



UNITED NATIONS DECADE ON
**ECOSYSTEM
RESTORATION**
2021-2030

Carbon Xchange (Sarawak) Sdn. Bhd.

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WHY BAMBUSA BEECHEYANA?

Introduction:

On 20th November 2023, Sarawak passed the Environment Bill to reduce the emission of greenhouse gases. This is a transition towards a circular economy which offers an opportunity to reduce Sarawak ecological footprint by lowering raw material consumption and minimising waste generation. It means, keeping the value of resources for as long as possible and rethinking production, consumption and end of life management processes.

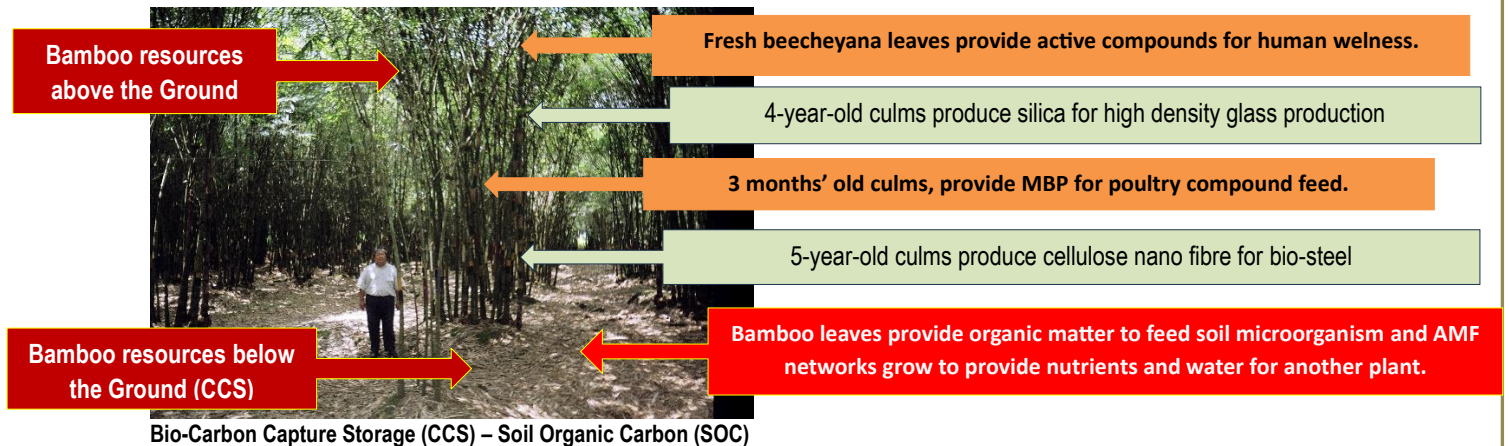
It is necessary to develop a long-term vision for the circular economy to set a clear direction of travel and determine which actions are necessary to turn this vision into reality. Bambusa beecheyana is a tropical bamboo specie which is an ecological resource that provide an extensive varied use that power the circular economy.

In 2050, economic trends favour regenerative products and material longevity. Information on the material composition of products is accessible by all actors throughout the value chain who cooperate more closely. As landfilling is phased-out, recycling becomes the last resort with secondary materials of good quality flowing across Sarawak

Beyond material flows, innovative business models thrive and contribute to reducing the need for new products and raw materials as well as the optimal use of assets. Global value chains also become more resource efficient. Finally circular economy strategies are designed according to the societal needs they intend to meet and play a key role in the achievement of climate and social objectives.

Bamboo as an ecological resource which capture and sink carbon as it grows, are providing new innovative uses from the bamboo culm resources above the ground. However, Carbon Xchange (Sarawak) Sdn. Bhd. also known as CXS is a leader in working with the ecological resources of bamboo that is below the ground. The Arbuscular Mycorrhizal Fungi (AMF) grow naturally below the bamboo clump creating multiple benefits for soil, plants and economy. This process is regarded as recarbonization of agricultural soils. A United Nations FAO initiative, to capture and store carbon (CCA) through a natural process. Soil carbon capture is the game changer

Bamboo Resources Above the Ground are:



Bamboo Resources Below the Ground

Bamboo resources below the ground is about soil ecological engineering which deals with the issue of how the numerous beneficial features of soil organisms can be harnessed in agricultural practice to optimise soil ecosystem services and support sustainable plant production.

At CXS we grow *Bambusa beecheyana* and maintain a science-based research development platform at UITM Kuching, Sarawak since 2017 until present. To discover the varied resources we can benefit from above and below the ground. The Bio-CCA of *Bambusa beecheyana* provides rural communities in Sarawak, the opportunity to participate in the carbon trading framework through the 20th November 2023 Environment Bill. It is the first law in Malaysia to address climate change. The Goals are:

- Reduce greenhouse gas emissions
- Achieve net zero carbon emissions by 2050
- Promote carbon capture and storage
- Mitigate the effects of climate change.
- Provide opportunities for participation in carbon mitigation projects
- Earn revenue by trading or selling carbon credits

Other objectives, increase green job opportunities. Empower small and medium enterprises, and equip Sarawak with sustainable infrastructure by 2030.