vivi bambù

ALBANIA

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The Vivi Bambù Project

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The Vivi Bambù project was created by a group of entrepreneurs committed to ecological principles who identified in the Only Moso Giant Bamboo an exceptional opportunity to unite business development with environmental responsibility. Bamboo, often referred to in China as “green gold”, has long played a vital role across many regions of the world thanks to its remarkable versatility and sustainable properties.

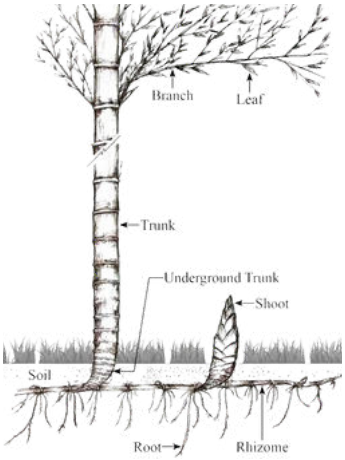
Once planted, the Only Moso Giant Bamboo can be harvested for between eighty and one hundred and twenty years without the need for further planting. Mature plants require no fertilisation beyond natural rainfall, and the species is largely resistant to external pathogens. The project is founded upon principles of innovation, sustainability and shared value, offering long-term benefits to investors.

Territory Analysis

The plantation is situated in Maqellarë, in the Albanian prefecture of Dibër, close to the border with North Macedonia. It sits around 600 metres above sea level. This area benefits from abundant water resources, crucial during the plant's early years. The region's climate and terrain provide particularly favourable conditions for the species to thrive.

The Bamboo Plant

Bamboo, a member of the grass family, encompasses more than 1,200 species across over 80 genera. The **Only Moso Giant Bamboo**, from the **Phyllostachys** genus, is particularly well suited to Mediterranean conditions, thriving in mild, rainy springs, warm summers and winters that can drop to –15°C. With a fertile soil layer of 30–40 cm and a pH between roughly 5.5 and 8 it adapts easily to diverse environments.



Its rapid, steady development is driven by a rhizome-based root system that spreads horizontally beneath the soil, enabling efficient colonisation of large areas. These rhizomes absorb significant quantities of nutrients and water, supporting accelerated growth and strong resilience. Bamboo reaches maturity in 7 to 10 years depending on climate and soil, though it becomes commercially productive after around 4 years. New shoots grow into full-height canes within 60 days, and once transplanted from specialised greenhouses, growth may reach 50 centimetres per day.

A single plant ultimately produces about 25 canes with a diameter of 10–15 centimetres. Roughly 1,200 seedlings are planted per hectare, and a mature hectare can produce up to 30,000 canes. The plant can live for up to 120 years and regenerates naturally; harvesting about 30% of the surface annually does not compromise future production. Its productivity is up to 40 times higher than comparable crops.

During early development, bamboo requires only adequate irrigation and organic fertilisers, and pesticides are rarely needed because it has no natural enemies. Once mature, the plantation requires no specific interventions: rainfall provides sufficient water, the plant withstands diseases that affect other grasses and simple weed removal is enough to maintain healthy growth.

Feature	Bamboo	Spruce (Fast Growing Tree)
Growth Rate (10 years)	20–25 meters	15 meters
Regeneration Time	2–3 years to the same size	20–40 years to regrow
Annual Forest Growth	10–30%	2–5%

Environmental Benefits of Bamboo

Bamboo offers significant environmental benefits and has become increasingly relevant to modern ecological and dietary trends. It has over 1,500 applications across industries such as construction, textiles, energy, catering, plastics, cellulose, agriculture, and cosmetics.

Key environmental characteristics:

- Exceptional carbon absorption: up to sixteen times greater than that of a traditional forest, enabling the sale of certified carbon credits under European ESG reporting frameworks.
- Natural air filtering: its leaves capture micro-particles and fine dust.
- Soil consolidation: the rhizome system stabilises terrain, reducing erosion, and preventing landslides.
- Excellent water retention: helping to reduce surface runoff and limit flooding. Thanks to this characteristic, the plant can withstand periods of drought.
- Strong ability to absorb contaminants: transforming them into biomass.
- High resistance to fire: even after burning, rhizomes regenerate new canes every year.

Commercial Application

Across the world, the bamboo economy supports hundreds of millions of people in processing and manufacturing.

China, with nearly ten million hectares under industrial cultivation in the last 10 years, employs over six million people in its bamboo sector. Every part of the plant can be used, giving rise to a market with over 1,500 applications.

Growing ecological awareness in Europe, coupled with the urgency to reduce carbon emissions, strengthens the relevance of bamboo-based products and carbon credit markets. Bamboo also contributes to several United Nations Sustainable Development Goals, particularly the objective of providing *affordable, reliable, sustainable, and modern energy*.

Global Market Value

CHINA

The value of bamboo production has increased by more than 50% in just two years

INDIA

Production value has surged from £34 million to £4 billion

EUROPE

Imports have expanded markedly; for example, purchases of bamboo flooring rose by 50% in two years

Global demand for bamboo has grown sharply in recent years. INBAR (International Bamboo and Rattan Organization) estimates the global market value at more than USD 36 billion, with rapid expansion continuing. European imports have risen significantly, particularly in bamboo flooring, which is increasingly preferred for its durability, stability and cost advantages over traditional wood.

In Europe, the bamboo market faces virtually no direct competition, with cultivation currently limited to southern France and Italy. Due to exceptional high request, China cannot fully satisfy its own domestic demand, reducing concerns about strong competitive pressures within the European market.

In addition to the ecological benefits already mentioned, Bamboo is a superior alternative in the following sectors:

- Wood replacement: Fast-growing bamboo can easily substitute for many wood species, regenerating annually compared with the 20–40 years required for trees to reach maturity.

- Job creation: A bamboo supply chain can generate significant employment and support agriculture even on marginal or low-yield land.

- Material innovation: Bamboo stimulates research into new materials and supports the shift from petroleum-based products to renewable alternatives, such as “green plastics” made from bamboo fibre and natural polymers, already used by automobile manufacturers for interior components.

Profitability and Versatility

To assess investment profitability, two factors must be considered, productivity and yield:

- Productivity: indicates the amount of material obtained from the plantation. Bamboo cultivation per hectare is 5 times higher than normal construction or heating wood. It grows very quickly, up to 50 cm in a single day.

- Yield: indicates the economic return of the product. Investing in bamboo is profitable because once production stabilises and plants reach sufficient height/diameter, revenues can reach 80,000 € per hectare after 8 years.

Summary of Economic Activity

- High Productivity: plants develop tens of thousands of canes (culms) per hectare with very high productivity due to their rapid growth cycle and plant resistance. A new plantation regenerates quickly, making it continuously productive for 80–120 years.

- Climate Resistance: plants are highly resistant to climate change, are highly adaptable, and can thrive in a Mediterranean climate up to an altitude of 1,500 meters.

- High Economic Potential (per hectare):

  Culms (up to 4,000): can yield 12 € each.

  Biomass (up to 100 tonnes): can yield 120 € per tonne.

  Shoots (up to 10,000 kg): can yield 1.5 € per kg.

  Carbon Credits (up to 280 tonnes): can yield 50 € per tonne, a value expected to increase with the progressive application of EU regulations on ESG journey sustainability reporting to smaller businesses.

- Return on Investment (ROI): the cost of the plant is absorbed in a few years, and the investment is highly secure due to the plant's resistance. Planting and maintenance costs are lower than those of an orchard.

Versatility of Bamboo Parts

Shoots

A nutritious and increasingly popular food in Western and Asian cuisine

Leaves

Valuable as animal feed, fertiliser additives or medicinal and cosmetic extracts

Branches

Used in agriculture, weaving and textile fibre production

Culms

Employedin construction, furniture, scaffolding, charcoal and architectural materials

Rhizomes

Used in artisanal products such as handles, accessories and decorative objects

Application Sector

FOOD

TEXTILE

CONSTRUCTION AND ARCHITECTURE

PLASTIC

CELLULOSE

ENERGY

5 Food Sector

Bamboo shoots are rich in fibre, vitamins, and minerals and their popularity is rising, particularly among the growing vegan and vegetarian population.

- The number of vegans in Europe is increasing rapidly with a 15% rise recorded in 2018 compared to the previous year.
- In Italy approximately 7.1% of the population currently follows a vegan diet.
- Projections suggest that by 2035 around 50% of Europeans may adopt this type of diet.

Thanks to their nutritional profile and versatility bamboo shoots appeal not only to plant-based consumers but also to those following traditional diets. Their increasing presence in European markets reflects a growing interest in healthy, natural, and sustainable food sources. Already widely processed in China bamboo shoots offer exceptional nutritional benefits and distinctive biodynamic qualities that make them a valuable component of a balanced diet.

Note on Warka Water project:

Bamboo's capacity to absorb moisture has enabled its use in Ethiopia in the "Warka Water" systems, innovative structures that collect up to 100 litres of water per day by harnessing temperature differences between day and night.

Textile Sector

The production of bamboo fabric is made possible through a **plastination** process that removes moisture from the raw material, reducing its natural tendency to absorb water, an essential step for preserving fibre strength and durability. The resulting fabric is highly breathable and efficiently wicks moisture away from the skin, releasing it as vapour.
Key advantages include:

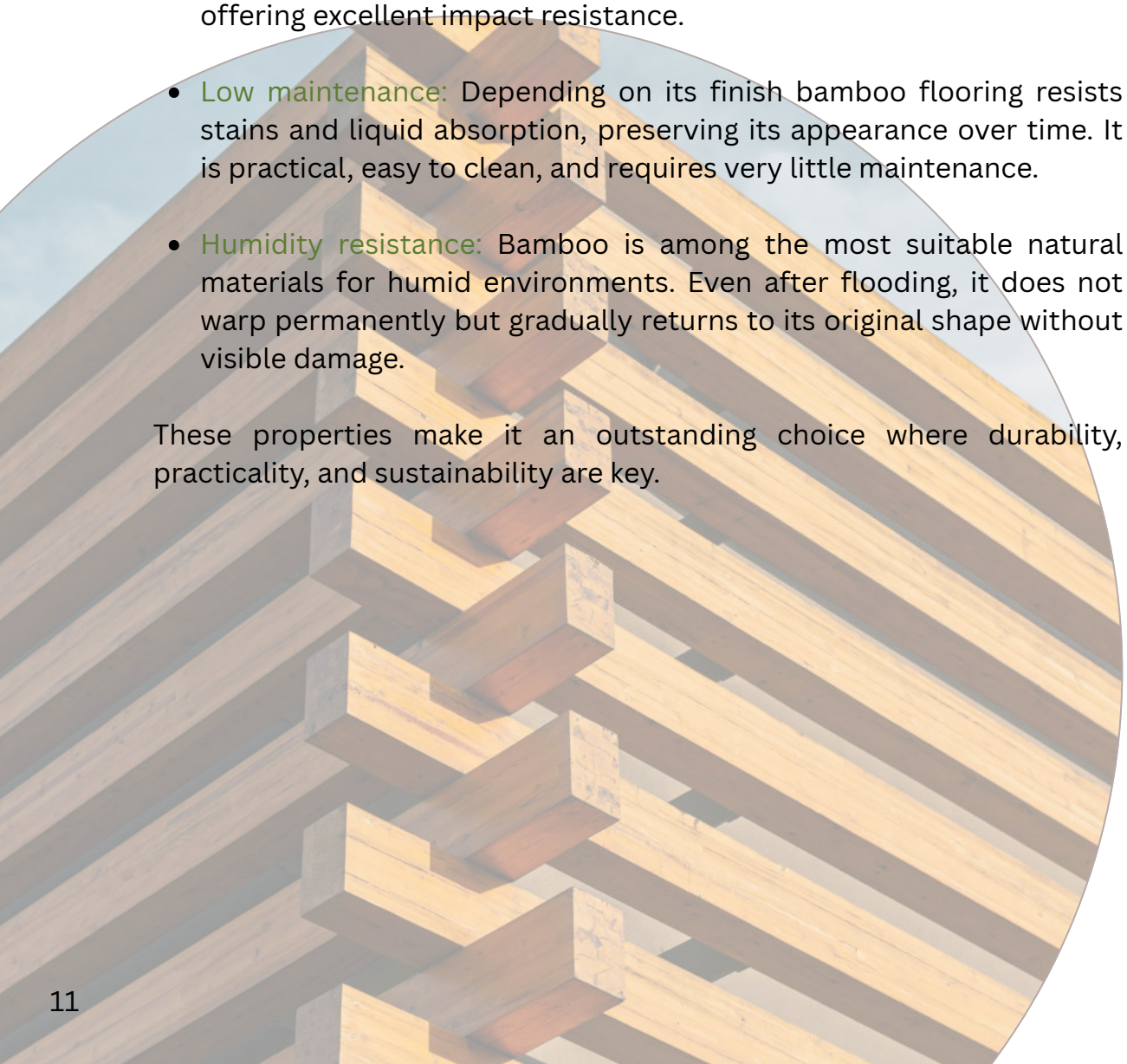
- Seasonal adaptability: Bamboo fabric helps keep the body warm in winter and cool in summer, making it suitable for all climates.
- Health benefits: Its hypoallergenic, antibacterial, and antifungal properties make it especially popular for children's clothing. It also provides natural UV protection.
- Comfort: The fibre is exceptionally soft and it is often compared to cashmere or silk. It offers long-lasting freshness and comfort.
- Practicality: Bamboo garments dry quickly, resist creasing, and are ideal for easy-care, no-iron clothing.
- Sustainability: Bamboo-based textiles are fully biodegradable, contributing to a reduced environmental footprint, and supporting a sustainable product life cycle.

Construction and Architecture Sector

Bamboo is highly prized for its exceptional combination of flexibility, lightness and hardness, making it an ideal material for flooring and cladding in a wide range of environments. Its versatility even extends to concrete reinforcement, where it demonstrates remarkable strength and durability.

- Aesthetics and resilience: Bamboo flooring provides a distinctive natural elegance that often exceeds that of traditional wood, while offering excellent impact resistance.
- Low maintenance: Depending on its finish bamboo flooring resists stains and liquid absorption, preserving its appearance over time. It is practical, easy to clean, and requires very little maintenance.
- Humidity resistance: Bamboo is among the most suitable natural materials for humid environments. Even after flooding, it does not warp permanently but gradually returns to its original shape without visible damage.

These properties make it an outstanding choice where durability, practicality, and sustainability are key.



Plastic Sector

Advances in scientific technology have led to the creation of bamboo-based bioplastics, offering numerous ecological benefits:

- Biodegradability: Unlike traditional plastics, which can take centuries to break down, bamboo bioplastic is fully biodegradable within a much shorter timeframe, significantly reducing environmental impact.

- Sustainability: Bamboo is a fast-growing, renewable resource that requires minimal natural inputs, making its cultivation far more sustainable than that of many other raw materials.

- Versatility: Bamboo bioplastic can be used to produce a wide variety of goods, including packaging, tableware and textiles. It is also indicated for construction components, making it suitable for a broad range of industrial applications.

Cellulose Sector

European paper mills consume around 64 million tonnes of cellulose each year, much of it imported from countries with extensive forest resources. This dependency contributes to deforestation and widespread environmental degradation. Bamboo, with its rapid growth cycle and high productivity, presents a far more sustainable alternative.

- Producing one tonne of cellulose requires only about two tonnes of bamboo chips.

- A bamboo plantation can yield more than 200 tonnes of wood chips per hectare, with agronomic estimates suggesting potential outputs of up to 500 tonnes per hectare.

These figures highlight a substantial opportunity to ease the pressure on traditional forests and promote a more sustainable cellulose supply chain.

Carbon Credits Sector

Beginning in 2025, Italian companies will be required to disclose their environmental, social and economic performance through a sustainability report, in line with ESG standards. This requirement promotes greater transparency and encourages companies to adopt more responsible and sustainable practices.
The reporting obligations will be introduced progressively:

- From 2025 (reporting on 2024): Listed and public-interest entities with at least 500 employees and either €25 million in assets or €50 million in net revenues (companies already covered by the NFRD).

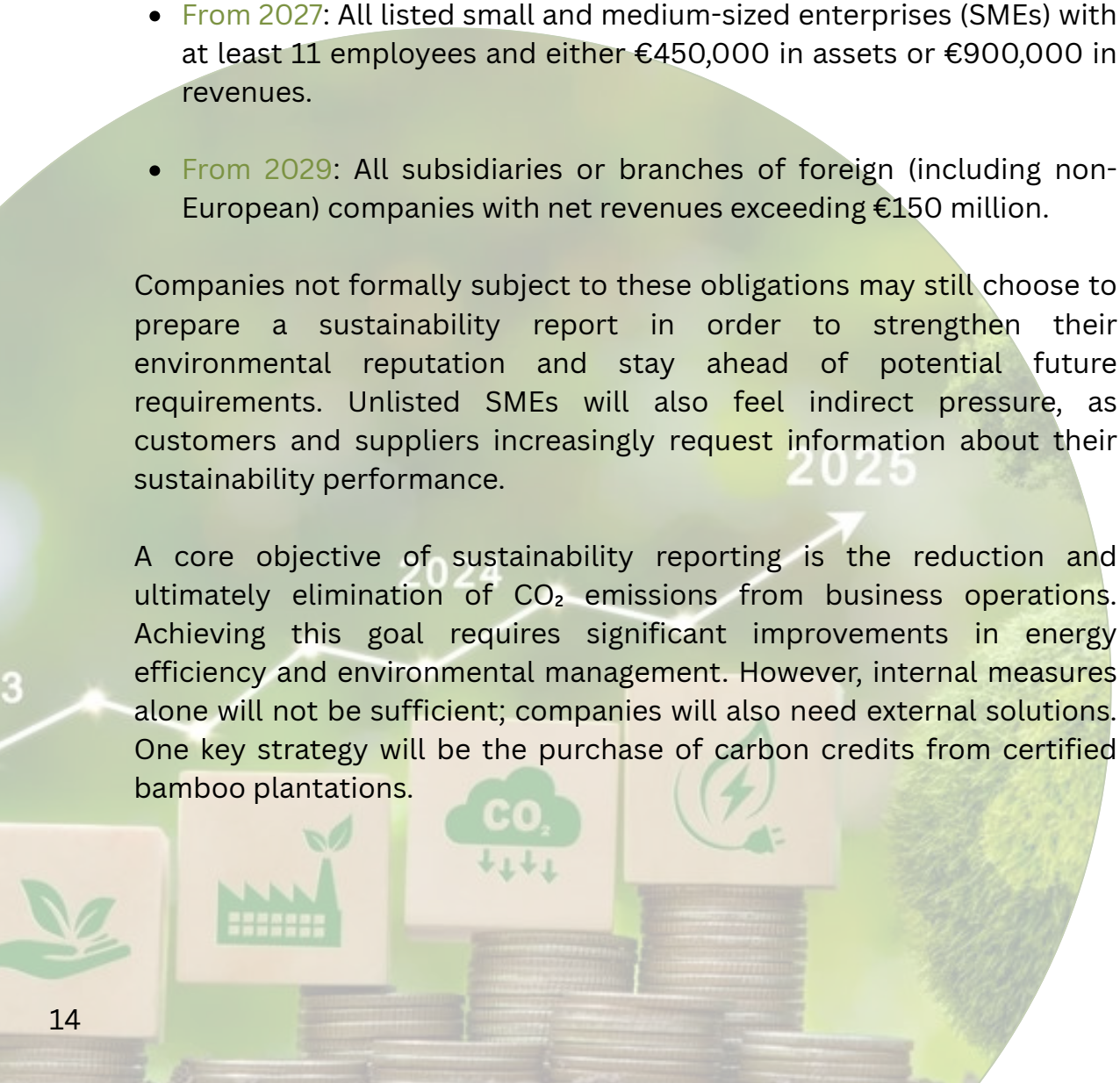
- From 2026 (reporting on 2025): All large companies with at least 250 employees and either €25 million in assets or €50 million in net revenues.

- From 2027: All listed small and medium-sized enterprises (SMEs) with at least 11 employees and either €450,000 in assets or €900,000 in revenues.

- From 2029: All subsidiaries or branches of foreign (including non-European) companies with net revenues exceeding €150 million.

Companies not formally subject to these obligations may still choose to prepare a sustainability report in order to strengthen their environmental reputation and stay ahead of potential future requirements. Unlisted SMEs will also feel indirect pressure, as customers and suppliers increasingly request information about their sustainability performance.

A core objective of sustainability reporting is the reduction and ultimately elimination of CO_2 emissions from business operations. Achieving this goal requires significant improvements in energy efficiency and environmental management. However, internal measures alone will not be sufficient; companies will also need external solutions. One key strategy will be the purchase of carbon credits from certified bamboo plantations.



Carbon Credit Market analysis and outlook

The outlook for the coming years is broadly bullish, though volatility is expected due to tighter regulations and ambitious emission reduction targets.

Key Drivers

- Stringent Regulatory Targets: Expansion of the EU Emissions Trading System (EU ETS), including maritime transport and a new ETS for heating and road transport (EU ETS 2), is expected to push carbon prices higher. The reduction target for ETS sectors has increased from 43% to 62% by 2030 (compared to 2005 levels).

- Carbon Border Adjustment Mechanism (CBAM): This mechanism will impose a carbon price on imported products with high environmental impact, encouraging global decarbonisation, and potentially affecting allowance values.