



From Waste to Value: Biochar for Carbon Removal Credits and Soil Health Enhancement

Presented by:

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Founder, CEO**

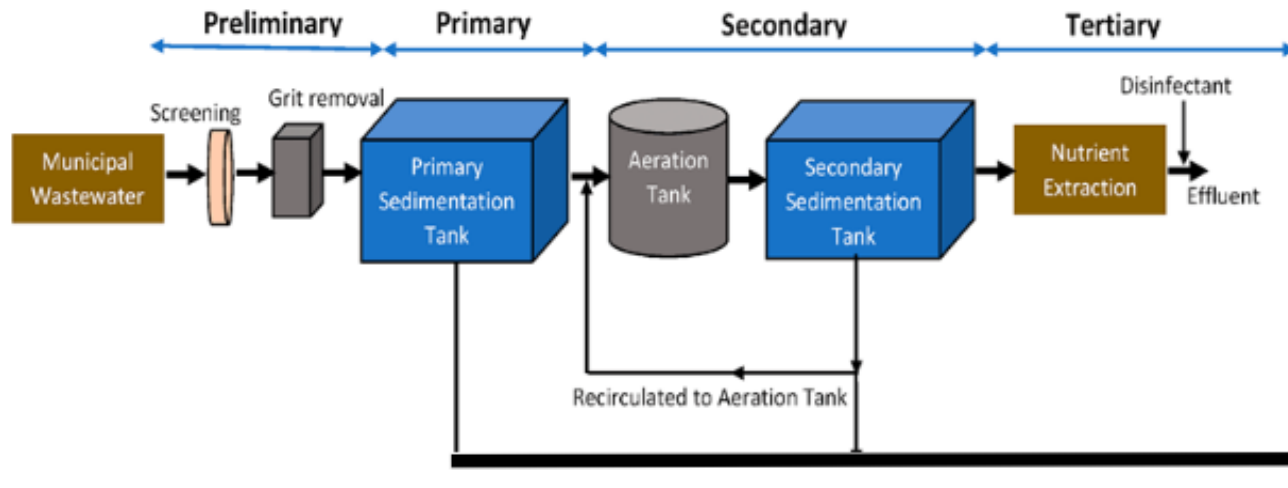
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PROBLEM

Sewage Sludge Disposal Concerns in the USA



Final Product: Sludge Cake

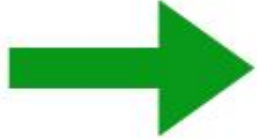


- Sludge Production: U.S. generates over 13 millions dry tons of sludge per year.
- Disposal Methods: incineration, landfilling, land spreading, and water discharge
- Contains: heavy metals, pathogens, offensive odor, forever chemicals like PFAS (Per- and Polyfluoroalkyl Substances).
- Risks: soil and water contamination, greenhouse gas emissions, public health

PROBLEM

Invasive Alien Species – A Growing Ecological Threat in South Africa

- Invasive trees like Acacia, Prosopis, and Lantana camara cover over 100,000 km² – more than 8% of South Africa's land.
- These species spread aggressively, outcompeting native plants.



- **Why it is a Concern:**
- Consume massive amounts of water, contributing to water scarcity in already drought-prone regions
- Reduce biodiversity, disrupt natural habitats, and degrade soil quality.
- When removed, they create large volumes of biomass waste that is often burned or dumped



SOLUTION

We convert biomass waste into biochar and produce high-quality carbon removal credits through continuous pyrolysis technology.

Our Solution

Biomass Waste



- Sewage Sludge
- Invasive Alien Plants



Continuous Pyrolysis Process



+

Software (dMRV + LCA + IOT)



+

Soil Health Assessment
(Track key physical, chemical and biological parameters)

1



High-quality
Carbon Removal
Credits (CDR)

2



Biochar

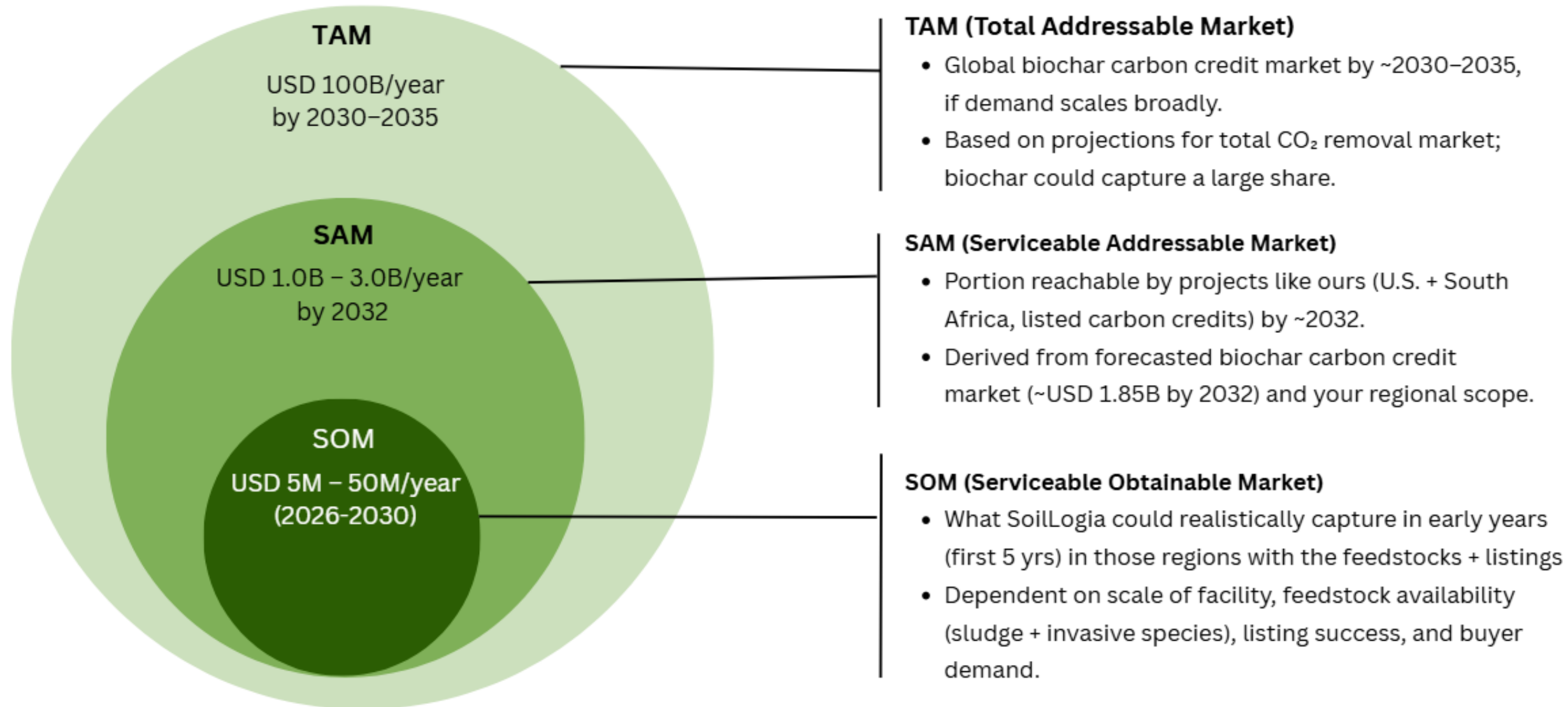
- Soil amendment
- Other value-added properties (future)

3



Regenerative
Agriculture

Global Potential Market Size for Biochar Carbon Credit Removal



COMPETITIVE LANDSCAPE

Competitors	Origin/Region	Their Focus	Strengths & Scale	Limitations
Varaha Earth	India	Soil carbon projects, agroforestry, MRV tech, carbon credits	Strong local networks in India; good reputation; varied nature-based carbon projects.	Less focused on high-volume biochar carbon removal; feedstock limitations; less advanced industrial-scale pyrolysis for multiple biomass types.
Exomad	Bolivia	Biochar production for durable carbon removal, using forestry residues; large facilities; signing large carbon credit deals	Removing ~120,000 tCO ₂ /year now; building phases to scale to ~800,000 tCO ₂ /year by 2027; multiple sites; high-quality biochar content.	Biomass source mostly wood (forestry residues); geographic concentration in Bolivia; fewer feedstock types; soil health co-benefits present, but less diversified feedstock types; sometimes slower to access new markets.

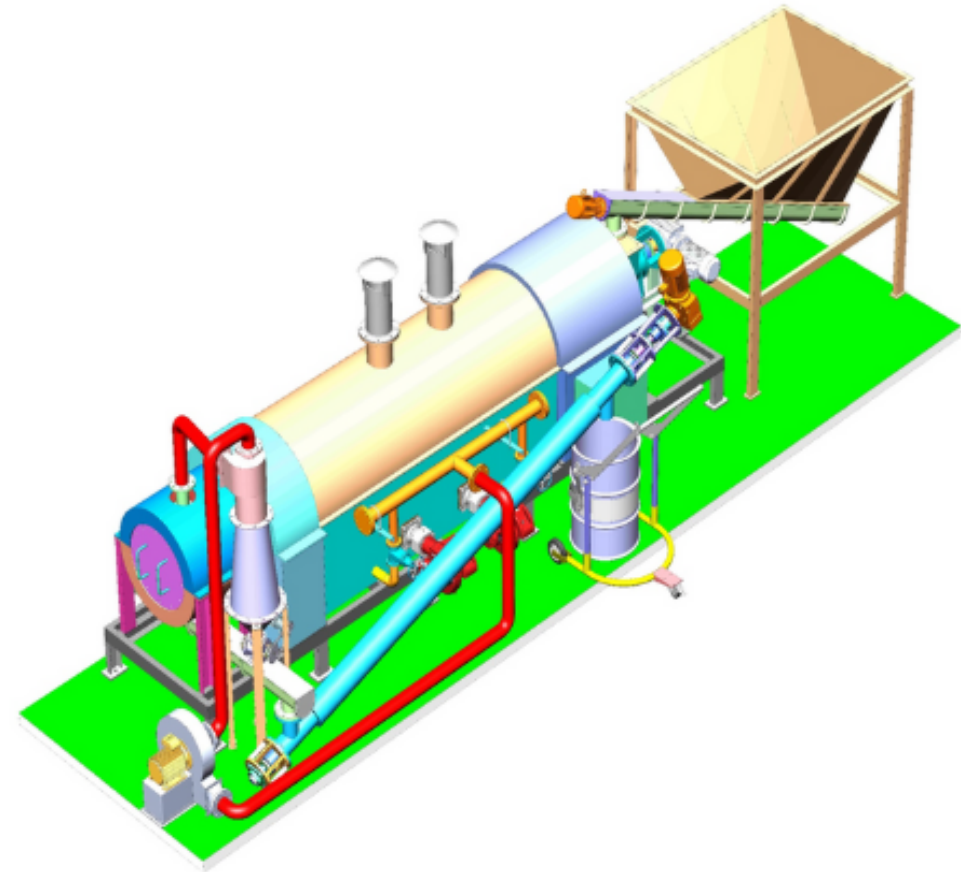
SoilLogia enters the market with a model designed to reduce these risks and broaden buyer appeal:

- **Feedstock Diversity & Security:** we source municipal sewage sludge in the United States and invasive alien trees in South Africa—two virtually unlimited, underutilized biomass streams.
- **Geographic Diversification:** by launching projects in both the U.S. and South Africa, we reduce geopolitical risk and open doors to multiple carbon markets, making us more attractive to global corporate buyers.
- **Soil Health Co-Benefits:** our process not only sequesters carbon but also restores soil fertility, improving food security and ecosystem health—an added value for companies seeking high-integrity credits with measurable social and environmental impact.
- **Investor Risk Mitigation:** large offtakers like Microsoft, Google, and other Fortune 500 firms increasingly prefer to diversify suppliers to spread procurement and performance risk. SoilLogia's multi-feedstock, multi-region approach provides exactly the diversified exposure that big climate investors demand.

CARBON REMOVAL FACILITY & CAPABILITY

We aim to purchase a Pyrolyzer that continuously processes over 17.2 tons of feedstock biomass per day.

Layout of the Pyrolysis System



Efficient Production:

- **High Throughput:** Each system processes 6258 tons of biomass per year
- **Strong Yield:** Produces 2197.30 tons of biochar annually (~35% conversion rate).
- **Carbon Removal Impact:** Generates over 5493.25 carbon credits (tCO₂e) per year from a single unit.
- **Scalable Model:** With virtually unlimited biomass sources, multiple systems can be deployed to multiply biochar output and carbon credit generation.

REVENUE MODEL, MARKET STRATEGY

Revenue Streams

- Carbon Credits – Verified removal credits sold through leading registries at \$200/tCO₂e.
- Biochar Sales – High-quality biochar marketed as a premium soil amendment at \$250/ton.
- Future Services – Soil health consulting, co-benefit verification, and ESG advisory.

Distribution & Partnerships

- Direct Sales: Corporate offtake agreements.
- Wholesale & Marketplaces: Carbon brokers, agricultural distributors.

Scalability Roadmap

- Phase 1: Deploy first system (U.S. or South Africa) – 2000 tons biochar/year, 5,000 tCO₂e credits.
- Phase 2: Add multiple systems in the U.S. and South Africa leveraging virtually unlimited biomass.
- Phase 3: Replicate globally – target 5+ systems by Year 5

Metric	Value	Notes
Biomass Input	6258 tons/year	Based on 365 operating days
Biochar Output	2197.30 tons/year	~35% yield
Carbon Credits Generated	5493.25 tCO ₂ e/year	Verified through registries
Revenue from Carbon Credits	\$1,098,650/year	5493.25 × \$200/tCO ₂ e
Revenue from Biochar Sales	\$549,325/year	2197.30 × \$250/ton
Total Revenue	\$1,647,975/year	Per system, pre-OPEX

FUNDING REQUEST & RETURN ON INVESTMENT (ROI)

1 Capital Requirements

We are seeking **\$568,776** to build our full-scale biochar facility with one industrial pyrolysis system capable of producing biochar and carbon credits at scale.

Use of Funds	Amount (USD)	% of Total
CapEx – Pyrolysis system, site development, equipment	\$261,550.00	46%
OpEx (Year 1) – Operations, staffing, feedstock sourcing	\$212,430.00	37%
Contingency (20%) – Buffer for market/cost fluctuations	\$94,796.00	17%
Total	\$568,776.00	100%

2 Investor ROI for over the 8-year lifespan of each pyrolysis unit

Item	Amount (USD)
Projected Returns (after OPEX)	\$1,440,509.00 per year
Investor ROI (30% equity stake)	\$432,151 per year

Why This Works

- **High-Margin Market:** Carbon removal credits trade at premium prices and demand is surging.
- **Scalable Model:** Multiple systems can be deployed to replicate revenues across regions.
- **Feedstock Advantage:** Unlimited sewage sludge (USA) and invasive alien trees (South Africa) ensure reliable, low-cost biomass supply.

EXECUTION ROADMAP & KEY MILESTONES

Phase	Timeline	Milestone
Phase 1 – Launch & Procurement	Month 1	<ul style="list-style-type: none">• Secure funding• Initiate project listing and registry with Puro.Earth• Order & procure pyrolysis system• Begin site preparation & permitting
Phase 2 – Build & Install	Month 2-6	<ul style="list-style-type: none">• Complete facility construction• Install and calibrate pyrolysis equipment• Set up biomass feedstock logistics
Phase 3 – First Production & Soil Application	Month 7	<ul style="list-style-type: none">• Begin large-scale biochar production• Immediate soil application to lock in carbon
Phase 4 – Verification & Credits	Month 8-9	<ul style="list-style-type: none">• Facility audit by VVB committee• Verification & issuance of CORCs (Carbon Removal Certificates)
Phase 5 – Continuous Scaling	Month 10+	<ul style="list-style-type: none">• Ongoing production & carbon credit sales• Plan additional pyrolysis systems for expansion

IMPACT & SUSTAINABILITY



23,000+ tCO₂e
removed annually
per facility



27,000+ tons of biomass
waste per year diverted
from landfills &
incineration



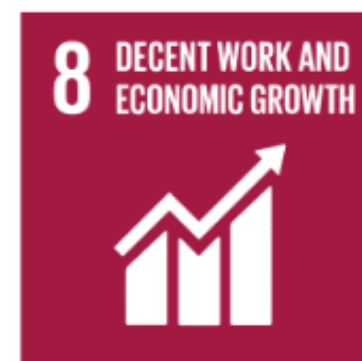
Soil Restoration (9,500+
tons/year of biochar
improving soil health)



Water Retention &
Quality (biochar
improves water holding
capacity, reduces
runoff)



Food Security (higher
yields and better soil
resilience)



Job Creation (20+ local
jobs per facility in U.S.
and South Africa)

Traction & Validation:

- **Pilot Projects:** Successful pilot-scale biochar systems in the U.S. and South Africa.
- **Corporate Partnerships:** Negotiating with carbon offtakers while awaiting Puro.Earth registration.
- **Scalability:** Fully feasibility-tested, with unlimited biomass for immediate expansion.
- **Market Readiness:** Investment-ready model generating biochar & carbon credits.
- **Media Coverage:**
 - **USA Today:** *Reclyzer Biochar – Transforming Waste into Wealth: SoilLogia's Mission to Foster Climate Health Without Compromise.* [Learn more](#)
 - **Economic Insider:** *Transforming Waste into Opportunity: Antonio Timoteo, Ph.D., Advances Soil Health and Net-Zero Carbon Goals with SoilLogia LLC.* [Learn more](#)
 - **Quantum Commodity Intelligence:** *Biochar Start-up Seeks \$6 Million in Seed Funding for Flagship Plant.* [Learn more](#)
 - **Biochar Today:** *SoilLogia to Raise \$6M in Seed Funding to Scale Sustainable Biochar Production.* [Learn more](#)



OUR TEAM – DRIVING SOILLOGIA'S VISION



Antonio Timoteo, Ph.D.
Chief Executive Officer

Expertise:

- Soil health
- Regenerative agriculture
- Waste management.



Sara Duarte, Ph.D.
Carbon Developer

Expertise:

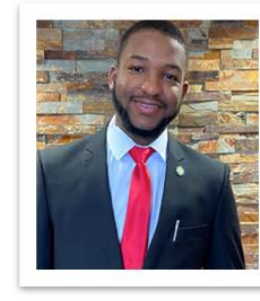
- Biochar amendments
- CDR Standard & certifications



Austin Lieber, Ph.D.
Chief Sustainability Officer

Expertise:

- Carbon removal technology



Marc Presume, MSc.
Chief Operating Officer

Expertise:

- Agronomy
- Data Scientist



Sandeep Rana, Ph.D.
Chief Marketing Officer

Expertise:

- R&D business
- B2B Marketing



Keith Thompson
Biochar Specialist

Expertise:

- Community-focused biochar project D.



Wayne Omagamre, Ph.D.
Chief Technology Officer

Expertise:

- Chemist and environmental toxicologist

INVEST IN SOILLOGIA - TURN WASTE INTO WEALTH

- **Funding Ask:** \$568,776 to build first pyrolysis facility and scale operations.
- **Investor Offer / ROI:** 30% equity on profits per year, 8-year lifespan per unit
- **Climate Investor Offer:** Secure carbon offset agreements at a fixed price by investing partially or fully. Our projects aim to generate 5493.25 + tCO₂e per year in verified carbon credits.
- **Readiness / Traction:** Pilot-tested in U.S. & South Africa, unlimited biomass sources identified.

Invest in Soil. Lock Carbon. Grow Returns. Together, we can turn waste into wealth and restore the planet.



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