

Bamboologic

European Bamboo Plantation Program

INVESTMENT TEASER

FOR INSTITUTIONAL INVESTORS

2.000 Ha bamboo plantation

Plantation value	€ 135 mil.	CO2 reduction (indirect)	81.700 t/yr	Employment	1.003 FTE
Product	Bamboo (Raw & Semi-finished)	Sectors	Construction / engineering; Health / Pharma; Clothing; Energy; Design		
Stage	Venture Capital	Market size (estimated)	Europe: est. € 1,3 Bn		
Investment	50.000.000 euro	Prognosed IRR	Up to 21,8% p.a.		
Financing	Equity	Type	Disruptive; Impact; Profit driven; Long term		
Location	Portugal / Netherlands	Goal	New plantation & primary processing		

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Mission

- ✔ Create the first industrial scale bamboo plantation in Europe;
- ✔ Satisfy the growing demand for bamboo products in Europe.
- ✔ Using degraded and abandoned land and advantageous labour conditions in Southern Europe;

Main drivers

- ✔ To create a sustainable and circular driven profitable company;
- ✔ Exploiting the natural benefits and advantages of European bamboo
- ✔ Contributing to the Bonn 2025 objectives
- ✔ Strengthening European agricultural options;

Executive Summary

Bamboologic Europe starts **Phase 1** in Alcouthim, Portugal for the first 110 Ha plantation, counting for a 8 million euros investment. First planting of bamboo on the site is planned in Q2/Q3 2020. First output from the plantation is to be expected in 3 to 5 years. **Phase 2**, a 42 million euros investment, consists of the expansion to 2.000 Ha. Several bamboo species were tested on the test plantation in Galicia, Spain.

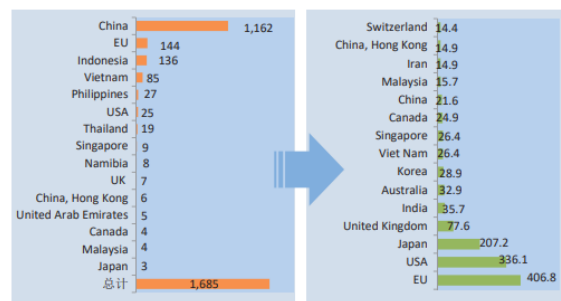
As of 2020 the company generates simultaneously cash flows with a bamboo trading platform and the settlement of out grower bamboo plantations in cooperation with third party landowners (e.g. Eucalyptus growers conversion program).

Bamboo: the new 'super commodity'

- Extremely versatile grass species with over 10.000 product applications
- Industries: Construction / engineering; Pharma / health care; Energy; Food; Paper/ fabrics / Clothing, Design
- Sustainable alternative for Steel, PVC, Cotton, Hardwood, Composite
- Leading market players as IKEA, VW /Audi and Melita are more and more converting towards bamboo for their products
- One of the most rewarding cash crops: fastest growing plant; plantation scope: +100 years; fast growing demand
- Sustainable zero-waste crop and powerful tool in terms of recovery of depleted land, revival of the EU agri sector and climate change mitigation

The bamboo market

- Europe is the largest export market for Asia
- Worldwide market expected to quadruple over the next years
- Problems imported bamboo: quality control, sustainability, exchange rates, import / transport
- European bamboo fibres higher tensile force
- Substitutive opportunities: e.g. Eucalyptus farmers are forced to switch to bamboo as raw material for the Spanish paper industry.



Major exporters and importers of bamboo and rattan products in 2016

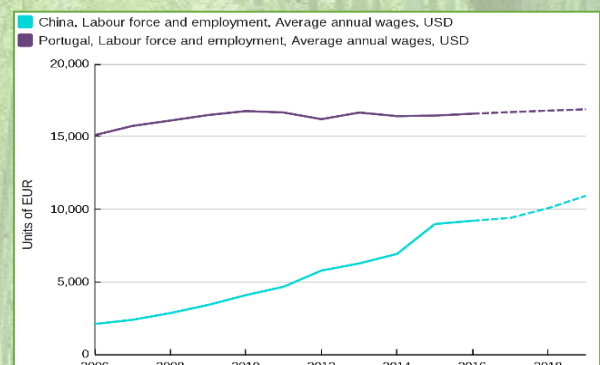
The biggest export market for Asia is Europe, but no plantations are present in the EU. Invest, together with BambooLogic in a new EU Industry.

Asia vs Europe

As the graph on the right shows, the labour cost difference between the South of Portugal and China is reducing due to cost of labour that is augmenting significantly in Asia.

Two times profit is gained on transport level; heavy CO2 transport overseas is avoided which is a plus for CO2-mitigation and pricing.

Other problems for the imported bamboo from Asia are quality control, exchange rates, import duties and payment modalities.



BambooLogic invests in the first European industrial scale bamboo plantation

Table 1: Targeted product markets per bamboo product

Leaves	Shoots	Fibres / pulp	Dust	Wood
Pharma	Pharma Food	Construction Paper Fabrics / Clothing	Construction Energy	Construction Engineering

Table 2: Plantation matrix (2.000 Ha)

Hectares	Type	Target start cash flow	Density plantation
970	Shoots / culms	Year 3- 8	Low - medium
150	Culms	Year 6 - 8	Low
150	Shoots	Year 3 - 4	Low - medium
700	Pulp / fibres / biomass	Year 3 - 4	High

Company & team

BambooLogic Europe holds its headquarters in the Netherlands. The project subsidiary for the Portuguese plantation is a Portuguese limited company holding 100% of the plantation.

World renown bamboo experts putting heads together

The company can count on a well-balanced and experienced 7-person management team and advisors with over 50 years of service in the bamboo or plantation industry as well as in financial and operational domains. All are unified with the conviction that all necessary parameters are in place to start-up European bamboo plantations. Among them:



Dr. Hans Friederich, is the former CEO of the United Nations, *Bamboo and Rattan Organisation* (INBAR) and Ambassador of the *World Bamboo Organisation*.



Jeroen Adriaans, Co-founder of *Bamigo*, a successful Dutch venture selling bamboo underwear for years now.



Jan Oprins, successful commercial bamboo grower, renown author, international consultant and world leading in vitro multiplication specialist. Successful founder, director and member of the board of different bamboo related and horticultural enterprises.

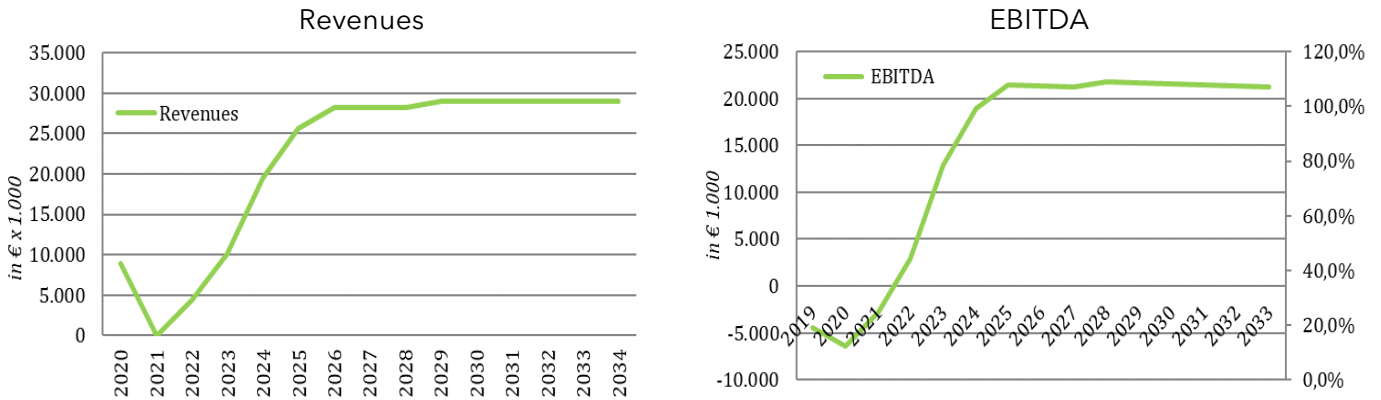
The Portuguese plantation is supported and facilitated by several governmental and non-governmental organisations.

- 🌱 University of Evora and Dutch academic research programs
- 🌱 Trade & Investment Agency Portugal (AICEP) and Portuguese Public Employment Institute (IEFP)
- 🌱 The municipality of Alcoutim and APDM, a local non-governmental organisation concerning local development
- 🌱 PDR2020, the Portuguese Program for rural development

Financial

Bamboo delivers constant and stable revenues for more than 100 years

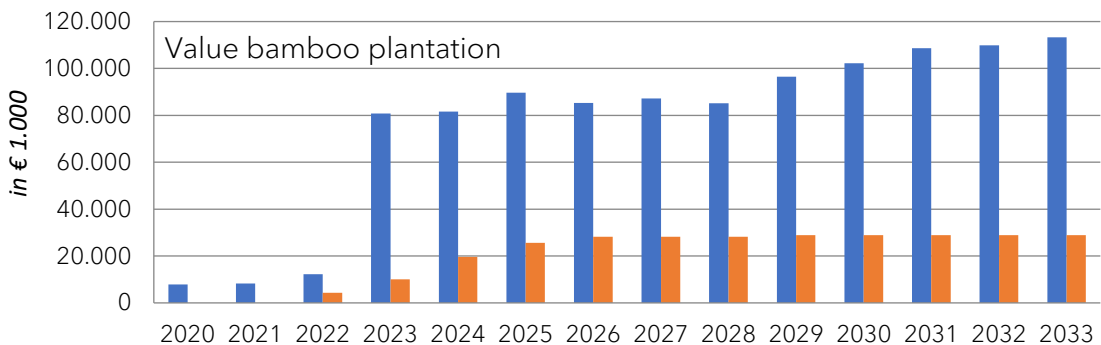
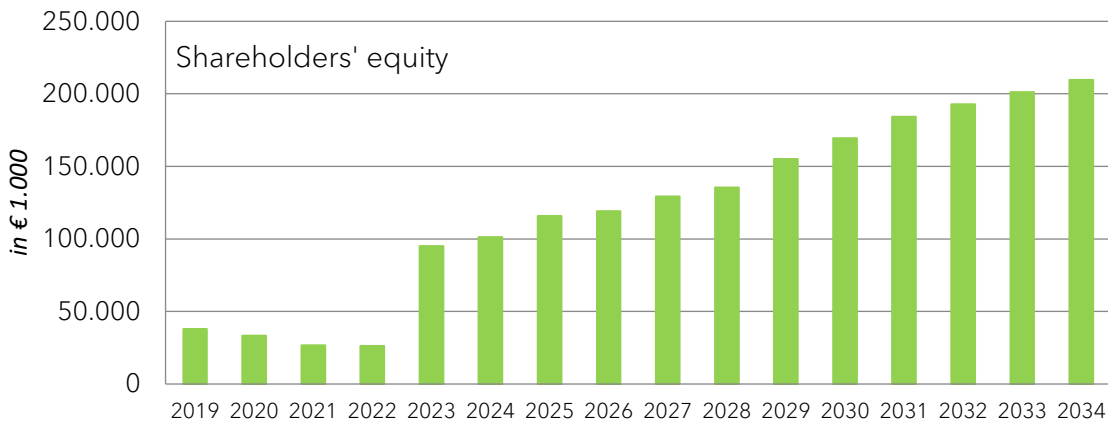
As of year 4/5 positive cash flow is expected and mounts till around year 6 to yearly earnings of + € 20 mil. (EBITDA).



Invest in value creation for people, planet & profit

Phase 1	Start-up Alcoutim plantation	110 Ha	€ 8 mil
Phase 2	Expansion South Portugal	2.000 Ha	€ 42 mil

Note: As of year 3, in an ideal scenario, when sufficient cash flows are generated, debt instruments (bank loans) will be sought up to € 25 mil., collateralized by the land and plantation value.



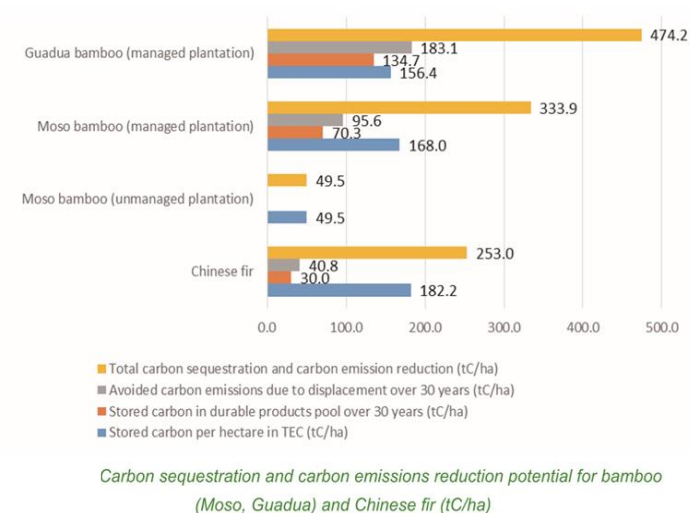
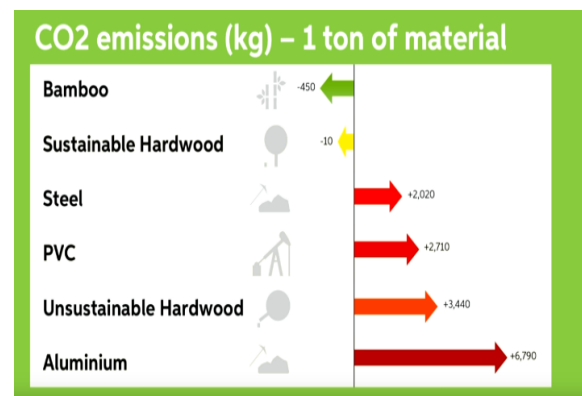
Financial result prognosis

- Based on Debt to Equity ratio 40% / 60%
- Dividend pay-out 50% of NOPLAT
- 'Low' to 'High' price and volume scenario's

Internal rate of Return (IRR)	Duration		
	7 year	10 year	15 year
'Low' scenario (price & vol)	5,0%	7,0%	9,5%
'Mean' scenario (price & vol)	9,7%	13,2%	16,95%
'High' scenario (price & vol)	12,5%	17,8%	21,8%

Impact investing

- Bamboo fully accepted as a versatile, sustainable and reliable product
- Ideal alternative for 'unsustainable' steel, PVC, concrete, cotton and composite materials
- Bamboo is a powerful tool for climate change goals (also for businesses)
- Bamboo absorbs up to 5 times more CO₂ than trees and produces 35% more oxygen than trees.
- Bamboo has a catalysing effect in terms of sustainability and fits in perfectly in the circular economy model we are heading to.



- As shown left in the graph from an INBAR working paper, managed bamboo is very useful in carbon emission and carbon sequestration
- Investing in a 2.000 Ha bamboo plantation means:
 - ° 41.100 tonnes of direct CO₂ reduction / year
 - ° employment of + 1.000 FTE in an economic weak EU region
 - ° recovery of thousands of hectares of depleted agricultural land

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Sources:

INBAR working paper, P. Van der Lugt - carbon sequestration
INBAR, Bamboo and rattan products 2016

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