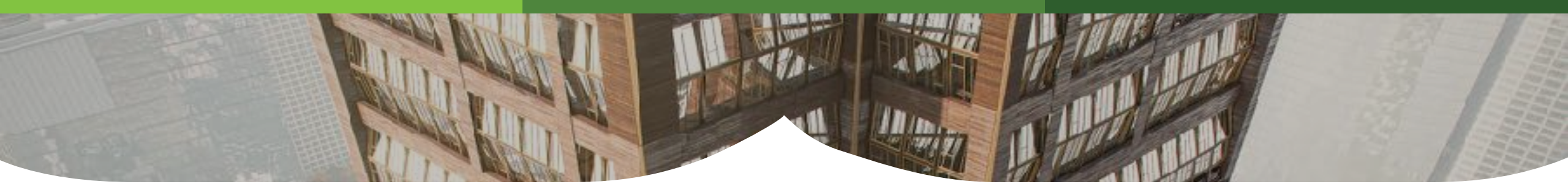


RIZOME®

Building with Engineered Bamboo

May 18, 2023

RIZOME

Engineered Bamboo

Strong like steel.
Tough like concrete.

We are Structural Bamboo Experts

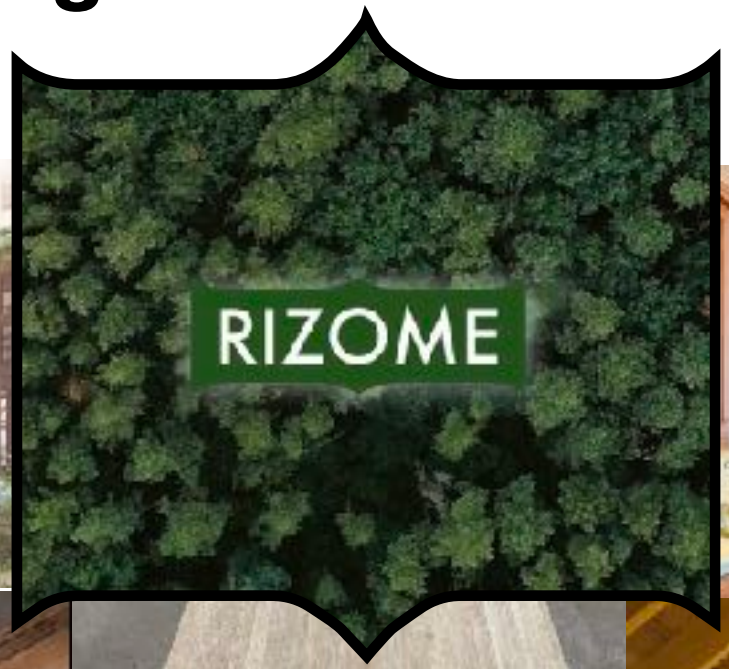
Our Sister Company

BAMBOO LIVING

Pre-fab House Manufacturing Center in Vietnam

Hundreds of Bamboo Buildings Built in USA

Now Manufacturing Dimensional Bamboo Products



Rizome’s Laminated Bamboo Products

Boards

Up to 10’ Long

Solid Asper Bamboo

S4S

Free & Clear

1/4 “ thick

Veneers

1/4 Inch Thick

Solid Asper Bamboo

4’ x 8’

Free & Clear

Custom thickness available

Panels

Multi Ply

Solid Asper Bamboo

4 ‘ x 8 ‘

Up to 1.5 “ thick

based on customer requirements

Laminated Lumber

Custom Sized

Solid Asper Bamboo

Cut to Size

Custom Thickness

Structural

Strand Woven

Exterior Grade

Available as 4’ x 8’ panel or

Cut to Size boards

Ideal for outdoor applications

Fall 2023

Rizome Structural Bamboo Components

Columns & Trusses

Joists & Floor Systems

Beams & Ceilings Systems

Photos for illustration purposes. Rizome custom builds components to customer specifications

CNC Manufacturing & Precision Finishing at our Manufacturing Center in Cagayan de Oro City, Philippines


Lamination Press


Precision Saw


High Finish Sander


4 foot x 8 foot panels


Multi-ply thickness

Made from Giant Timber Grade Bamboo for World Class Building Materials

Giant Asper Bamboo

RIZOME

We Launch the Products with Philippine Architects, Hotels & Developers

Rona Tan Architects & Design

Andy Locsin

"Rizome is quite an interesting company. It's been discovered that over the years that one of the more amazing and sustainable building materials that exist and whose potentials have not been tapped is actually bamboo," Locsin continues.

And it turns out [that] in terms of strength, buildability, constructability—with some clever ways to put the material together, laminate it, design the components of it—it turns out to be a sustainable and inherently beautiful material. It's super strong structurally, and [also] enduring."

Art Fair Philippines 2023
Rizome materials make his design possible

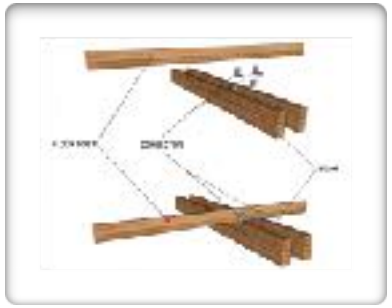
Our First US$1 Million Project

PINO STUDIO

"I've been looking for you so I can build with no steel"

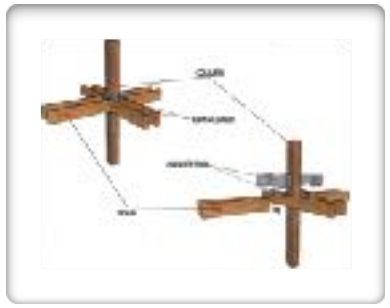
All structural components made from bamboo

Beams



Columns

Joists



Our first US$2 Million Project

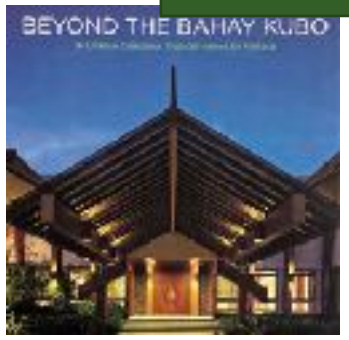
Gelo Mañosa

Rizome materials bring sustainability to the new Philippine Senate campus

New Senate under construction in Manila

"I've briefed my team and all are excited all over again!

My team are already wanting to use your product invidious projects"



A Structural Component Partner

Royal Pineda

Rizome Laminated Bamboo for his commercial buildings

the advantages and performance wonders of these ‘miracle timber’ with your technology made us more confident, realizing that now, we can already translate our projects into glue-laminated bamboo construction in terms of methodologies and materialism.

We believe that this is revolutionary, benefitting not just our country but the whole world in terms of carbon reduction and sustainability. The regenerative results and carbon-neutral world will be the future. We are also glad that the Philippines is hosting this effort together with you.

Infrastructure Projects - Bidding on Airports

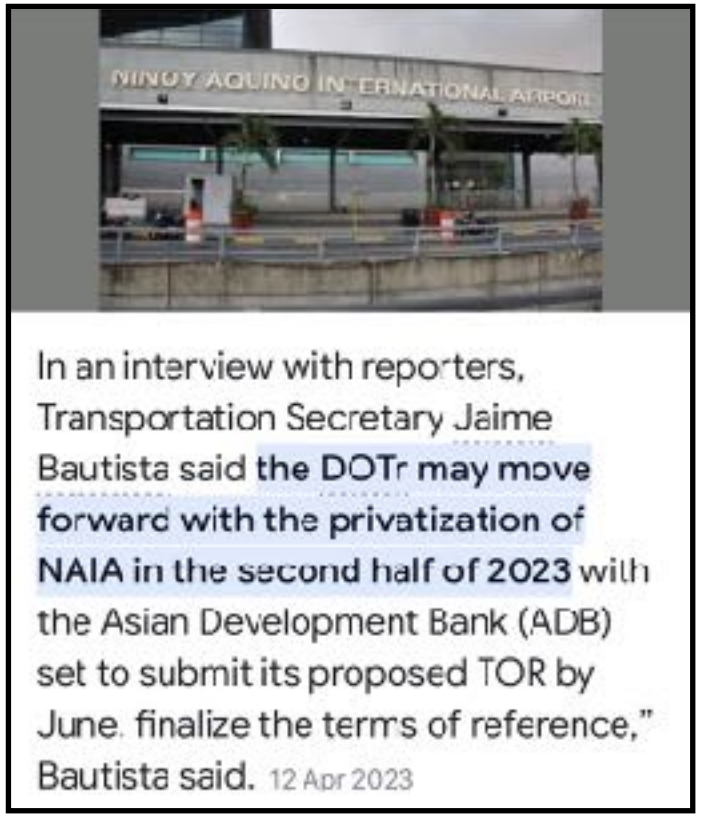
Leyte

Bukidnon

Negros

Samar

Manila



Commodity Markets

As bamboo fiber matures we enter US$140 billion Addressable Markets

Wholesale Channel Partner for Strand Products (4Q23)

Bamboo Alternative to Wood Plastic Composite

Bamboo Alternative to Tree based OSB

Growth market: Oriented Strand Board
As more bamboo comes online we will expand to OSB

TAM: US$ 44.Billion

CAGR of 5.4% to 2030

What is the OSB market trend?

The global oriented strand board market size was valued at $25.6 billion in 2020, and is projected to reach $44.3 billion by 2030, growing at a CAGR of 5.4% from 2021 to 2030.

Demand: 43.5 Million Cubic Meters

The global oriented strand board (OSB) market size reached 33.6 Million Cubic Meters in 2022. Looking forward, IMARC Group expects the market to reach 43.5 Million Cubic Meters by 2028, exhibiting a growth rate (CAGR) of 4.2% during 2023-2028.

Global Oriented Strand Board Market Research, 2030

The global oriented strand board market size was valued at $25.6 billion in 2020, and is projected to reach $44.3 billion by 2030, growing at a CAGR of 5.4% from 2021 to 2030. Oriented strand board is a widely used, versatile engineered wood board made from waterproof, heat curing adhesives, and rectangular shaped strands of wood arranged in cross-oriented layers. It is a type of engineered wood. OSB is manufactured in various grades with improving resistance to the effects of moisture. The combination of wood and adhesives in OSBs creates a strong, dimensionally stable panel that resists deflection, delamination, and distorting. Moreover, these panels resist racking and shape distortion when subjected to demanding wind and seismic conditions.

Growth Opportunity: Railway Sleepers

Addressable Market: US$ 103.7 Billion

Railway Sleepers Market is anticipated to reach US$ 103.67 Bn by 2029 from US$ 52.80 Bn in 2021 at a CAGR of 8.8% during a forecast period.

Railway Sleepers Market Overview

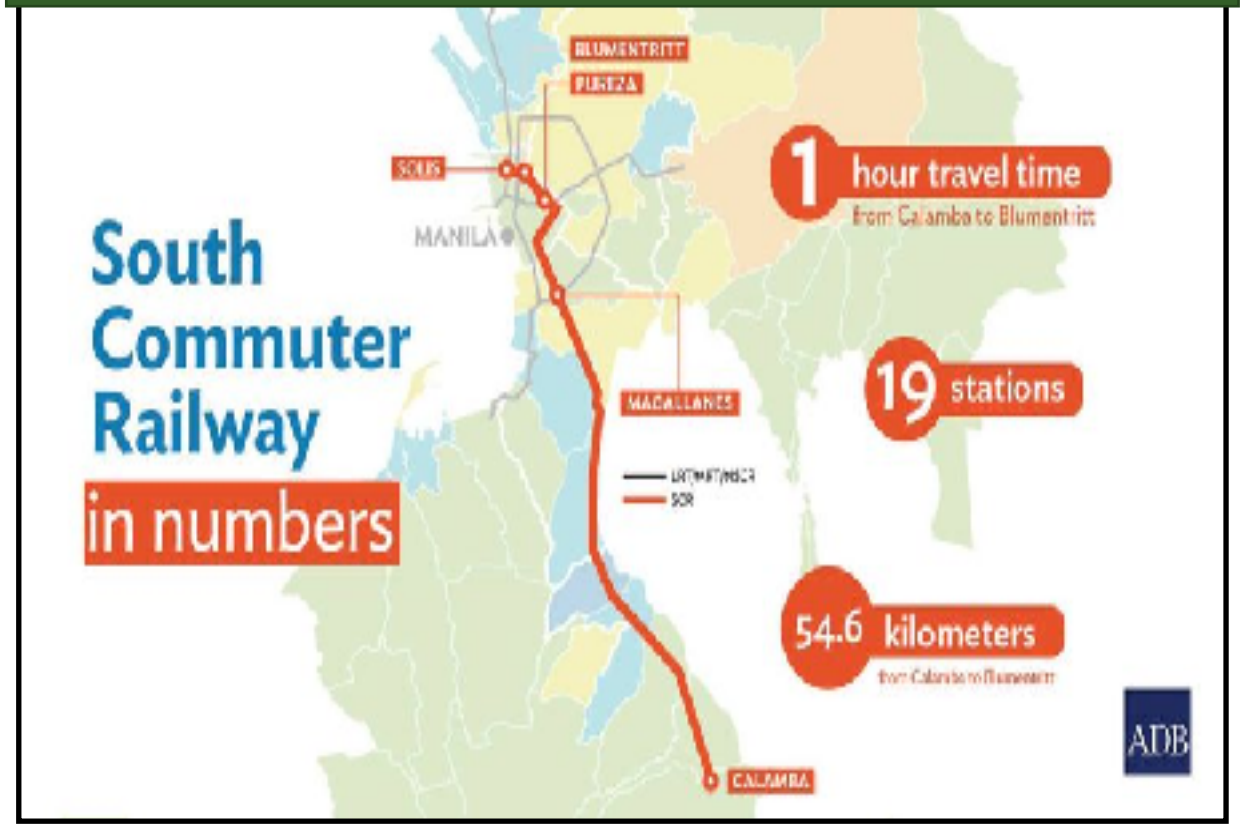
Railway sleepers are the rectangular-shaped components of railroads that are usually made of wood or concrete. The railway sleepers are an important part of the railroad assembly because they evenly distribute the load over the railway lines. The railway sleepers provide a robust form to the track and ensure that the railway bogie and locomotive remain upright.

3 Billion Sleepers will need Replacing

It is estimated that there are at present throughout the world about 1,250,000 kilometers of railway track for which **approximately 3,000 million** sleepers (crossties) are used, 95 percent of them made of wood.

Philippine Rail for Bamboo Sleepers

We will bid on this rail project to launch bamboo sleepers

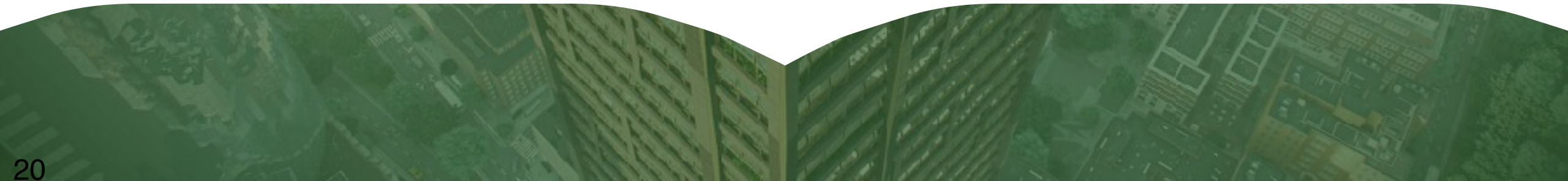


Bamboo is Tested in Germany:
-3 million load cycles with inclined load,
-5 million load cycles with straight load and several
-plus stiffness, heat & cold tests

RIZOME®

Reforesting Philippines

Plant Bamboo + Make Lumber = Sequester Tons of Carbon



Bamboo’s Environmental Impact

Rizome Reforesting Program Components

Propagation

Super Charged Seedlings

We use advanced organic inoculants for super-charged propagation materials & will launch lab-based tissue culture protocols to clone bamboo plants for large scale, efficient planting

Nursery

SME Partners

We also work with local agri-businesses to grow bamboo in nursery from ‘branch cuttings’ we get from each mature bamboo pole we harvest

Land

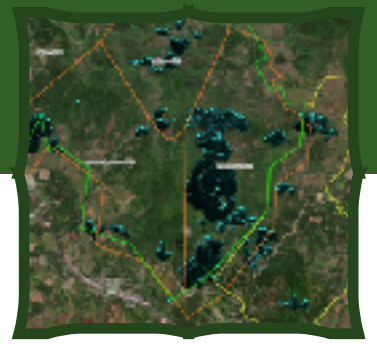
Partner with Owners

We partner, under long term contracts, with local landowners —indigenous peoples, and large agricultural entrepreneurs to develop bamboo on their lands creating a diversified value chain

Optimization

Growing System

We use precision based farming practices and organic fertilization techniques to increase bamboo fiber yields from each hectare grown



Technology

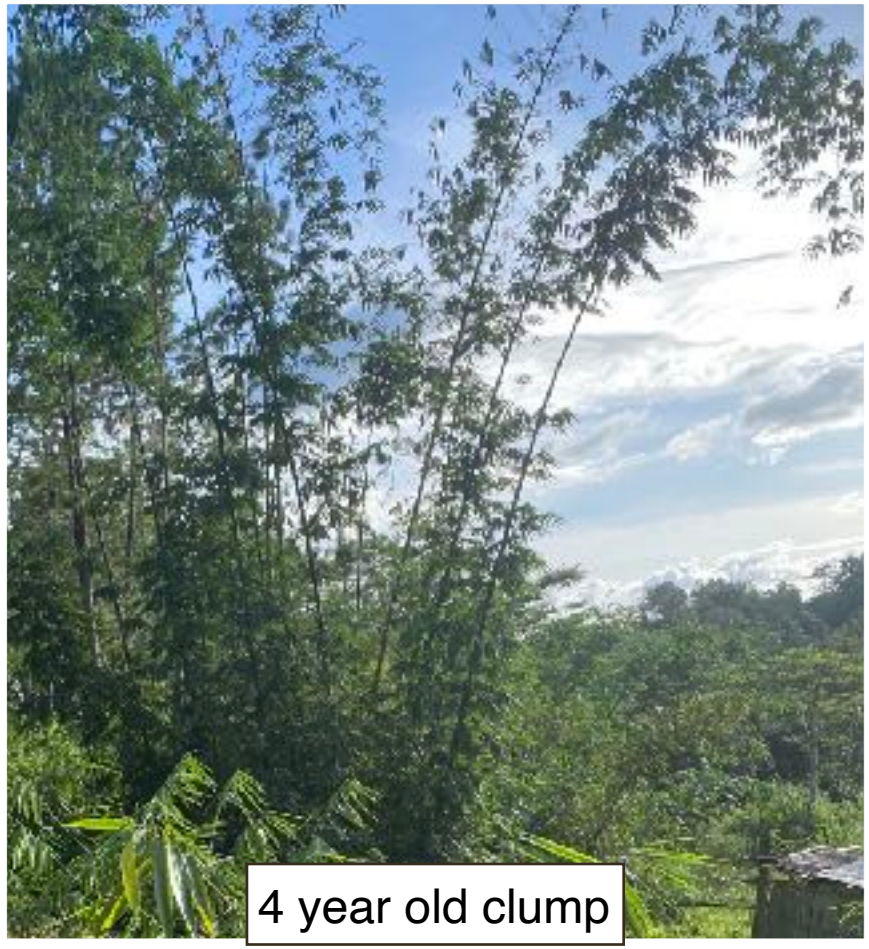
Data Centric

GPS geo-tagging and satellite monitoring allow us to track and trace our carbon credits to the individual bamboo plant level

Mindanao Program

Planting 1.8 million bamboo plants with Climate Impact Partners

MOAs established with 15 Tribes
Planting Bamboo for Livelihood & Carbon Removal



4 year old clump

Samar Province Program

On the Ground & Ready to Scale

Samar Province is Shovel Ready

Land area:

41,000 Ha identified for phased development:

- Phase 1: 5,000 ha
- Phase 2: 14,000 ha
- Phase 3: 22,000 ha

Titled Landowner:
Department Environment & Natural Resources

Stakeholder Alignment

Agricultural Entrepreneurs
Community
LGU
Regulatory

Project Preparedness:

- Land identified
- Engagement with stakeholders
- Planting Plan developed
- Prototype Planting Plant:
  - 50 hectares for learning
  - 10,000 plants in the local nursery
  - Planting begins in June 2023

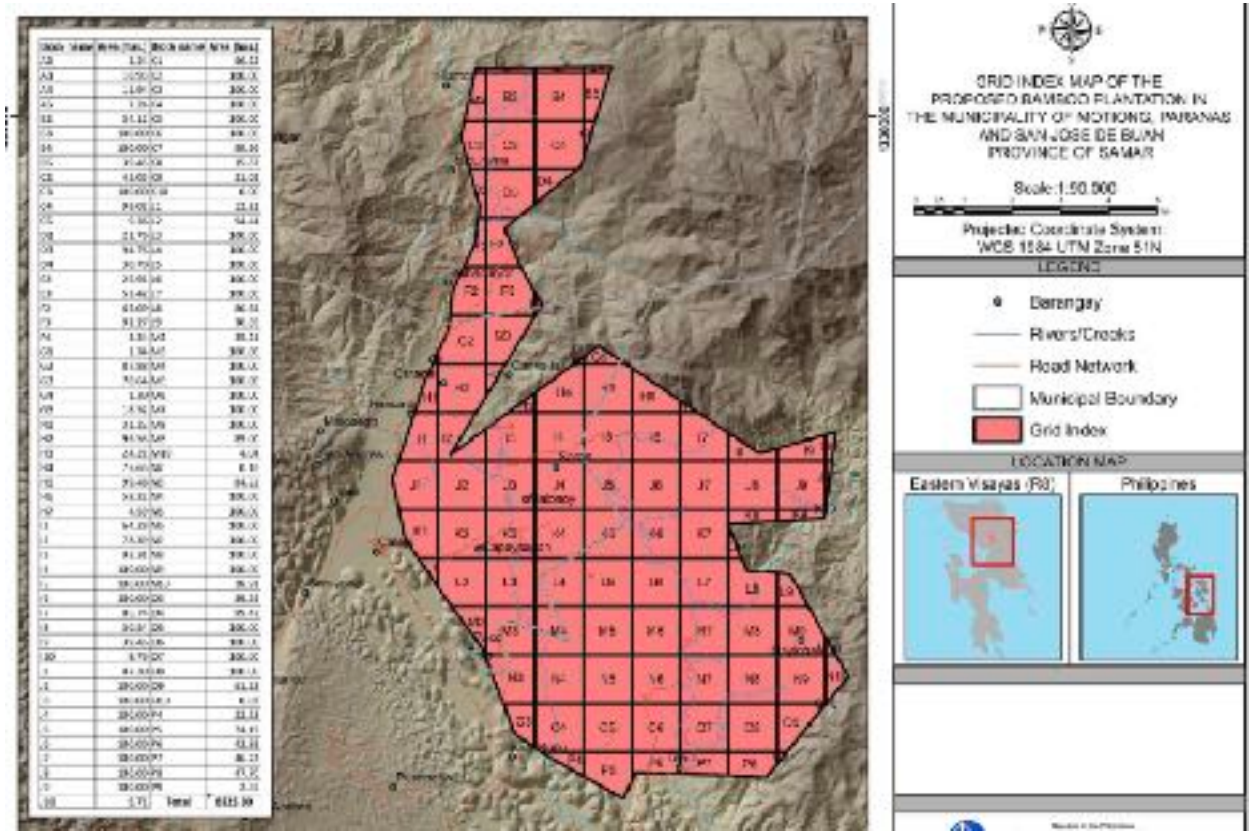
Project Scaling:

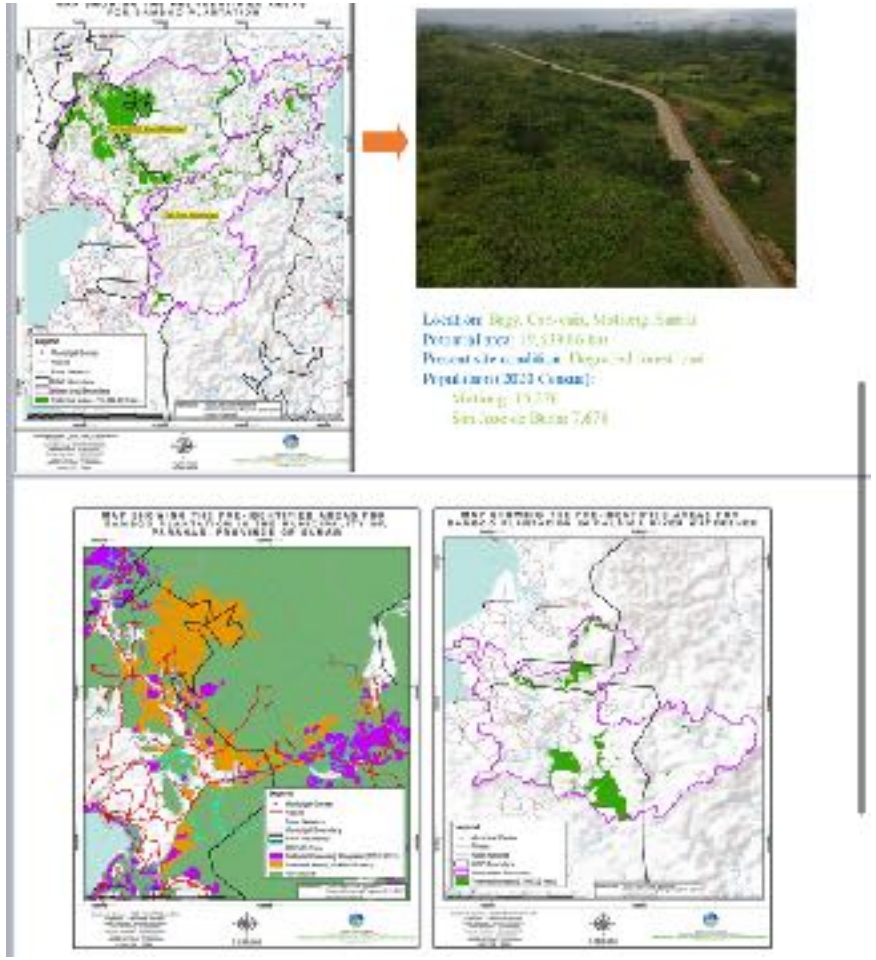
- Actively pre-planning for commercial sale planting

Public Private Infrastructure Project

- Stakeholders:
  - Public landowner:
    - DENR
  - Private developers:
    - Samar Bamboo Corporation
    - Rizome

41,000 Hectares Identified





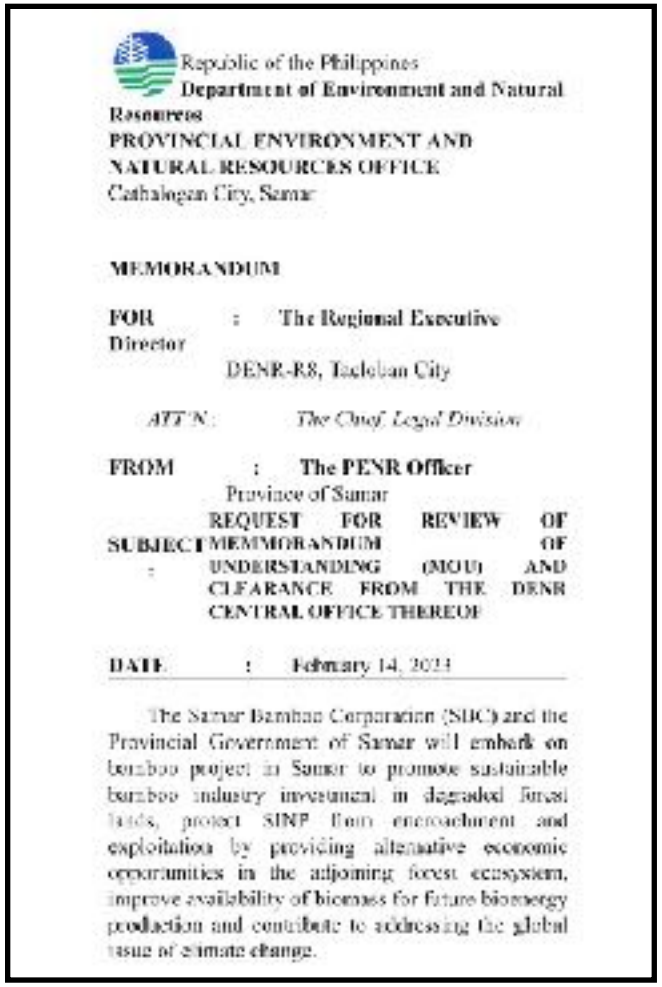
MOU being drafted & reviewed

MEMORANDUM OF UNDERSTANDING

This MEMORANDUM OF UNDERSTANDING (MOU) is entered into by and between:

The **Department of Environment and Natural Resources**, represented herewith by the DENR Regional Office No. VIII with office address located at Sta. Niño Extension, Tacloban City, represented by its OIC, Regional Executive Director, **ARTURO E. FADRIQUELA**, herein referred to as **DENR**;

The **Samar Bamboo Corporation** with office address located at _____, represented herein by its Chief Executive Officer, _____, herein referred to as **SBC**:



Republic of the Philippines
Department of Environment and Natural Resources
PROVINCIAL ENVIRONMENT AND NATURAL RESOURCES OFFICE
Catbalogan City, Samar

MEMORANDUM

FOR : **The Regional Executive Director**
DENR-R8, Tacloban City

ATT'N : *The Chief, Legal Division*

FROM : **The PENR Officer**
Province of Samar

SUBJECT : **REQUEST FOR REVIEW OF MEMMORANDUM OF UNDERSTANDING (MOU) AND CLEARANCE FROM THE DENR CENTRAL OFFICE THEREOF**

DATE : February 14, 2023

The Samar Bamboo Corporation (SBC) and the Provincial Government of Samar will embark on bamboo project in Samar to promote sustainable bamboo industry investment in degraded forest lands, protect SINP from encroachment and exploitation by providing alternative economic opportunities in the adjoining forest ecosystem, improve availability of biomass for future bioenergy production and contribute to addressing the global issue of climate change.

Samar Nursery Developed
Planting Begins in June

Phase 1 Nursery Ready

10,000 Bamboo Seedlings

Funding the Philippines Opportunity

Developing Engineered Bamboo at Scale Requires Project Financing

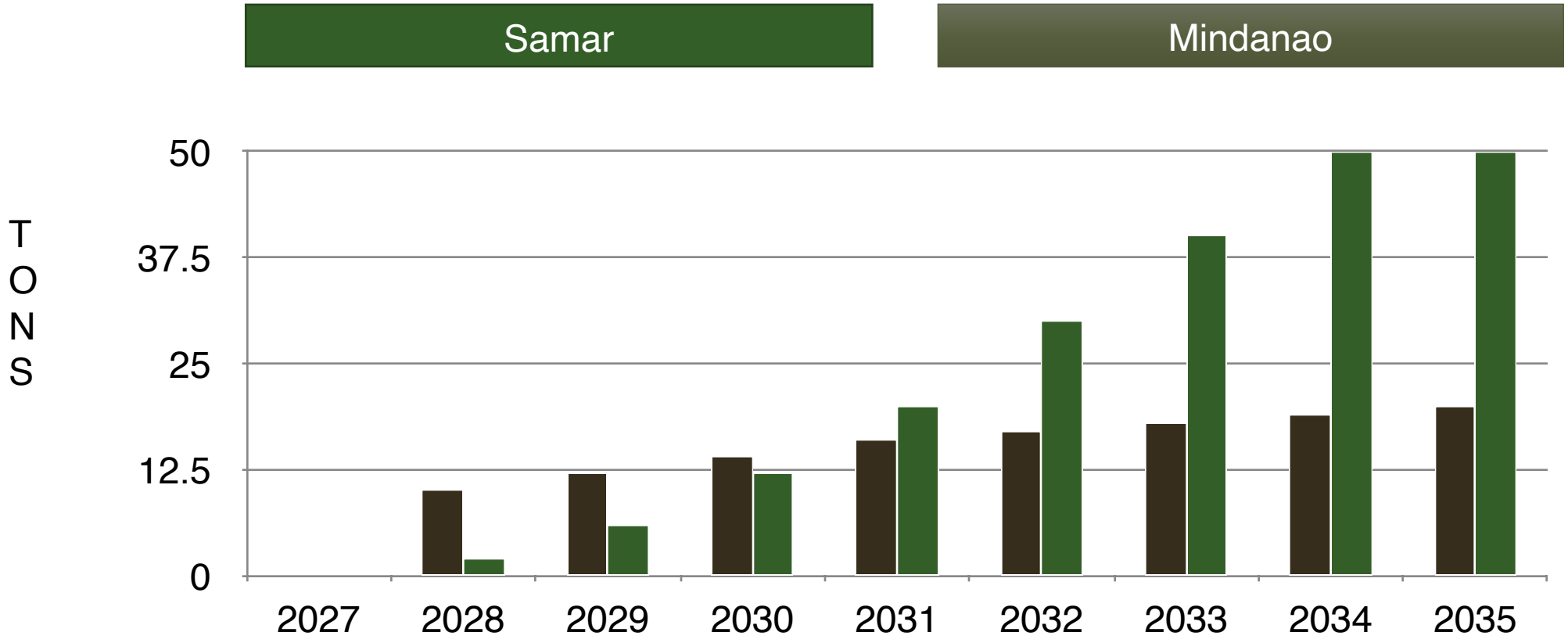
Funding Needed by Use of Funds / Year

	Manufacturing	Bamboo	Nursery	Total
2023	$1.7 M	$1.7 M		$3.4 M
2024	$0	$4.0 M	$1.0 M	$5.0 M
2025	$0	$4.75 M		$4.75 M
2026	$0	$7.0 M		$7.0 M
2027	$3.5 M	$7.0 M		$10.5 M
2028	$0	$7.0 M		$7.0 M
2029	$3.5 M	$7.0 M		$10.5 M
2030	$22.0 M	$0		$22.0 M
2031	$0	$0		$0
Total	$30.7 M	$38.45 M	$1.0M	$70.15 M

Cumulative Building Materials Revenue by 2040

Building Materials	2040 Cumulative
Mindanao Revenue	$1,545,095,312
Samar Revenue	$2,002,361,832
Total	$3,547,457,144

Tons of Bamboo Fiber for Building Materials



RIZOME®

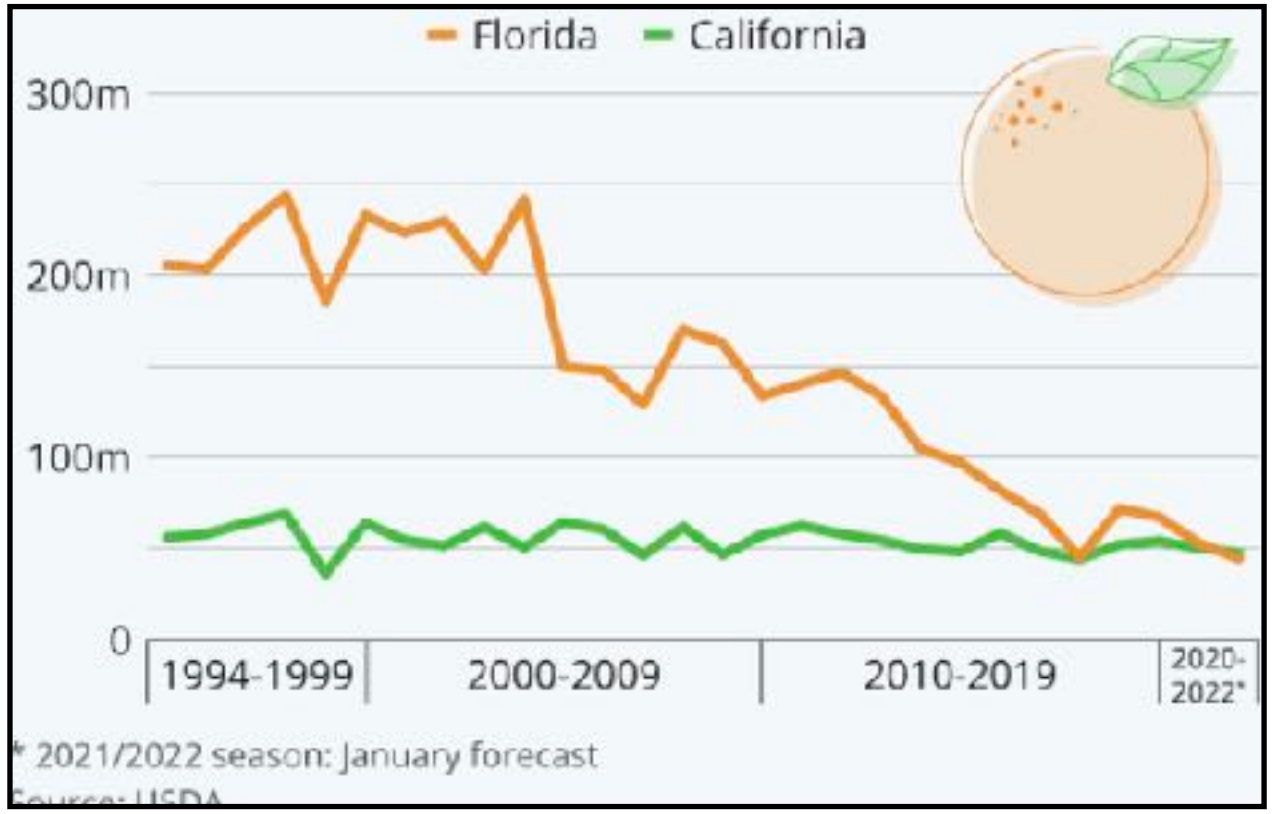
The Miracle Timber®

Regenerative Ag in Florida

Partnering with Citrus Farmers for Regenerative Agriculture

Made in America bamboo panel products

Florida Citrus Industry Looks to Bamboo



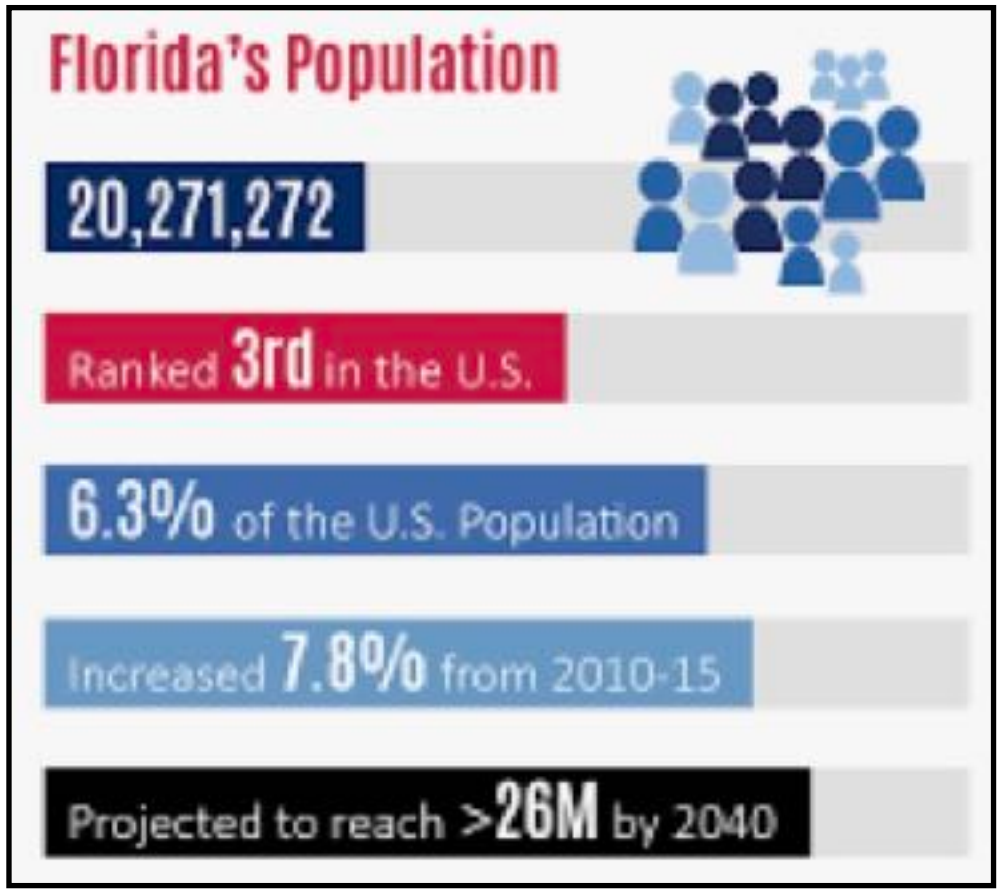
Sustained decline in citrus industry is impacting:

- Farm jobs & income
- Land values
- Adjacent industries

Agricultural regeneration with Timber Bamboo is underway, improving:

- Soil health
- Economic vitality
- Carbon sequestration

Millions of People are Moving to Florida



By 2040:

an estimated 6 million more people will move to Florida

Driving big demand for construction of homes & buildings

Today, there is no-wood grown in South Florida

Bamboo timber building materials will help meet demand for this growing market

Bamboo Thrives in South Florida

2023 Goals: expand planting & open manufacturing center

Growing Fast & Big in Labelle

Three Years Old

9 months old

Florida Near-Term Roadmap

- Pilot: to be completed Summer 2023
    - 100 acres of timber grade bamboo planted to:
        - Test precision agriculture practices
        - Prove soil amendment practices
    - Conduct Carbon Feasibility Study
- Bamboo Development:
    - Phase 1: Plant 300 acres with our Joint Venture partner
    - Phase 2: Plant 1,000 acres with 3rd party planting partners (cooperative)
    - Phase 3: Expand planting as agreed with partners to reach 20,000 acres over time
- Manufacturing:
    - Phase 1: Open a final assembly plant in Florida in early 2024
        - Feed bamboo semi processed materials from Rizome's Philippine operation
        - Demonstrate to planting partners the viability of bamboo building materials
    - Phase 2: Expand manufacturing capacity as bamboo in Florida becomes available.


Thank you