



Cooperation Opportunities
EMERALD - SMARAGDFA®
Carbon Farming Solution

December 2023



Introducing Emerald

An Exclusive Paulownia Hybrid

Everyone wants to plant trees to stop climate change. But not everyone has the right tree for it. Our hybrid trees are the perfect solution for fast-growing yet sustainable timber.

Emerald Trees have been engineered to offer outstanding carbon farming properties, as well as versatile business use-cases. They can be used for biofuel, furniture, and construction.





Our Value Proposition

Environmental and Economic Sustainability

Carbon Offsetting

Tree plantation is an effective way to reduce carbon emissions and improve air and water quality, enhance biodiversity, and support local communities.

Carbon offsetting through tree plantation offers a sustainable solution and a chance to build a more resilient and eco-friendly future.

It is crucial to choose well-designed and well-managed projects with clear environmental and social goals implemented in partnership with local communities to maximize its benefits.



Use as Material

The Paulownia tree is a remarkably versatile and valuable species that has been utilized for centuries across a range of applications.

Its wood, which is both lightweight and durable, is highly sought-after for crafting various items, including furniture, flooring, and musical instruments.

Moreover, the tree's rapid growth rate and adaptability to diverse climates make it an environmentally sustainable option for reforestation and forestry initiatives. Its leaves provide an excellent source of nutrition for livestock, while also serving as a natural fertilizer.



Emerald - Smaragdfa® Solution

Business Development Framework

Plant - Establish Carbon Farms

Planting Smaragdfa® trees and building the green ecosystem in various locations across the Globe.

Replicate as Franchise

Create a global franchise platform, leveraging the knowledge and network provided by Smaragdfa®.

Maintenance

Land is provided by partners, while the Smaragdfa® team and local experts are overseeing the operations during the 3x8 years of Smaragdfa® lifecycle. This results in enhanced and tracked CO2 sequestration.

Research

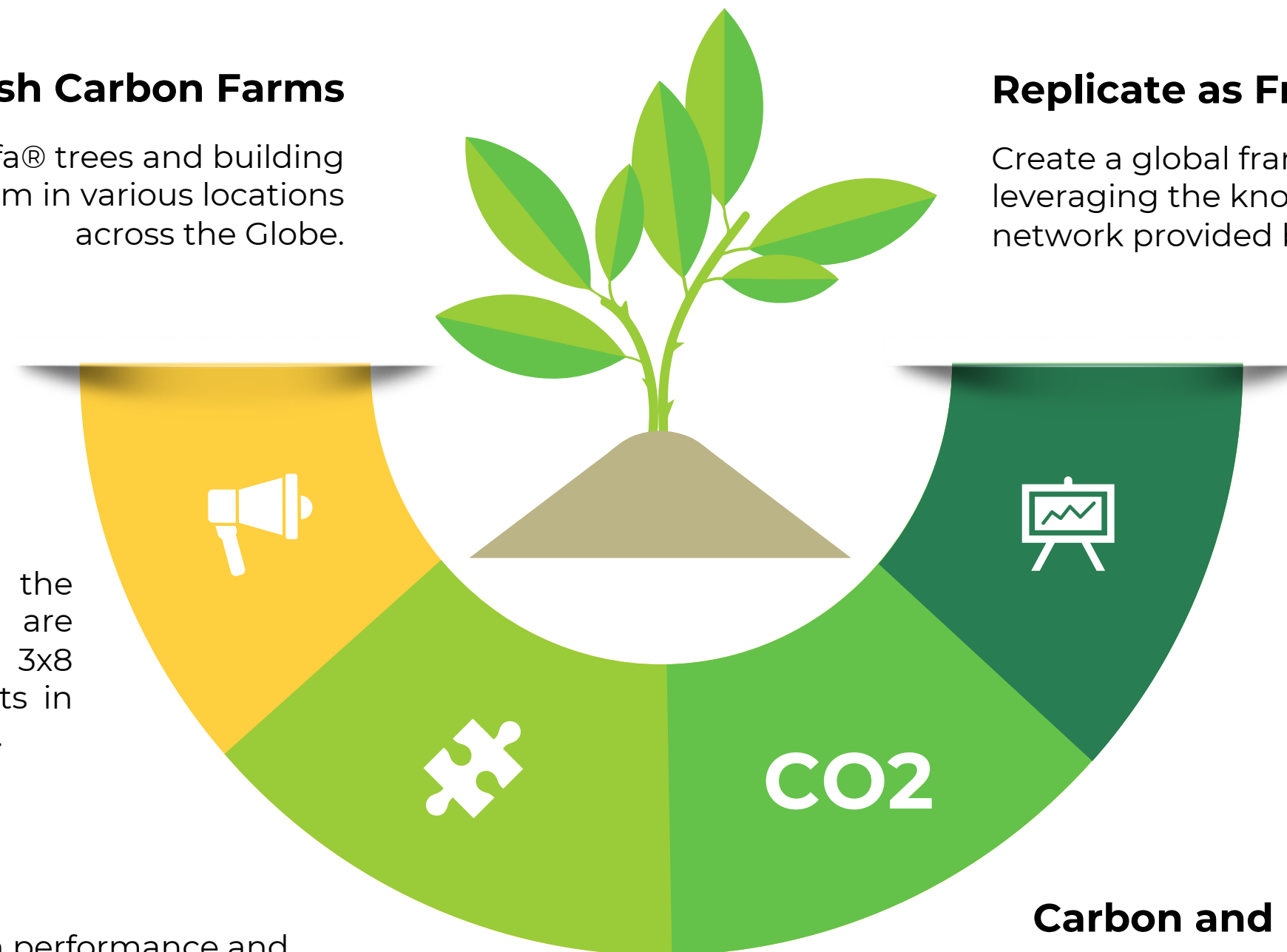
Fine-tune and enhance plantation growth performance and test results. 0,6-1 m3 wood production is achievable per tree. Attract and integrate further green technologies.

Circular Economy – Sale of Wood

Planting Trees are gaining momentum currently. Planting the **proper** Trees makes the difference.

Carbon and ESG economy – Plantation Resale

Selling the Carbon Farms to Corporates and Green Investment Funds as part of business or CSR initiatives.





Emerald - Smaragdfa® Carbon Farming

System Features

UN Sustainable Development Goals

Fully complying with SDG 17 goals which creates a strong selling point for Corporate CSR and ESG investment purposes.

Enhanced CO2 Absorption

100 tons per hectare per year CO2 absorption is achievable compared to the country average of 13,6 tons/ha/year

Fast-Growth with Smart Water-Management

During the first phase of 8-year lifecycle, 3 cm daily growth was registered. A tree yields ~0.8 m3 superior wood material. AgrooterTM provides 50% decrease of water usage.

Non-Invasive Resilience

Due to specific innovation and research efforts the Smaragdfa® tree is non-invasive and thrives in adverse natural environment with extreme temperatures.



Sustainable Wood Products

Smaragdfa® tree provides exceptional wood resource to new sustainable product lines in the fields of CLT Housing, Furniture, Interior design, Clothing, etc. That long term carbon sinking brings us closer to a circular economy.

Ecosystem Vision: Inter-Cropping & Open-field CO2 Fertilization

Due to specific innovation and research efforts the Smaragdfa® tree is non-invasive and thrives in adverse natural environment with extreme temperatures.

Corporate Social Responsibility

Planting Trees are gaining momentum currently. Planting the **proper** Trees makes the difference.

ESG Investing

These Carbon Farms are the truly green projects which provide unparalleled transparency in terms of achieving Green goals with yield premiums.



Why is Emerald Different?

Product Specifications



Emerald

Advantages

Light, yet strong:
High strength-to-weight ratio.
Emerald wood can be cut quickly and requires little water, which makes them an environmentally friendly choice.
It is easy to work with and is free of spasms.

Resistance

It has excellent resistance. Its specific defense mechanisms make it more resistant to infections caused by fungus and insect stings. It tolerates drought better than other native tree species and can withstand extreme temperatures.



Alder

Due to its ability to bind nitrogen, it has soil improvement effects. Due to its hardness, it can be used in many areas, from carpentry to construction. Due to its high water demand, it can also be planted in swampy areas.

It is well resistant to natural influences and moisture, however, intestinal rot and fungal infection along frost cracks are also common diseases.



Pine

A cost-effective choice for many carpentry jobs. Pine is generally softer, making it a good choice for beginning carpenters.
Versatile: Can be used in many projects, from furniture to architecture.

It is resistant to most natural adversities in Europe and Asia. The wood's specific resin content helps protect against insects and some fungi, but fungal infection is a common problem.



Why is Emerald Different?

Product Specifications



Emerald

Cutting time

6-8 years

Flash point

410-420 °C

CO2 Sequestration

up to 200 kg/tree p.a.

Density

260 kg/m³

Hardness

Light Hardwood



Alder

30 years

200-280 °C

10-25 kg/tree p.a.

380 kg/m³

Hardwood



Pine

25-70 years

190-260 °C

10-20 kg/tree p.a.

510 kg/m³

Softwood



Project Overview

8-year Lifecycle Repeatable up to 3 times after First Harvest

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032
Cash Flow Intensity Indication	52%	4%	5%	4%	5%	4%	7%	7%	12%
Plating & project implementation	X								
Wood Harvest	X						20% harvested	20% harvested	60% harvested
Manure, Dung	X		X		X		X		
Irrigation	X	X	X	X					
Land lease	X	X	X	X	X	X	X	X	X
Insurance	X	X	X	X	X	X	X	X	X
Maintenance	X	X	X	X	X	X	X	X	X



Plantation & Maintenance

An All-Encompassing Service

Emerald guarantees
95% survival rate
in each plantation project

Key Facts about the Emerald Tree

2-3 centimeters
daily growth

8X
CO2 sequestration

27 use-cases
across sectors

Non-invasive Hybrid
suitable for farming

Ultralight hardwood
for premium furniture

Food source
with protein-rich leaves



EXPERT PLANTATION SERVICES

Our team made the most suitable species for carbon sequestration. We employ advanced techniques to ensure high survival rates and optimal growth, thus maximizing the carbon absorption capacity of each plantation.



COMPREHENSIVE MAINTENANCE

We don't just plant trees; we nurture them. Our maintenance services include regular monitoring, pruning, pest control, and soil health management to ensure the longevity and health of the plantation.



CARBON CREDIT ASSISTANCE

Understanding the complexities of the carbon credit market, we guide our clients in documenting and registering their plantations for carbon credits, providing an additional revenue stream while contributing to the global fight against climate change.



TECHNOLOGY INTEGRATION

Leveraging cutting-edge technology, we offer drone surveillance for plantation monitoring, GIS mapping for accurate area assessment, and data-driven analysis for continual improvement of our services.



COMMUNITY ENGAGEMENT

We believe in the power of community. Our projects often involve local communities, providing them with employment and educating them on sustainable practices, thus ensuring the long-term success of our plantations.



ENVIRONMENTAL IMPACT REPORTS

Transparency is key. We provide detailed reports on the environmental impact of our plantations, showcasing the tangible benefits in terms of carbon absorption, biodiversity enhancement, and ecosystem restoration.



Product Generation Service

Maximizing the Potential of Emerald

Finding the right third party for your timber products can be a daunting task – that's why **Emerald offers a comprehensive consulting service for product generation.**

Our team is dedicated to connecting you with reliable and skilled third-party providers that are experts in creating quality timber products. From furniture to building materials, we work with a diverse range of providers to ensure that you get the best possible outcome for your project.

With us, you can be confident that your timber products will be made with care and precision, and that you'll be working with professionals who are passionate about what they do. Let us help you bring your vision to life and create beautiful, functional products that will stand the test of time.





Carbon Trading Services

A Fully Integrated Solution



COMPREHENSIVE LIFECYCLE MANAGEMENT

Offering end-to-end services covering the entire lifecycle of carbon plantation projects. This includes initial feasibility studies, project planning and design, implementation, monitoring, and final reporting.



INDEPENDENT VALIDATION

Partnering with independent, reputable third-party companies to ensure unbiased and rigorous validation of carbon plantation projects. This is crucial for maintaining transparency and trust in the carbon credits generated.



CUSTOMIZED CONSULTING SERVICES

Providing tailored consulting services to clients, helping them understand the nuances of carbon trading, legal requirements, and best practices in plantation management for maximum carbon sequestration.



CARBON CREDIT TRADING

Assisting clients in generating carbon credits through their plantation projects, followed by facilitating their sale or trade in the carbon market. This includes guidance on pricing, market trends, and compliance with regulatory frameworks.



SUSTAINABILITY INTEGRATION

Advising clients on how to integrate sustainable practices into their carbon plantation projects, ensuring that they contribute positively to the environment and local communities.



TECHNOLOGY UTILIZATION

Using advanced technologies like satellite imaging, AI, and blockchain for accurate monitoring and transparent reporting of carbon sequestration data.



COMPLIANCE & RISK MANAGEMENT

Offering expert guidance on navigating complex regulatory environments, and providing risk assessment and management services to mitigate potential challenges in carbon trading.



WORKSHOPS & TRAINING

Conducting workshops and training sessions for clients and their teams to build knowledge and capacity in carbon trading and sustainable plantation management.



ONGOING SUPPORT & MONITORING

Providing ongoing support and regular monitoring to ensure that carbon plantation projects remain compliant and effective over their entire lifespan.



COLLABORATION WITH ENVIRONMENTAL EXPERTS

Collaborating with environmental scientists and experts to continuously update practices based on the latest research and developments in the field of carbon sequestration and environmental conservation.



Emerald Horizons

Capacity & Growth Potential

Emerald is renowned for its specialization in tree cultivation, currently boasts a production capacity, with an output of **7 million seeds per annum***.

With Current stock we are able to cultivate more than **14 000 Hectares of (degraded) area.**

* Output may vary depending on laboratory capacity



Looking to the future, Emerald Tree manufacturing has significant potential for growth.

By incorporating additional laboratories around the world into our operations, the company can **substantially increase its production of roots/younglings**. This expansion not only meets the escalating market demand but also opens up new possibilities for Emerald Tree.

In the next few years with our forecasted production increase, the company could venture into new markets or regions, thereby enhancing our influence and diversifying revenue streams in both the forestry and agricultural sectors.



Our Team

Versatile Skills for a Complex Product



Dr. József Steier

Chief Executive Officer

Economist, energy expert and agricultural engineer with 40+ Years of experience, including 10 years in Africa with a diplomatic mission.

Innovation Label winner COP 22 Entrepreneur and Business Leader with successful IPO track record.



Márton Steier

Founder

Corporate Banker with 12 Years experience in business development and strategic advising with special focus on ESG financing.

Marton is currently advising a dozen of the largest Corporates in Central Europe from the field of Aviation, Mobility and Power & Gas industries.



Márk Bednár

Partner & Advisor

Márk is a successful entrepreneur, partner at Klima.Metrix, specialized in SaaS for carbon accounting of major companies.

In Emerald, he is responsible for sales strategy and partnerships. Mark is a Forbes 30/30 and a Global Shaper of the World Economic Forum.



Dávid Ország

Business Intelligence

With a focus on business intelligence and sales activities, David has consistently delivered results across projects related to ESG and agroforestry.

With a professional focus on green finance and sustainability, David's main goal is to engineer a greener and more accessible future.



Our References

Emerald as a Pioneering Innovation

In 2013, our organization pioneered the establishment of **the first carbon plantation in Hungary**, which has since been operational and garnered interest from Hungarian authorities.

Our efforts have expanded beyond European borders, with **successful tree planting initiatives in the Middle East and Africa**. Currently, we are embarking on an ambitious project to extend our **tree planting efforts to the Amazon Forest**.

We are committed to **assisting European municipal offices** in recognizing and capitalizing on the potential of carbon sequestration through sustainable methods.

We take great pride in the fact that each of our collaborations has been a resounding success, earning us **commendations from a diverse range of industries, spanning from animal agriculture to cement manufacturing**.

We are eager to continue working with companies in this and other regions, contributing to the growth and success of the agroforestry and agriculture industries worldwide.



Innovation Award at COP22

UN Framework Convention on Climate Change
22nd Conference of the Parties



Certified Positive Impact on All SDGs

Attested by the Eszterházy Károly University of
Eger, Hungary



27 Validated Use-Cases

Full list of applications provided on request