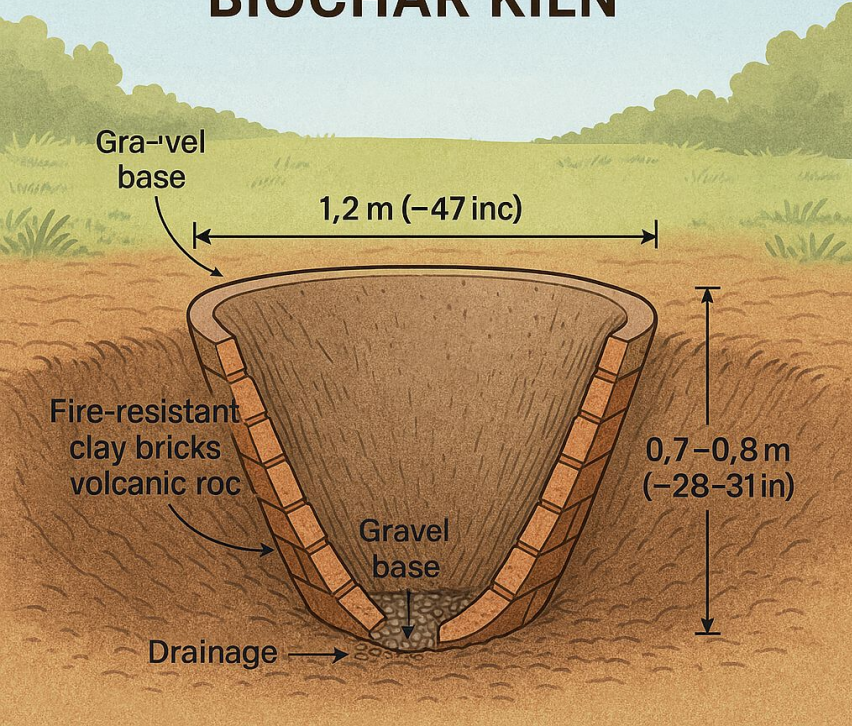
- Capacity: 400 L
- Ash Output: 3–5 kg per cycle
- Water Requirement: 3–5 liters per cycle
- Cycle Duration: ~2–3 hours

IP held by Trash Rangers Indonesia.

This unit is part of our Lombok deployment under the waste-focused, village-led model.



INVERTED CONE BIOCHAR KILN



A low cost, earthen/brick inverted cone kiln design (gravel base, drainage) suitable for rapid community deployment and training.

	Capacity	Ash Output (kg/cycle)	Water Requirement (L/cycle)	Cycle Time (h)
Micro Hydroburner	400 L	3-5	3-5	~2-3 h per cycle
Mid Sized Hydroburner	1000 L	10-15	10-15	~3-4 h per cycle

Comparative Output Specifications (field units, Lombok)

Closing Note on Replication & Integrity

Whether farmer led (Kenya/East Africa) or village collective with waste integration (Lombok, NTB), the end state is the same: measured sequestration, community level climate resilient roads, and transparent, ethical accounting that does not permit pollution as a substitute for reduction.

Our framework is open, auditable, and designed to be replicated globally with local partners.





Contributor and Main Peer Reviewer:

Fernando Escobar
MSc, PMP
PhD Candidate in Applied Computing – Universidade do Minho

Team Peer Reviewers:

AgroRegenerations Founding Team

(special recognition to Michael Jones and Tahrira Sultana)

Note: Additional validation discussions underway with other third-party partners.

AgroRegenerations Carbon Offset Model

Measurable Climate + Social Impact | Anti-Greenwashing | Equity-Driven | Planetary Resilience

AgroRegenerations Carbon Offsets are not a license to pollute. They create measurable, evolving, and multi-dimensional climate and social impact, recognizing that true climate action is not just about CO₂ math but also about biodiversity, agroecology, smallholder livelihoods, and community resilience.

Key design principles:

- Hard-coded anti-greenwashing (~76% token burns)
- Integrated ecological + financial incentives for farmers (~16% pool)
- Publicly auditable, open-source architecture, with non-transferable NFT badges for buyers
- Eight coded impact pools (can expand as needed) linked to real-world projects, designed to expand and deepen over time in alignment with partner networks and on-ground realities:

Kenya Dual Biome Biome (Mount Kenya + Lake Victoria)

Lombok, Indonesia (Tropical Forest Regeneration)

Italy + Spain (Mediterranean Agriculture)

Amazon (future, under review)

Bangladesh (Mangrove Restoration)

Nordic/Europe (future, under review)

North America (future, under review)

Pilot Innovation Pool (future, under review)

Mission Commitments:

- Internal MRV (measurement, reporting, verification) tools – we are the core validator – using soil testing, field data, and digital dashboards
- AI/ML agents, satellite or remote sensing (where applicable), third-party soil test reports, and partner data to reinforce and refine impact measurement
- Continuous refinement of metrics with evolving best practices and third-party audits
- Impact reported not only in approximate CO₂ equivalence but also across biodiversity gains, community resilience, regenerative land management, and SDG-aligned benefits

Systematic Mechanics and Flow



How It Works:

1. Buyer purchases offset + selects pool
2. Tokens locked for exactly one year (12 months + 6 hours)
3. Upon unlock:
 - a. **~76%** permanently burned
 - b. **~16%** to verified farmers (via AgroConnect):
Farmers can optionally lock ~10–20% of rewards into a special stability staking pool that doubles by the next season
 - c. **~80%** stablecoins + ~20% EPiD tokens
- d. **~8%** to validator + tools fund (covers both internal MRV and third-party audits)

NFT Badge:

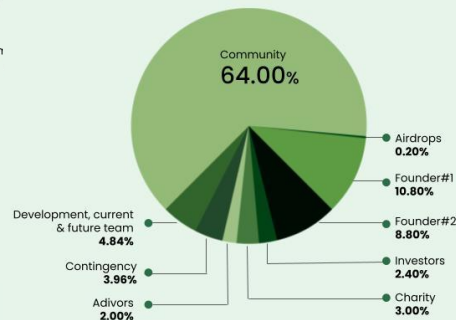
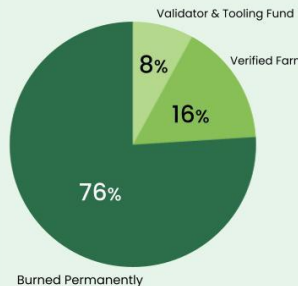
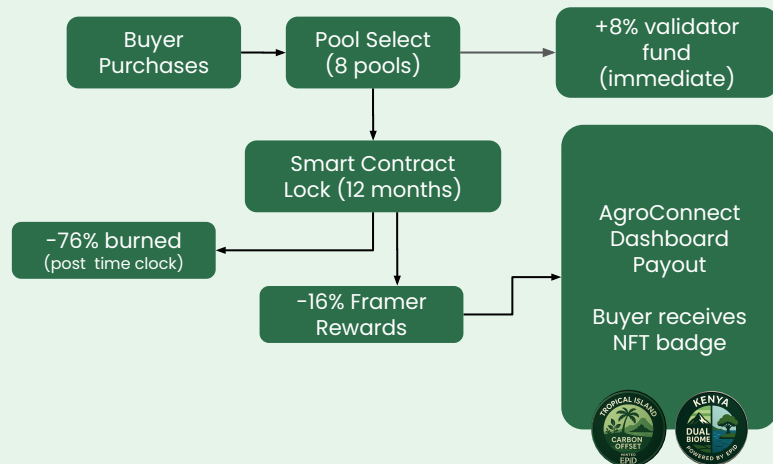
Each buyer receives a non-transferable, symbolic NFT badge showing their chosen region and impact type — not resellable, purely for participation validation.

Matching Pool:

- ❖ Up to 2% of total token supply over four years
 - 20% from operations, 80% from founder wallets
- ❖ After cap is reached, replenishment: one-third revenue, one-third operations, one-third founders, reviewed annually
- ❖ Buyers' experience remains consistent; matching operates internally

Liquidity + Pools Layer

- ❖ Separate liquidity pool (LP) underpins price stability
- ❖ Eight coded impact pools: backend mechanics fixed, descriptions flexible to match partner scaling
- ❖ AgroConnect acts as the delivery and reporting interface — not a speculative or custodial marketplace.



Technical Architectural & Governance

Coded Components (Automated Flows)

- Smart contract lock + timed release
Fixed percentage allocations (burn, farmer, validator)
- Matching pool triggers + cap counters
NFT badge issuance
- Internal dashboard integrations (AgroConnect, EPiDAgro)
- Optional farmer staking pool (future stability pool)

Manual Components (Governance)

- Regional pool expansions and evolving descriptions
- Validator and audit partner selection
- Liquidity + matching management
- Transparent, off-chain governance (non-DAO, fully open-source and traceable)

Summary Statement

The AgroRegenerations system is built to:

