

LINEAR ECONOMY

Take – Make – Dispose



RAW MATERIAL
EXTRACTION

PRODUCTION

USE

DISPOSAL

IMPACTS

-  High resource extraction & energy use
-  Waste generation & pollution
-  Higher greenhouse gas (GHG) emissions
-  Limited value recovery
-  Higher cost & regulatory risk
-  Minimal or no carbon credit potential



Net High Emissions

Low to No Carbon Credits

VS

CIRCULAR ECONOMY

Reduce – Reuse – Recycle – Regenerate



SUSTAINABLE
SOURCING

CLEAN & EFFICIENT
PRODUCTION

RESPONSIBLE
USE

REUSE, RECYCLE
& REGENERATE

BENEFITS

-  Lower resource use & energy efficiency
-  Waste minimization & circular resource loops
-  Reduced GHG emissions
-  Value recovery from by-products & circular streams
-  Cost savings & stronger brand value
-  Generates verifiable carbon credits



AROMATIC BUSINESS

Creating Value. Restoring Nature.
Earning Carbon Credits.



Net Low / Negative Emissions

High Carbon Credit Potential

LINEAR ECONOMY MODEL

Aromatic Plantation to Oil Distillation – Hydrosol and Process Waste Not Utilised



CIRCULAR ECONOMY MODEL

Aromatic Plantation to Oil Distillation – By-products Utilised as Briquette Fuel & Hydrosols as Therapeutic Products



CIRCULAR ECONOMY IN AROMATIC PLANTATION

From Plantation to Prosperity - Zero Waste, Maximum Value, Positive Impact

A Closed-Loop Model Transforming Aromatic Farming into Sustainable Wealth



1 AROMATIC PLANTATION

- Regenerative & organic farming practices
- Soil health & biodiversity enhancement
- Carbon sequestration in soil and biomass



2 STEAM DISTILLATION



- Steam Distillation (Water Efficient)
- Clean Energy Utilization
- Efficient Resource Utilization

3 PRIMARY PRODUCTS



EARNING CARBON CREDITS



- Reduced Emissions
- Carbon Sequestration
- Renewable Energy Use
- Waste-to-Value Conversion



Generate Carbon Credits
Create Additional Revenue
Support Climate Action

4 PROCESS WASTE & HYDROSOL



- Distillation Spent Biomass (Leaves, Stems, Flowers)
- Hydrosol / Floral Water
- Fallen Leaves & Trimmings

KEY BENEFITS

- Zero Waste
- Additional Income
- Lower Carbon Footprint
- Sustainable Livelihoods
- Global Market Advantage



6 RETURN TO SOIL & REGENERATE

- Bio-compost enriches soil
- Improves soil organic matter
- Enhances crop yield & resilience

5 CONVERSION TO VALUE-ADDED PRODUCTS

A. BIOMASS TO BRIQUETTE (CLEAN ENERGY)



- Renewable Fuel
- Lower Emissions
- Energy Security

B. HYDROSOL & BIOMASS TO THERAPEUTIC & USEFUL PRODUCTS



- Aroma Mists
- Natural Skin Toners
- Herbal Soaps
- Reed Diffusers
- Compost / Organic Manure

Upcycling Waste • Creating Value • Supporting Wellness

CIRCULAR FLOW
Continuous utilization of resources

ZERO WASTE
Every output has a purpose

MAXIMUM VALUE
More products, more income

CLIMATE POSITIVE
Lower emissions, earn carbon credits

PEOPLE & PLANET
Sustainable today, prosperous tomorrow

Aromatic Plants • Clean Process
Zero Waste • High Value • Carbon Positive
A Model for a Sustainable Future

PROBLEM IDENTIFICATION – DHENKANAL /ANGUL (ODISHA) PERSPECTIVE

CHALLENGES

- MAN - ANIMAL CONFLICT
- SOIL DEGRADATION
- HIGH CO2 EMISSION
- WATER CONTAMINATION
- HEAVY METAL CONTAMINATION
- DEFORESTATION
- THREAT OF BIO-DIVERISTY
- NO LIVELIHOOD
- CLIMATE CHANGE
- FLUCTUATION IN SALES PRICE



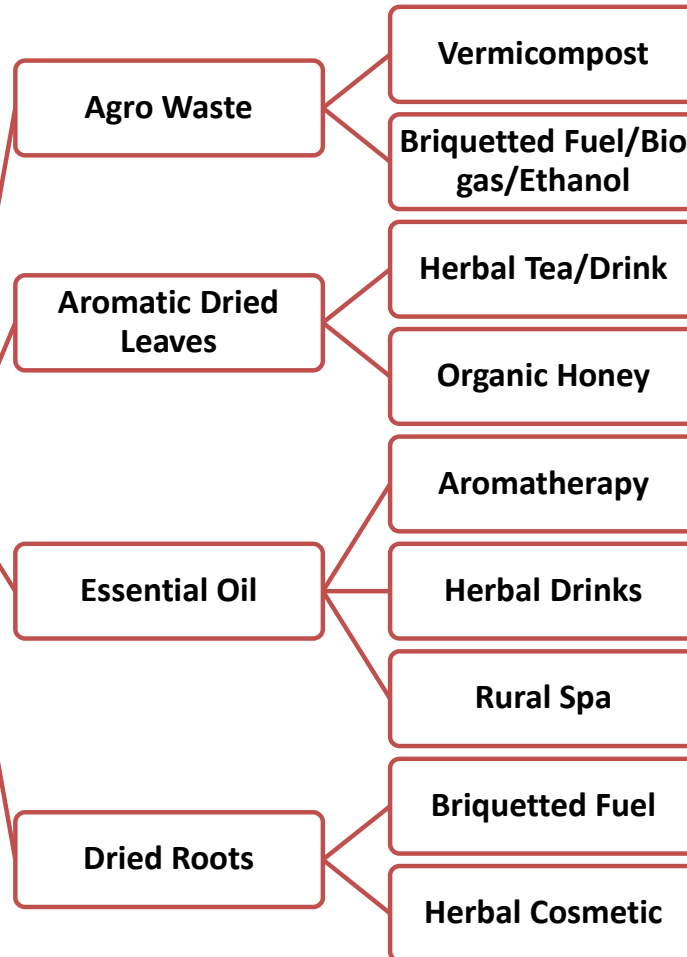
INTENDED OUTCOME

- MAN-ANIMAL CO-EXISTENCE
- SOIL CONSERVATION
- LOW CO2 EMISSION/ CO2 ABSORPTION
- WATER PURIFICATION
- PHYTO REMEDIATION
- AFFORESTATION
- ECOLOGICAL BALANCE
- MULTIPLE INCOME GENERATION
- CLIMATE BALANCE
- STEADY INCOME

MASS FLOW AND BUSINESS INTER CONNECTIONS - @ DHENKANAL DISTRICT



Aromatic Plantation



FARM INPUT ENTERPRISE

GREEN FUEL SOLUTIONS

RURAL SPA
 AROMATHERAPY CENTER
 WELLNESS CENTER
 AROMA VILLAGE
 HEALTH VILLAGE
 ECO TOURISM

SOIL RESTORATION
 ECOLOGICAL BALANCE
 CARBON FIXATION
 HEAVY METAL REDUCTION
 HEALTH AND WELLNESS
 ANIMAL DEPREDATION

AROMATIC BUSINESS IN CIRCULAR ECONOMIC MODEL



HEALTH VILLAGE



AGARBATTI



HERBAL PRODUCTS



HERBAL TEA



BRIQUETTE



AROMATHERAPY

GREEN ESSENCE FOUNDATION PARTNERSHIP IN WITH TATA STEEL FOUNDATION



FARMERS ENGAGEMENT



FARMERS ENGAGEMENT



STEAM DISTILLATION UNIT



BRIQUETTE PROCESSING



BRIQUETTE M/C



BRIQUETTE FROM LG

PLANTATION ACHIEVED (> 100 ACRES)



LEMONGRASS



PALMAROSA



VETIVER



VETIVER



CITRONELLA



LEMONGRASS

CAPACITY BUILDING



WITH SCIENTISTS



WITH FARMERS' GROUP



FARMERS WITH DIST. COLLECTOR



SHED NET



CROP TRANSPLANTATION



CROP TRANSPLANTATION

PROCESSING



VETIVER CHARGING



VETIVER TRANSPORT



MINT



SS MACHINE



FIELD DISTILLATION UNIT



VETIVER OIL

PRODUCT & STORAGE



OIL WITH DIFFUSER



LEMONGRASS OIL



WITH SCIENTIST



EXTRACTED VETIVER OIL



WITH DIFFUSER



OIL STORAGE



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THANK YOU

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