



Making Bamboo the Timber of the 21st Century



Overview

EcoPlanet Bamboo was created with the following major purposes:

1. To provide an economically viable and time tangible solution to deforestation by meeting increasing global demand for timber and fiber based consumer products that currently rely on the harvesting of natural forests;
2. To overcome the investment barriers associated with traditional timber plantations, thereby tapping into new sources of financing for land use projects;
3. To convert degraded land back to economic productivity, while proving that business can be positive for both the environment and communities.

EcoPlanet Bamboo was founded in 2010 and currently has operations in 4 countries, with 2 additional countries currently being launched, to be operational prior to the end of 2018.



Why Bamboo?

Plantation forests still account for a fraction of the world's timber and fiber needs.

With the right sustainable management systems and technology, bamboo can be:

- ✧ A tree free, deforestation free fiber;
- ✧ Fed into existing timber based supply chains;
- ✧ Certified under the same standards that global markets and consumers already trust and value.

EcoPlanet Bamboo is working to replace timber from natural forests.



Barriers to Entry

When EcoPlanet Bamboo began large scale operations in 2010, there were a number of barriers that needed to be overcome in order to drive the industrialization of bamboo as a commercially viable fiber:

1. Changing perceptions;
2. A global lack of planting material at commercial scale;
3. The consistency and security of supply that major industries require to consider a fiber switch;
4. Uncertain policies due to ecological standing;
5. The current lack of technical knowledge on the silviculture and science behind species and commercial management;
6. Clean fiber but dirty manufacturing due to a lack of accessible technology solutions;
7. A lack of connectivity between the raw crop and major international markets;



China's Bamboo Industry

Although an age old crop in China, this industry faces many challenges

- No guarantee of security of supply
- Competition between food & fiber across thousands of end products
- No quality control
- Logistical nightmare – grown predominantly on remote mountainous land
- Increasing costs of agricultural labor

This represents a significant opportunity for the developing world.

However... the Chinese model is often not always suited for application to Latin American or African contexts.



Framework 1: New Generation Plantations



- Typical baseline - deforestation & increasingly degraded land
- Bamboo is inter-planted maintaining ecosystem integrity;
- Manual developments result in high job creation.

Framework 2: Restoring Agricultural Land



Framework 3: Riparian Buffer Zones

Smallholder Plantings





Silvicultural & Technical Knowledge

Silvicultural understanding of the commercial growth and management of a range of bamboo species is decades behind accepted tree species. Publicly available information is inaccurate. For example:

- “Bamboo matures in 3 years”
Reality --- >6 / 7 years
- “Bamboo does not need fertilizer”
Reality --- if commercial harvesting occurs the plant’s nutrients need to be replenished
- “Bamboo does not get attacked by pests”
Bamboo is susceptible to a range of pests, particularly in the first 2 years and needs to be managed accordingly

EcoPlanet Bamboo has invested heavily into R&D and drawn from experience and trials across the world to develop the silvicultural management strategies treatments in needed to take bamboo through the stages of development to maturity and commercial yield.

Integrated Management Systems

The management of land use assets in remote areas, and working with large teams of unskilled and semi-skilled workers produces a unique set of challenges.

Over the past 8 years EcoPlanet Bamboo has internally developed a proprietary Integrated Management System that ties together all aspects of plantation management.

- Standard Operating Procedures
- Rigorous Environmental Health & Safety Systems
- Geospatial Mapping of Landuse Change



Certification

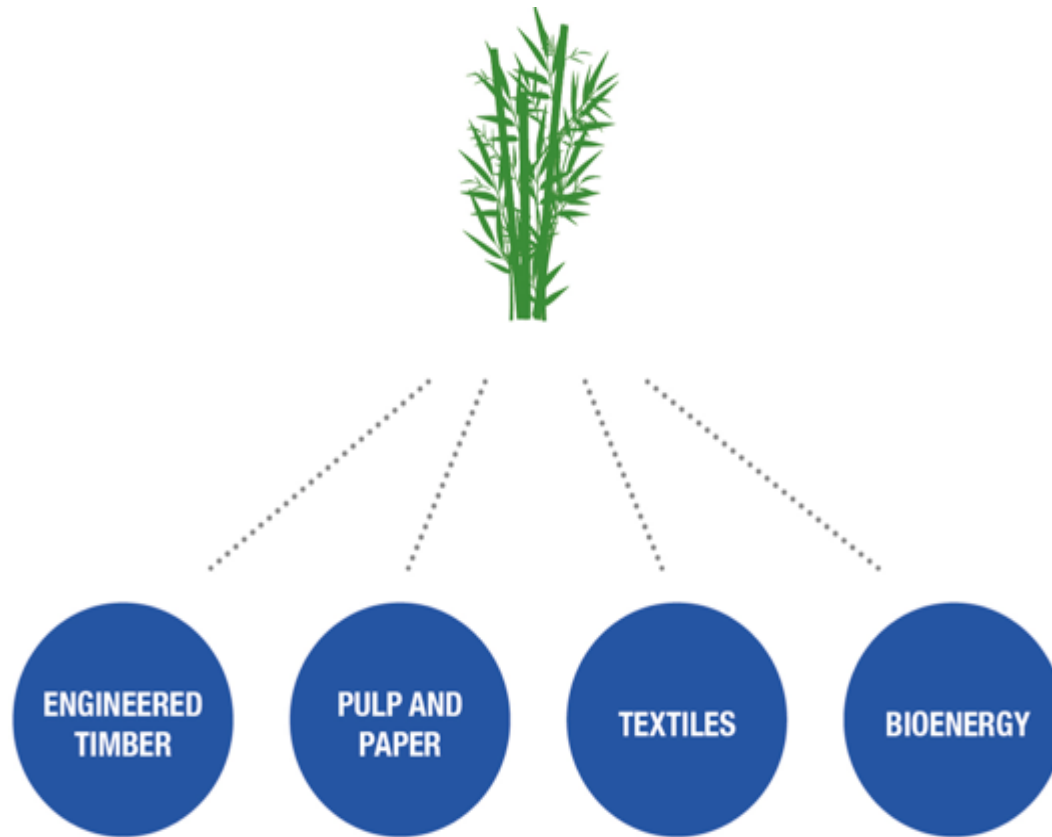
Certification is a critical component of EcoPlanet Bamboo's operations. We have pioneered the application of sustainable forestry certification (Forest Stewardship Council) to bamboo plantations. All Central America and Southern African plantations received certification within 3 years from the start of operations.



We have also pioneered the development of Monitoring, Reporting and Verification (MRV) systems for the international accreditation of our plantations climate change benefits.



Fully Integrated BioBased Economies



EcoPlanet has pioneered the industrialization of bamboo – moving away from the traditional focus of bamboo as an NTFP and developing it as a viable alternative fiber for the 4 major industries that consume the majority of the world’s wood and fiber supply.



Combining a Sustainable Resource Base with Clean Manufacturing

EcoPlanet Bamboo has worked internally and with technology partners to develop innovative technology for each major market sector that meets the following criteria:

- Environmentally clean
- Low footprint
- Applicable at small scale

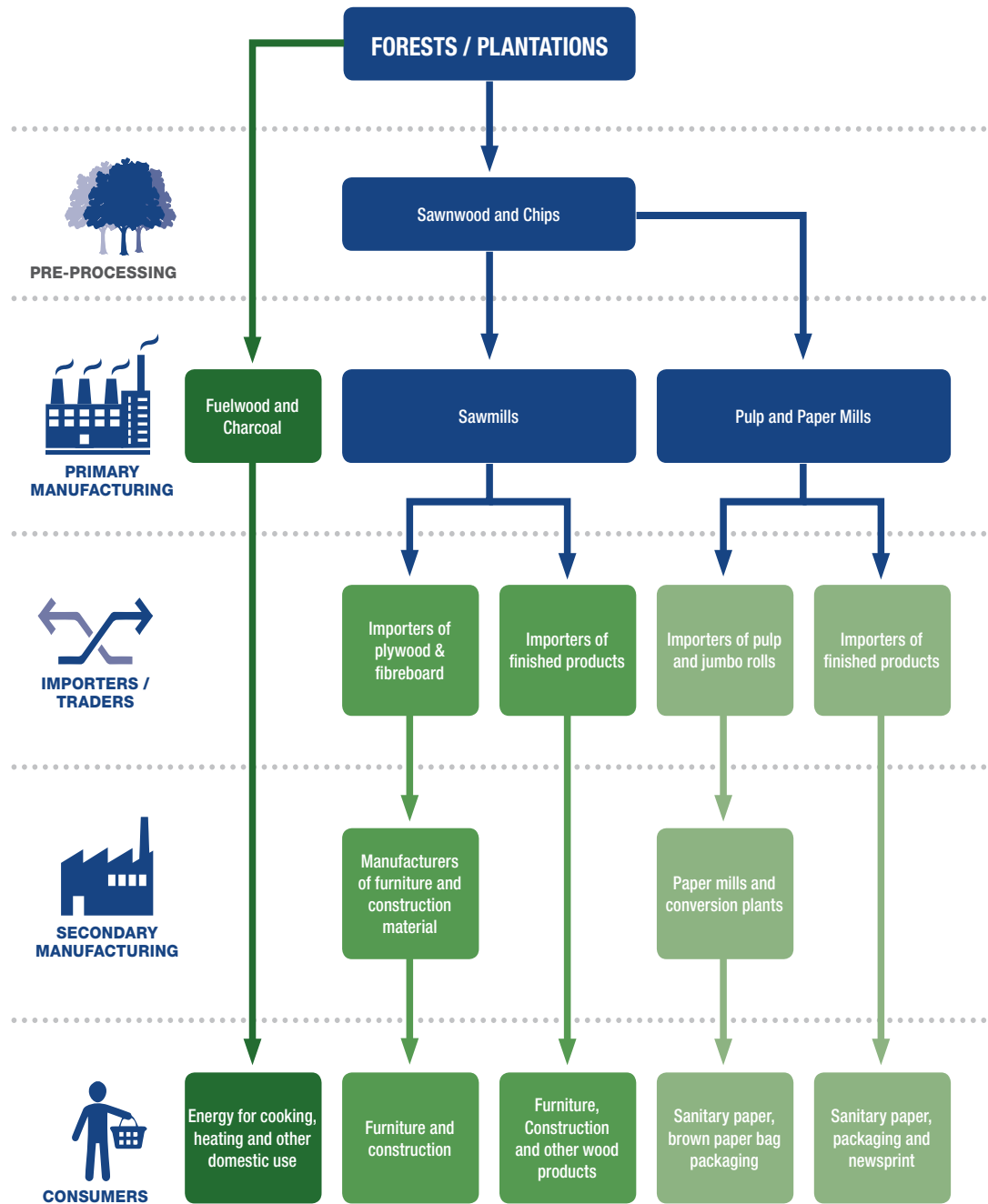
While outputs focus on development of bamboo based products that are:

- Same technical specifications as products already on the market
- Same quality or better
- Same price as current products



Disrupting Existing Forest Based Supply Chains

Analysis of existing supply chains indicates how and where bamboo can feed in as an alternative raw resource or semi-processed product, allowing for an increase in domestic industry and facilitating green industrial growth.



Market Analysis Determines the Scale of Bamboo Restoration

10.1.1 Pulp and Paper



- Sanitary paper = 867ha
- Brown paper bags = 90ha

Total bamboo planted area: ~1,000 hectares

10.1.2 Engineered Timber



- Plywood = 304ha
- MDF = 520ha

Total bamboo planted area: ~1,000 hectares



Example: EcoPlanet Bamboo Ghana

Documentary available at:

<https://vimeo.com/153476216>

