

## Dear Sir's, Madams,

We invite you take a look for our operation - Agro Forestry, Activated Carbon & Charcoal project, and cover land for phase one- 155 000Ha, phase 2 - 300 000Ha and grow to 1,500,000Ha, to produce bamboo activated carbon from Biomass Bamboo. Our project need startup funding around \$100M USD available make income around \$1,500M , project have ability return of investment within 1st year till 20 years. Our project is real green for sustainable humanity and green Earth. Activated carbon is bonus. Our project have potential max income is more \$6.25B per year from 2018 till 2080+.

Take all our Bio set and Offset for reinvestment in Free Health Care, Free Education and many more Community Social Development activity.

Our Company looking for establish Agroforestry plantation on 205,000 ha,(for today) that is big enough to supply Biomass for energy cogeneration, Pulp for textile and Paper, Charcoal and Biochar, Food, Feedstock, Building materials, Furrisher, Oil, Biofuel, food Supliments and more, from 5, very fast growing bamboo's, Pinatta, Moring and Jicama. Algae be deploy from year 1. Our bamboo, and other plantation, is absolutely sustainable, after 3 years, you can get biomass supply 250,000,000 tons per year till 50-80 year onward. Ops! We need cleaning land before start plantation. 250,000 of Ha. 12.5 ton of Biochare per ha. From day one! This is 3,125,000 ton of Biochar. In 2 years \$781,250,000, from waste, residuals.

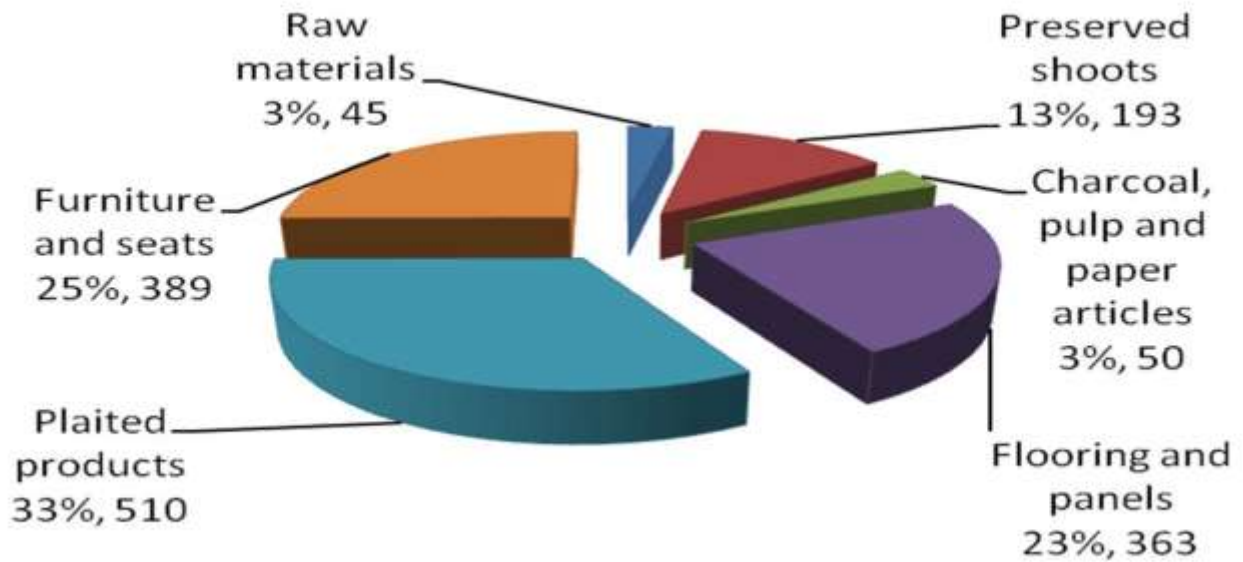
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Whatever there are at least 9 options how to get product from the bamboo;

1. Biomass Power: Capacity power supply 9,000 Mwe/hour,
2. Bio Coal Pellet : Capacity \$50,000,000 TPY,
3. Diesel Oil Refinery : Capacity 12 million gallons,
4. Bio Gas : Capacity 10,000 Nm3/hour ,
5. Charcoal / Activated Carbon : Capacity \$725,000,000 TPY,
6. Bamboo Powder : Capacity 50,000,000 TPY,
7. Sweet Shoot : Capacity 4,500,000 TPY,
8. Seedling Branch Stock : Capacity 75 Million Stock,
9. Carbon Credit : Capacity absorption CO2 is 373,000 million Nm3/year and Discharge O2 is 186,000 million Nm3/Year and replace Coal equal as 935,000,000 GJ/Year or 22,000 Tones of Oil Equivalent.
10. Whatever plant 1-6, your project still get revenue from listed 7+8+9 also!

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AGD plantation on land per first sites, 60 000ha within 6 months with budgetary \$100M include Company office, College. Health Care Centre, warehouses, workshops and plants establishment cost, start from land planning design, cleaning the land, building reservoir/pools and line plastic pipe water irrigation cover land, Nursery for propagation, branching propagation, plantation and guaranteed survival 100% of seedlings and clump, on land will cover by Organic Fertilizer. Then use Designed Sufficiency Agriculture compliance our model, and develop our people to protect project and run continuity biomass supply long live. We have team of 500 foreign professionals' tutors, lots of them volunteers.

Our group will combine 8 major parts are following:

- 1) Biomass Production Technology. To security production biomass full requirement.
- 2) Grinding & Dried Technology. To supply biomass grinder & drier
- 3) Activated Carbon Technology. To supply Activated Carbon Rotary kiln.
- 4) Pyro-Torrefaction Refinery. To supply biomass bio crude oil refinery machine.
- 5) Liquid Biogas Technology. To supply liquid biogas machine.
- 6) Distilled Water Technology To supply distilled water for industrial and drinking
- 7) Bio Fertilizer Technology To supply bio fertilizer for large land bamboo growing
- 8) Food and Feed Stock Technology. To arrange finance to all energy project in Limpopo.



### EXPORTERS

China	927	60%
Indonesia	191	12%
Viet Nam	67	4%
EU-27	49	3%
USA	27	2%
Philippines	20	1%
Thailand	18	1%
Malaysia	12	1%
Myanmar	11	1%
Nigeria	7	1%

Global export 1,550

### IMPORTERS

EU-27	366	27%
USA	218	16%
Japan	179	13%
Canada	50	4%
Australia	23	2%
Singapore	22	2%
Korea	21	2%
Russia	17	1%
Switzerland	16	1%
China	14	1%

Global import 1,375

Country Area of Bamboo (1,000ha)

Nigeria 1,590

Ethiopia 849

Tanzania 128

Kenya 124

Uganda 67

Total Africa 2,758

There are over 1500 documented uses for bamboo which includes:

- Charcoal and bio chare,
- furniture, flooring,
- musical instruments,
- crafts,
- scaffolding,
- pulp and paper making,
- sports equipment such as skateboards,
- textiles,
- food in the form of young bamboo shoots, International trade in bamboo shoots from China is now worth more than USD 150 million per year
- medicinal uses,
- and energy.

### RESOURCES

- Bamboo can be converted into three valuable products: bamboo charcoal, oil and gas.

- Bamboo extracts contain valuable elements and can be used in pharmaceuticals, creams and beverages.
- Bamboo gas can be used as a substitute for petroleum.
- Bamboo charcoal is an excellent fuel for cooking and barbequing.
- Environmental

It takes an acre of trees to build a typical home, but because bamboo grows so fast and dense, the bamboo for a home grows in an area the size of the home itself. Use bamboo and save a forest.

- Structural

Bamboo exceeds strength of construction wood by several times. It is durable, resilient and long-lasting.

- Aesthetic

Bamboo has a tradition dating back thousands of years because it is considered a beautiful material with such a luxurious ambiance.

- In 2006, roughly 10 million USD worth of bamboo textiles were sold in the US

and 50 million USD worth worldwide.

- There are over 200 retail stores carrying bamboo textile products in the US alone.

The stores range from small, high-end designer clothing to mega-chains such as Wall-mart and Bed, Bath & Beyond.

Bamboo fabric is widely available in China, India, and Japan. Footprint provides socks made of 95% bamboo to offer "antibacterial and moisture-wicking properties and superior comfort". London-based Bamboo Clothing supplies a range of bamboo clothes for men and women that stay naturally cooler in the summer and hotter in the winter, like Merino wool.

- Cellulose is the most important component of the bamboo for textile purposes.

Whether the cellulose is regenerated or mechanically and biologically extracted from the stem, bamboo textiles are made from bast fibres of cellulose.

- Steam extract and crush - Bamboo leaves and soft, inner pith from bamboo trunk

Crushed bamboo is soaked in sodium hydroxide to produce cellulose.

- The bamboo cellulose is forced through spinneret into a sulphuric acid bath

The process is the standard viscose process. This process is also used to manufacture fibres from wood pulp.

- According to textile classification so called bamboo is standard viscose, abbreviation CV.

The processing of the cellulose pulp into fibre "can" be cleaner than the processing used for conventional viscose "if" :

a closed loop process captures and reclaims all the solvents used in the manufacturing, though this is "not" standard practice

- The resulting bamboo viscose fibre is very soft to the touch.

The Swiss company Litrax claims to use a more natural way of processing the bamboo into fibre.

In this the woody part of the bamboo is crushed mechanically before a natural enzyme retting and washing process is used to break down the walls and extract the bamboo fibre.

- This bast fibre is then spun into yarn.

The same manufacturing process is used to produce linen fabric from flax or hemp. Bamboo fabric made from this process is sometimes called bamboo linen.

Why Farm with Bamboo.

Understanding density and yields Advantage of bamboo over Eucalyptus

Water advantage.

Downstream

The fastest growing plant on this planet

Is a critical element in the balance of oxygen and carbon dioxide in the atmosphere

A viable replacement for wood

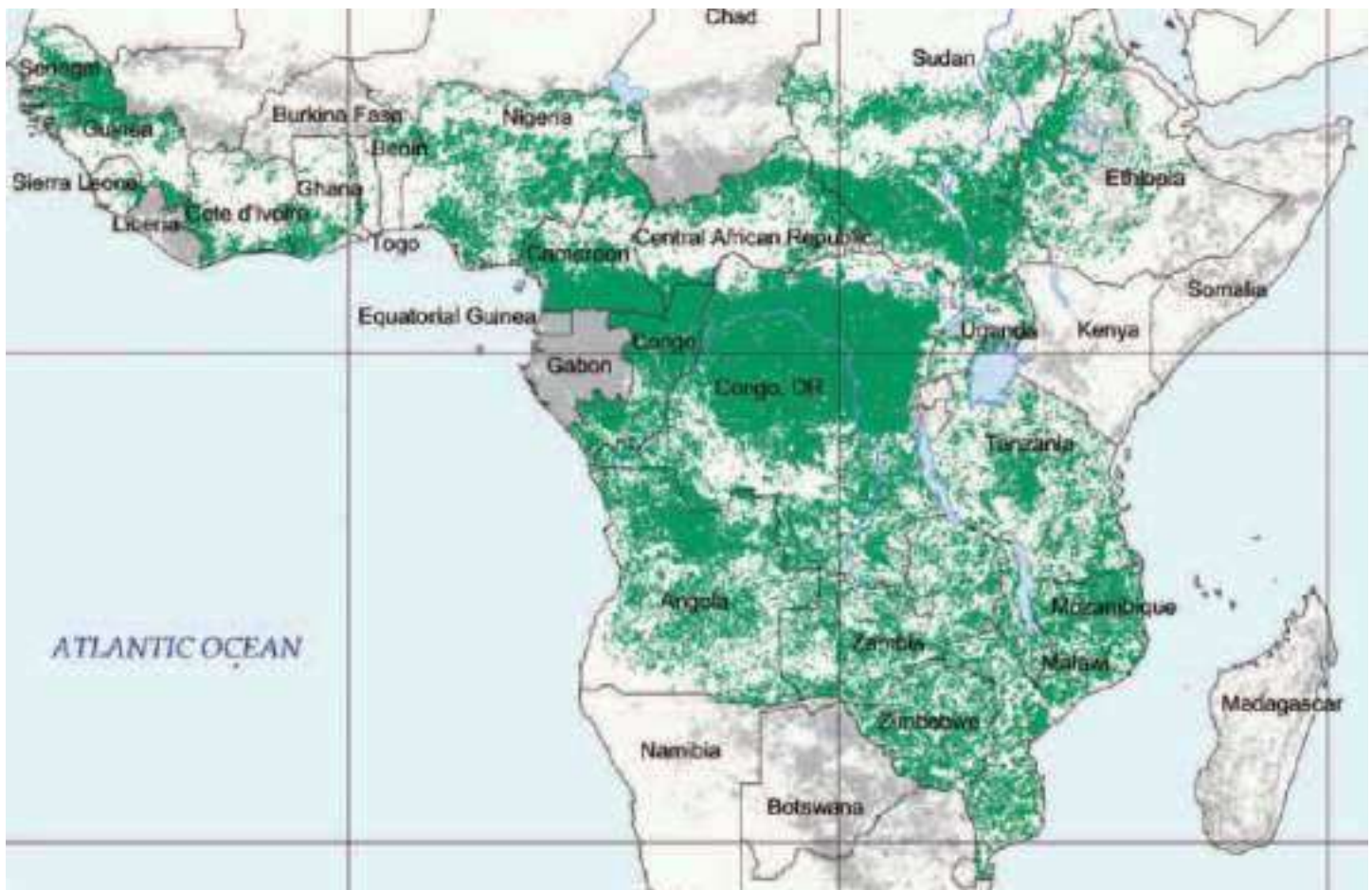
An enduring natural resource Versatile with a 105 day growth cycle

A renewable resource for agro forestry production.

And over 2.2 billion people rely on bamboo as a source of income.

Bamboo forests are excellent at controlling soil erosion and have been shown to be particularly effective within water catchment areas.

INBAR's work on bamboo and biodiversity has found that bamboo plantations have been used successfully to rehabilitate degraded land back in to productive, fully functioning ecological systems Bamboo addresses the global and ecological challenges:



- generating employment through bamboo cultivation and manufacturing, and
- by providing fertility, stabilization, water pollution treatment, and carbon sequestration to the environment,
- bamboo plays an important role in sustainable development.

#### Species

1500 species worldwide with excess of 14 million hectares worldwide

Grows naturally on all continents except Antarctica and Europe

Chosen plants optimise sustainable development

All Sympodial – non invasive plants

Generally growing in the wild

Advantage of bamboo over Eucalyptus

Yields Of fast growing Eucalyptus

After 10 Years the p/h weight is 200 tons p/h @ R460 per ton

Regrowth 8 years the p/h weight is 180 tons p/h @ R460 per ton

Income for 10 years at yield 200 t/h is R92 000 p/h = Ave R9200 p/y

Income for 8 years at yield 180 t/h is R82 800 p/h = Ave R8280 p/y

Total Income per hectare R174 800 p/h = Ave R9711 p/y

Yields Of fast growing Bamboo

4th Year the per hectare weight is 100 tons p/h R140 p/t = R 14 000

5th Year the per hectare weight is 120 tons p/h R140 p/t = R 16 800

6th Year the per hectare weight is 150 tons p/h R140 p/t = R 21 000

For the next 4 years, let's say, the weight remains the same therefore

4 Years Income is = R 84 000

Total in year 10 = R 135 800

Total next 8 years = R 168 000

Total Income from Bamboo after 18 years = R 303 000 vs Ave R9711 p/y

#### Water advantage

A mature clump Bamboo of bamboo uses on average 2 litres of rain per day. As the rhizomes are all connected within the clumped is difficult to gauge individual culm uptake.

Bamboos do not have an elongated root system that draws water from the aqua-fill, it has a fine hair-like root system to a maximum depth of 80cm. Bamboo only uses surface water, thereby stabilising slopes and eradicating soil erosion.

Plantations can be intercropped for the first two years. This will aid the growth of young bamboo plants.

A 10 year old Eucalyptus uses on average 10 litres of rain per day.

This increase with age up to 200 litres.

Eucalyptus has a deep tap root that draws water all year round from the aqua-fill. Generally there is no other vegetation around.

Downstream Process.

From Activated Charcoal for water purification to:

Producing a high grade coal replacement to Bio Diesel.

From Paper to Bamboo fibre (clothing etc).

Floors, Walls, Structural Beams & Roofing.

There are now over 5000 products made from Bamboo

Lets take a look at the Bamboo Revolution

RES projects combine the following:

Social Responsibility: Achieve compliance Enterprise Development: Sustainable agriculture and manufacturing enterprises

Environmental Responsibility: Phyto-remediation of soil and water

Carbon sequestering / offset opportunities

Renewable energy options

Biomass Gasification: Alternative fuel for boilers and dryers

Fast pyrolysis oil: Replacement for No2 Bunker oil in boilers

Captive Gasification Co and Tri-generation

Bituminous Coal replacement

Pellet fuel for home cooking and heating

Sustainable low cost bio-diesel

Renewable consumer products

Timber replacement

Steel roofing replacement

Edible oil

Food fortification products

Animal feeds

Organic Nitrogen Fertilizer

Soil amendment

All from single project design.

Eastern Cape

1st 11 Ha planting at Cintsa

Planned 300 Ha development at Cintsa

Total project potential 1,000 Ha

Carbon project registration

Food & Trees – Bamboo for Africa Verified Carbon Standard Registration

First Bamboo VCS registration internationally RES as the project development partners, land provision, plant procurement & capacity building

200 Ha Development at Blue Disa – Lawley GP

60 Ha Bio Energy Plantation Development at Leandra

Working with SEDA & Dept of Agric as integrated support structure

Development land & sites

Kwa Zulu Natal 15,000 Ha Ulundi

Gauteng 300 individual farms

Northwest Province, Limpopo & Mpumalanga

Zambia, Malawi & Mozambique

RES Bio Energy Farm outside Westonaria

Trial plantings planted nationally

Biomass beneficiation

DBSA grant award for clean cook stove, job creation, and education.

A very well planned and managed effort is required as it will dictate the way forward.