GEODYN SOLUTIONS™

NATIONAL CIRCULAR BIOFERTILIZER, ORGANIC WASTE-TO-FLUFF & SEED ENHANCEMENT MEGAFACTORY

www.geodynsolutions.com

PREPARED BY

GEODYN SOLUTIONS

(PRIVATE INVESTOR CONSORTIUM)

TOTAL PROJECT INVESTMENT (PRIVATE CAPITAL):

USD $49,500,000

CLASSIFICATION:

STRATEGIC NATIONAL FOOD SECURITY, HOSPITALITY PROTECTION, AND CLIMATE RESILIENCE INFRASTRUCTURE

EXECUTIVE SUMMARY

The Dominican Republic relies on imported fertilizers and chemical agricultural inputs, exposing farmers and the national food system to currency risk, global price shocks, and supply chain instability. Meanwhile, the hospitality sector — representing 22–25% of national GDP — is increasingly affected by sargassum accumulation and seasonal waste surges. Landfills are nearing capacity, and organic waste decomposition is now a major generator of methane emissions.

Geodyn BioCycle Dominicana establishes a national circular bioeconomy system that:

- Converts organic waste, sargassum, agricultural residues, and food waste into high-performance biofertilizer
- Produces microbial, mycorrhizal, biostimulant, and seed enhancement products domestically
- Restores soil fertility, crop resilience, and export quality
- Protects coastal tourism zones and the hospitality sector
- Creates rural employment & cooperative agricultural empowerment
- Generates long-term carbon credit revenue

No government funding is required.
Government partnership is limited to land siting, cooperative integration, and regulatory facilitation.

COMPREHENSIVE NATIONAL BENEFIT SUMMARY

SECTOR	BENEFIT
Agriculture	Higher yields, reduced fertilizer costs, better crop quality & shelf-life
Hospitality & Tourism	Clean beaches, reduced odor, stable food supply for hotels/resorts
Waste & Municipal Systems	Less landfill pressure, reduced methane emissions, regional processing hubs
Environment & Climate	Soil carbon increase, ocean methane mitigation, biochar sequestration
Rural Development	1,200–3,100 new jobs, cooperative-based distribution networks
National Economy	Keeps fertilizer value domestic, opens carbon export revenue streams

CIRCULAR RESOURCE CONVERSION MODEL

Organic Waste + Food Waste + Market Waste + Hotel Waste + Sargassum

↓ (15 MT/hr)

Geodyn Waste-to-Fluff Conversion System

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Organic Fluff + Biochar + Mineralized Sargassum

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BioPellet™ Organic Fertilizer + Microbial Blends

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Farms

Waste becomes farm productivity and export competitiveness, not landfill methane.

TECHNOLOGY & INFRASTRUCTURE SYSTEMS

(All equipment lists already validated and scalable)

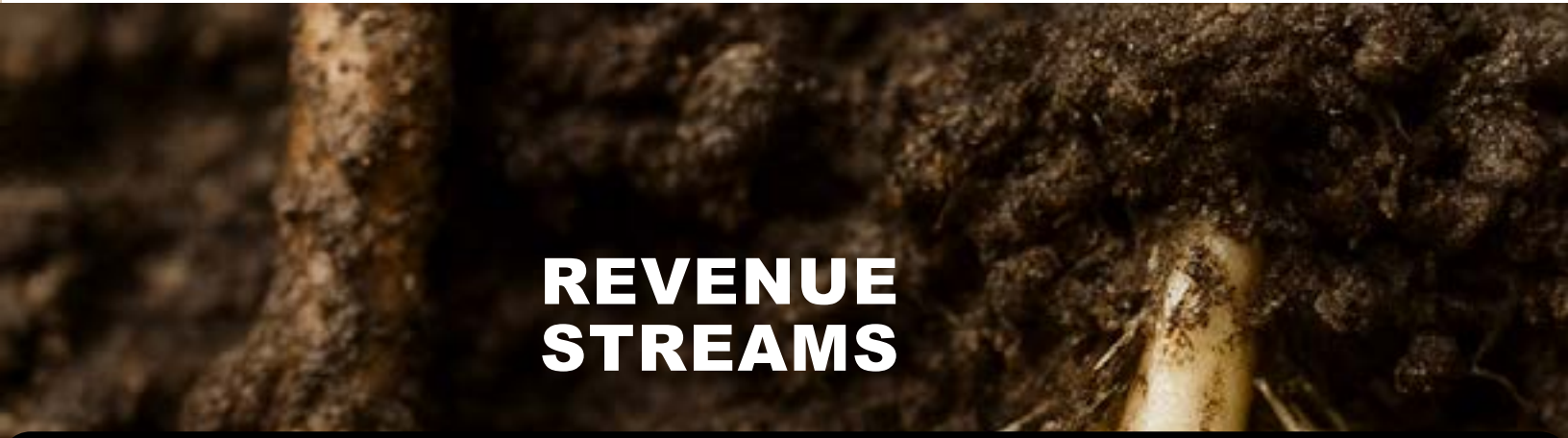
SYSTEM	PURPOSE	OUTPUT
15 MT/hr Waste-to-Fluff System	Converts municipal & tourism waste to fluff	Base for fertilizer + BSF feed
Sargassum Processing Line	Mineral balancing & drying	Coastal protection + soil nutrients
Microbial Fermentation Facility	Beneficial microbes, biocontrols, biostimulants	Replaces chemical inputs
AMF (Mycorrhizae) Propagation Center	Root expansion & drought resilience	Major yield improvement driver
BioPellet™ Fertilizer Plant	Granulated organic fertilizer	Mass adoption capability
BSF Protein Facility	Food waste → animal feed	Reduces feed import costs
Biochar Carbon System	CO_2 sequestration	Soil restoration + carbon credits
National Microbiome Laboratory	Soil/crop diagnostics & custom formulations	Precision agriculture nationwide

CAPEX & LAND REQUIREMENTS

COMPONENT	BUDGET ALLOCATION	LAND REQUIRED
Central Plant (Factory + Labs + Waste-to-Fluff)	Included in $49.5M	25–35 acres
Satellite Biomass Nodes (12–16)	Included	1.2–3.5 acres each
Farmer Demonstration Fields	Cooperative-based	Scalable

ANNUAL OPERATING COSTS *(OPEX)*

CATEGORY	ANNUAL COST
Labor & Technical Personnel	$4,800,000
Biomass & Sargassum Collection	$3,200,000
Energy, Heat & Steam	$2,100,000
Microbial Media, Inputs & Consumables	$1,300,000
Logistics & Distribution	$1,690,000
Maintenance & Spares	$1,200,000
Total OPEX	$14,290,000 / year



REVENUE STREAMS

STREAM	ANNUAL POTENTIAL
BioPellet™ Organic Fertilizer	$62M–$125M
Microbial Bio-Stimulants & Biocontrols	$22M–$48M
AMF Root Expansion & Seed Enhancement Systems	$14M–$36M
BSF Protein Meal (Feed Replacement)	$16M–$26M
Carbon Credits (Soil + Blue Carbon)	$14M–$45M
Total Annual Revenue	**$128M – $280M+**
Net Annual Profit (after OPEX)	**$114M – $266M+**

LAND & REGIONAL DEPLOYMENT FOOTPRINT

ADOPTION RAMP ASSUMPTION:
Year 1 ~30% national penetration, scaling to 85–92% by Year 5.

YEAR	REVENUE	OPEX	NET PROFIT	CUMULATIVE RETURN
1	$128M	$14.3M	$113.7M	$113.7M
2	$158M	$14.8M	$143.2M	$256.9M
3	$192M	$15.3M	$176.7M	$433.6M
4	$223M	$15.9M	$207.1M	$640.7M
5	$250M	$16.5M	$233.5M	$874.2M
10-Year Total	—	—	$1.15B – $2.40B+	23x – 49x ROI
Payback Period: 2.3 – 3.4 years				

GOVERNMENT PARTNERSHIP
(NON-FINANCIAL ONLY)

Requested support, not funding:

- Land designation & zoning
- Permitting coordination
- Cooperative & extension network access
- Recognition as National Circular Agriculture & Tourism Protection Infrastructure

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