Theme

ENVIRONMENTAL RESTORATION AND JOB CREATION

Topic of Presentation

Bamboo: The Miracle Plant

Federal Ministry of Environment, Abuja

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Opening Statement - 1

- We are at a pivotal moment in time such that the world is experiencing a confluence of pressures from climate change, demands for greenhouse gas mitigation, stakeholder pressures on corporations to do more to mitigate climate change and demand for more sustainable solutions for manufacturing materials, enhancing climate justice demands and lots more.



Opening Statement - 2

- Basically, **the International Network on Bamboo and Rattan (INBAR)** considers Bamboo as a vital resource of a **Green Economy**.
- Bamboo is potentially a key component of the Green Economy's transformation.
- For example, since 2018, China earns up to $60 billion (globally) and $39 billion (domestically) from bamboo and rattan sector.
- Therefore, since bamboos have presence in several states in Nigeria; its versatility could offer Nigerians sustainable solutions to their needs and unemployment issues.



Source: https://tradehub.earth/wp-content/uploads/2021/03/BambooRattan_Final4.pdf

Introduction to Bamboo

Bamboo is a sustainable, fast-growing grass

- Approximately, 1600 species of bamboo grow worldwide.
- Bamboo is the fastest growing plant in the world - it is able to grow 91cm in just a day!

- Its rapid growth and tolerance for marginal land, make bamboo a good nature-based solution (NBS) for afforestation, carbon sequestration and climate change mitigation.

- Used for building materials, as a food source, and as a raw product for multiple uses, bamboo is versatile and has notable economic and cultural significance.

- Bamboo, like wood, is a natural composite material with a high strength-to-weight ratio useful for structures.
- Bamboo's strength-to-weight ratio is similar to timber, and comparable to a softwood or hardwood.

Bamboo's ecological restoration benefits

Quality Carbon Credits

Carbon Sequestration

Bamboo, as a member of the grass family, sequesters carbon better than terrestrial forests. It can sequester up to 17 tonnes per hectare per year within the roots systems. Harvesting carbon does not disturb the sequestered carbon overall.

Land Restoration

Bamboo provides tremendous restorative powers to degraded lands. Bamboo can clean soil and water of contaminants, mitigate erosion, restore moisture content and revitalize soil nutrients

Premium credits

The economic support and poverty reduction feasible with a plantation project can also create premium credits known as CCBS credits. Renewable energy credits may also apply

Bamboo for environmental sustainability

Rehabilitates degraded land

Develops, support, restores biodiversity

Erosion protection against flooding and wind

Cleaning and restoration of water tables

Restore over-farmed, overgrazed lands

Carbon sequester ~ 17+ tonnes per hectare annually

Oxygen production = 35% better than terrestrial forests



Bamboo for economic development

Global Bamboo Supply Chains and Demand

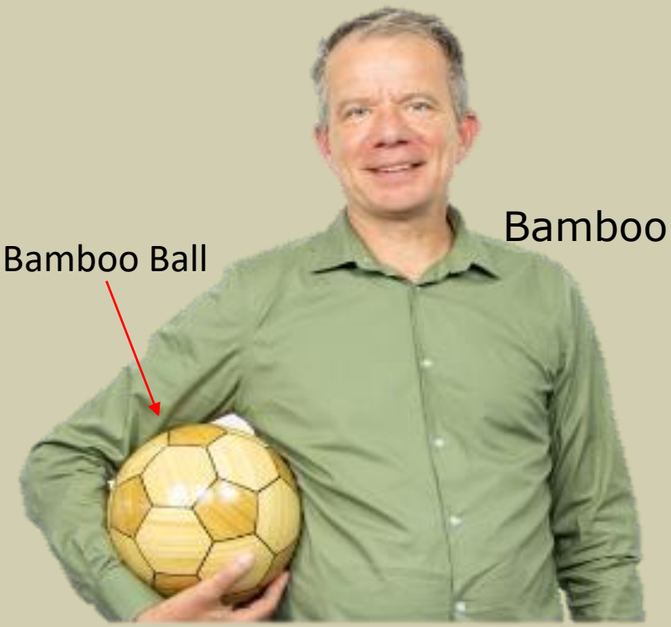
Increase global demand

Increased pressures on corporations to develop sustainable materials and source materials from vetted organization that insure employee health and well-being and environmental sustainability.

Diverse Applications

Bamboo is seen as a replacement material for many non-sustainable materials in many industries including construction, fabric, paper, and biomass

BAMBOO as sustainable raw material for industries



Edwin van Houten
Area Sales Manager MOSO International BV, the Netherlands



It was constructed using 42,000 pieces of bamboo

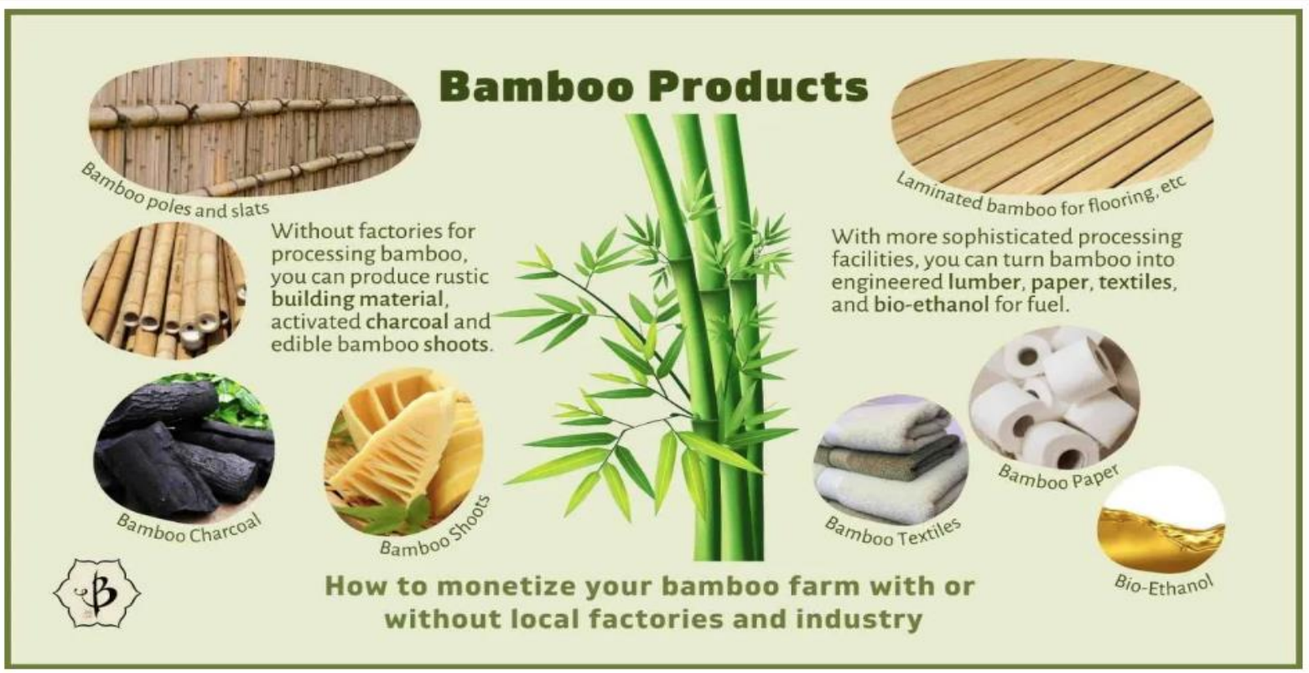


Bamboo Flooring



Bamboo Hotel, Jakarta

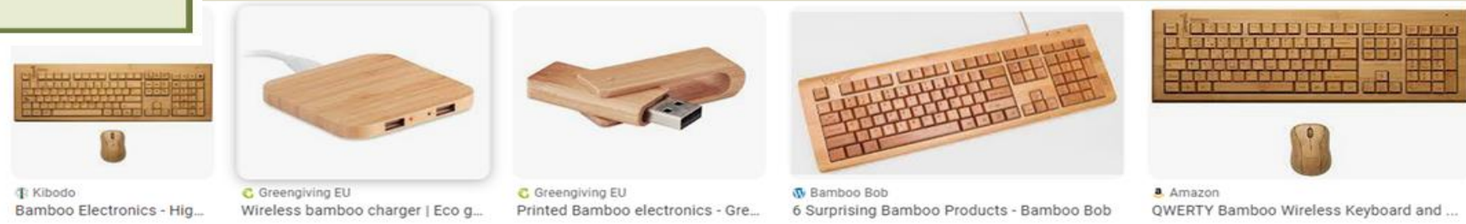
BAMBOO - arts and crafts



Source: Bambu Batu



Bamboo Musical Instruments



Bamboo Electronics

BAMBOO for food and transportation industries



B. Vulgaris porridge



Bamboo beer



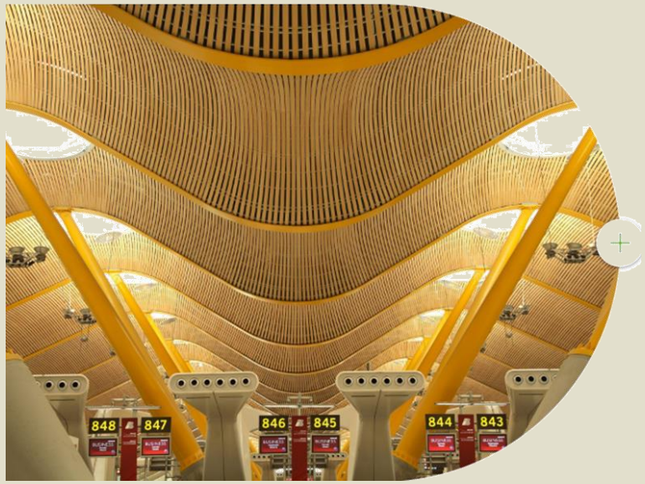






Sky King Flew A Bamboo Bomber Plane

International airport with bamboo interior decors



Bamboo Panels, Beams & Veneer

Kempegowda International Airport Terminal 2 in Bengaluru, India



In November 2022, the doors to the new Kempegowda International Airport Terminal 2 in Bengaluru, India opened for the first travelers. The terminal, designed by Skidmore, Owings & Merrill LLP (SOM), reflects India's third largest city, known as the 'Garden City' and capital of technological innovation.







Bamboos in NIGERIA



- Forestry and bamboo experts, including John Ogbodo, have identified three primary native species in Nigeria: *Oxytenanthera abyssinica* and *Bambusa vulgaris and ornamental bamboo*.

- The hospitable climate for bamboo production in Nigeria also makes this country an excellent location for the introduction of additional non-native, non-invasive species that are particularly valued in the global markets.

- However, there is neither a **national bamboo forestry policy** nor **trade standards for bamboo commodities in Nigeria** .

O. abyssinica found in the wild of Yobe State

Bamboos for attaining SDGs & NDCs in Nigeria

- Nigeria stands to enjoy from the following Sustainable Development Goals (SDGs) benefits:
  - Bamboos can contribute to attaining sustainable bamboo industry, innovation and infrastructure (SDG-9) through green jobs and manpower creations (SDG-7) that can support sustainable consumption and production patterns (SDG-12) carbon dioxide removal (CDR) (SDG-13), promote avoided tropical deforestation to boost forest biodiversity (SDG-15), bamboo based agroforestry production and bamboo foliage production for agro-pastoralism that can reduce herder-farmers crises (SDG-2), and SDG-6 (bamboo for flood management), SDG-1 through creation of green jobs and partnership for the goals (SDG-17).

- Additionally, the bamboo forestry and commodities could contribute to meeting the nationally determined contributions (NDCs) Targets of the Paris Agreement in Nigeria.
  - Because, a number of companies have substituted wood and plastics with bamboo as the raw material and have found it sustainable and also useful in conserving environment resources.

Concluding remarks - 1

- Nigeria which is the **second leading** bamboo producing country West Africa, has no operational national **bamboo policy, nor regulations and plantation establishment standards**.
- There is no single state in Nigeria that, currently has at least:
  - **one hectare** of **planted** bamboo forest. All we can see, are naturally occurring bamboos in the wild.
  - No known **state government owned bamboo forest nursery** with at least, 1,000 bamboo seedlings anywhere in Nigeria.

Concluding remarks – 2

SIBRED Is a Pivotal Bamboo and Ratan Research Agency Of the Federal Ministry of Environment's Upon Which Quality Services Can Be Delivered Within Central and West Africa.

NNAMDI AZIKIWE UNIVERSITY
SIBRED
SAHELIAN INSTITUTE FOR BAMBOO RESEARCH AND ENTREPRENEURSHIP DEVELOPMENT
...Quality bamboo for better livelihood

- SIBRED offers PhD, MSc., certificate courses and provides services to stakeholders in the Sahelian Africa countries of:
- Burkina Faso, Cameroon, Chad, Gambia, Guinea, Mauritania, Mali, Niger, Nigeria and Senegal.
- including countries that border the Sahelian countries such as:
- Benin Republic, Ghana, Côte d'Ivoire, Liberia, Sierra Leone and Togo.

Recommendations

- In this era where many foreign investors want to offset carbon by investing in bamboo forests/plantation establishments, there is an urgent needs for Nigeria to enact **national policy, certifications guidelines** and **regulations.**
- Likewise, there is needs for **bamboo building codes and national bamboo commodities standards** to meet up with international trades.
- Need for the Federal Ministry of Environment to be renamed as **Federal Ministry of Environment and Green Economy – just to place emphasize as an** outcome of the **theme** of this year's World Bamboo Day Celebration.

  - NB: Former Minister, Prof. Isa Ali Pantami did a similar thing by submitting a memo to FEC for addition of 'Digital economy' to Fed. Ministry of Communication'. Hence, the now **Federal Ministry of Communications and Digital Economy.**

Appreciation/Award from SIBRED:

- **Alh. Balarabe Abbas Lawal**, Honourable Minister of Environment - for political will
- **Dr. Ishaq Salako**, Honourable Minister of Environment (State) – for creating enabling policy environment with particular reference to bamboo value chains promotion in Nigeria
- **Prof. Charles Okechukwu Esimone, FAS**, Vice Chancellor, Nnamdi Azikiwe University, Awka – for being the first University Administrator to approve bamboo and rattan focused research and entrepreneurship development Institute (i.e. SIBRED) in Africa
- **Mrs. Hajara Umar Sami**, Director, Federal Department of Forestry at the Federal Ministry of Environment, Abuja for championing this laudable course on national bamboo policies development
- **Mrs. Alaba Modupeola Adzandeh** – INBAR National Focal Point in Nigeria
- **Mr. Micheal Kwaku** – INBAR West Africa Regional Director based in Ghana
- **Ms. Diana Doheny (USA)** – Founding Member, SIBRED Board, UNIZIK
- **Prof. Jerome Ihuma** – Biology Department, Bingham University, Karu, Nasarawa State

Thank you for your attention!