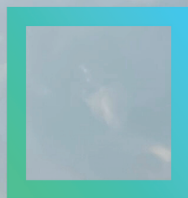


ISSUE 1 | 2023



# Planetzero .earth

## In this issue:

**VIETNAM NET ZERO  
TARGET 2050**

**GLOBAL WARMING**

Limit set at 1.5°C:  
Urgent Action Required

**DECARBONIZATION  
PATHWAY**

Towards a  
Carbon-Emission-Free Future

**BIOCHAR**

**THE BLACK GOLD**

Unearthing the Potential  
of Biochar

## Sustainable Businesses

First Movers Leading the Way in  
Pioneering New Solutions

2023

# About us



Our mission is to help our clients achieve their sustainability goals by providing them with reliable and cost-effective engineering solutions that are grounded in scientific research and technical expertise. We strive to create value for our clients by delivering high-quality services that meet or exceed their expectations, and by building long-term partnerships based on trust and mutual respect.

## Innovation

We are committed to exploring new ideas and innovative approaches that push the boundaries of what is possible, and to using cutting-edge technology and techniques to solve complex problems.

## Sustainability

We are passionate about creating a sustainable future for our planet, and we believe that biochar and carbon credits have a critical role to play in achieving this goal.

## Collaboration

We believe that the best solutions emerge from collaboration and teamwork, and we work closely with our clients and partners to create shared value and achieve mutual success.

## Excellence

We believe in setting the bar high and striving for excellence in everything we do, from our technical work to our client interactions.

## Integrity

We hold ourselves to the highest ethical standards and always act with honesty, transparency, and fairness in all our dealings with clients, partners, and stakeholders.

### Detail contacts

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# Our team

## Message from Our Chairman

Dear Readers,

It's with great pleasure and a profound sense of responsibility that I write to you today as the chairman of Planetzero.earth.

Our world is at a pivotal juncture, where the decisions we make today will shape the future of our planet for generations to come. The challenges of climate change, environmental degradation, and resource depletion are more pressing than ever before. But with these challenges come opportunities – opportunities to innovate, to unite, and to strive for a sustainable future.

At Planetzero.earth, our vision is clear: we envision a world where sustainability is not just a buzzword but a way of life. We believe in the power of collective action, where individuals, businesses, and governments can come together to address the most pressing environmental issues of our time.

We understand that the path to sustainability is not easy, but it is a path worth pursuing. It requires dedication, innovation, and a willingness to embrace change. It calls for us to rethink the way we live, work, and consume.

I invite you to join us on this journey. Together, we can be the change-makers, the innovators, and the first movers who lead the way toward a planet that thrives, not just survives.

Thank you for your support, and together, let's make a difference for our planet.

Warm regards,  
Markus Klemmer  
Chairman, Planetzero.earth



**Markus Klemmer**  
Chairman



**Nguyen T.T. Trang**  
Sustainable Solutions  
Consultant



**Le V. Tai**  
Technical Solutions  
Consultant



**Nguyen T. Trang**  
Business Development  
Executive



**Markus Baumann**  
Managing Director  
Planetzero.earth GmbH

# Biochar - The Black Gold



**“Biochar is the lightweight black residue, made of carbon and ashes, remaining after the pyrolysis of biomass.”**

Sustainable biochar, derived from agricultural waste or by-products and sewage sludge, presents a transformative solution to pressing environmental challenges. This innovative approach not only addresses waste management issues but also offers a sustainable means to enrich soil quality, foster agricultural productivity, and combat climate change, thereby nurturing a greener and more resilient future.

FSC (Forest Stewardship Council) certification is a globally recognized and trusted label for responsibly managed forests and the products that come from them.

FSC certification promotes sustainable forestry practices, which help conserve biodiversity, protect rights of Indigenous, and mitigate deforestation. By choosing FSC-certified products, consumers and businesses contribute to the preservation of our planet's precious forests while supporting ethical and sustainable supply chains.”

“What is “pyrolysis”?

Pyrolysis is defined as the thermal decomposition of organic materials in the absence of oxygen.

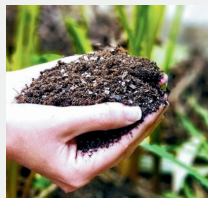
Typically, the pyrolysis of an organic substance will produce a solid residue which is often highly enriched with carbon.

We also provide high-quality bamboo biochar that is sustainably harvested from FSC-certified forests in Vietnam. Our biochar product is carefully manufactured to ensure it is free from any hazardous elements, such as heavy metals and Polycyclic Aromatic Hydrocarbons (PAHs), which are known to cause cancer.



2023

# Sustainable Products



## BIOCHAR IN BLUE-GREEN INFRASTRUCTURE

Biochar can be integrated into various elements of the urban landscape, such as green roofs, rain gardens, and permeable pavements. This porous, carbon-rich material enhances water filtration, mitigates stormwater runoff, and promotes plant growth by facilitating nutrient retention and microbial activity in the soil.



## NOVA TERRA PRETA

Terra Preta owes its characteristic black colour to its weathered biochar content, and was made by adding a mixture of charcoal, bone, broken pottery, compost, and manure to the low fertility Amazonian soil. Nova Terra Preta (NTP) represents a contemporary adaptation of the ancient Terra Preta. The positive impact of biochar in soil includes improved water retention capacity, living space for microbes, buffer for nutrients, generally better plant health and eligibility for the generation of tradeable carbon credits.



## CARBON-CONCRETE FLOWERPOTS

The cement industry is one of the largest emitters of carbon dioxide in the world, contributing to the greenhouse gas effect and global warming. Carbon concrete products are produced by replacing a portion of cement or sand with biochar. This innovative product allows for the infinite storage of carbon in the concrete, while also neutralizing the carbon emissions from cement production.



## AIR FRESHENER

The bamboo biochar acts as a natural absorbent that traps and neutralizes unwanted odours, without using any harmful chemicals. Plus, our air freshener is perfect for the environmentally conscious and stylish folks. Our minimalist and sleek design will complement anyplace, making it a chic addition to your space.



## BIOCHAR SOAP

BioChar Soap - a revolution in skincare! Infused with the power of biochar, this soap is your secret to healthy, radiant skin. Biochar, derived from organic matter, gently exfoliates. Its unique ability to balance oil production makes it suitable for all skin types, from oily to sensitive.

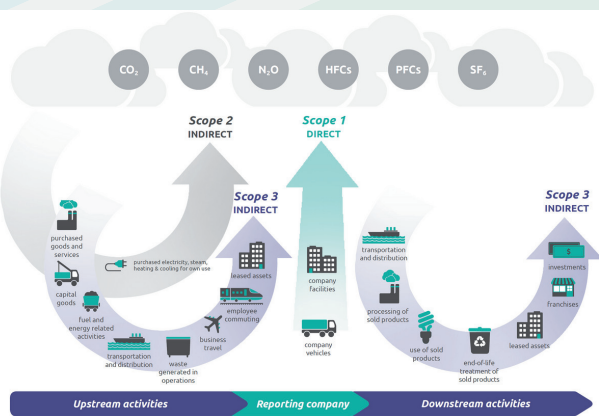
# Greenhouse Gas Inventory

Setting up a company's Greenhouse Gas (GHG) inventory is important for various reasons in national and international context on GHG emissions. Here are some key points to consider:

- 1.Regulatory Compliance:** Adhering to Vietnam's Decree No. 06/2022/ND-CP and other regulations is vital to avoid legal, financial, and reputational consequences linked to GHG emissions.
- 2.Transparency and Accountability:** A GHG inventory fosters transparency, enabling companies to disclose emissions, build trust with stakeholders, and enhance accountability.
- 3.Efficiency and Savings:** GHG inventories identify emission reduction opportunities, improving resource efficiency and leading to cost savings through measures like energy efficiency and waste reduction.
- 4.Market Access:** A GHG inventory provides a competitive edge in eco-conscious markets, meeting the demand for suppliers committed to sustainability by disclosing their carbon footprint.
- 5.Risk Management and Planning:** A robust GHG inventory and emission reduction strategies prepare companies for future environmental regulations, mitigating risks and facilitating adaptation to evolving legal requirement.

We support businesses to calculate their GHGs emissions in three scopes by using standards to ensure that our clients have an accurate and reliable assessment.

- Greenhouse Gas Protocol
- ISO 14064:2018 Managing Greenhouse Gas Emissions
- Guidelines of IPCC
- Carbon Border Adjustment Mechanism (CBAM)
- Local standards and guidelines



*"At COP26, Vietnamese Prime Minister Pham Minh Chinh commits to achieving net-zero emissions by 2050."*

*According to Decree No. 06/2022/ND-CP and Decision No. 01/2022/QĐ-TTg*

*"Nearly 2000 enterprises, companies, organizations from different sectors submitted GHG emissions data by the end of March 2023 and shall complete the first GHG inventory report in 2024"*



# Trainings & Workshops



## Methodology - Participatory Adult Learning Approaches (PALA)

PALA stands for diverse kinds and ways of practical exercises, or group work activities that is used in adult learning.

The strong focus on working in small and mixed groups emphasizes exchange processes among and between participants who all have different professional backgrounds

Environmental, Social, and Governance (ESG) principles have gained significant traction, impacting decision-making for businesses, investors, and consumers alike. Training employees in these aspects is crucial to foster awareness about the broader impact of their actions on ESG landscapes.

We collaborate closely with clients to create tailored workshops and training sessions focused on GHG inventory and environmental aspects. New topics can be implemented based on the client's need. We can offer our workshops in spoken Vietnamese and English. Materials usually be provided in English.

**1. Training on Greenhouse Gas (GHG) Emissions Inventory** is designed to offer comprehensive guidance to companies seeking to establish their own sector-specific GHG reporting initiatives regarding the basic principles and mechanisms.

**2. Training on Designing Monitoring – Reporting – Verifying (MRV) Systems for GHG Emissions** is tailored to offer comprehensive and specialized guidance to companies seeking to establish robust reporting systems for their business sector-specific GHG emissions.

**3. Environmental Awareness Workshop** aims to empower participants with the knowledge, inspiration, and tools they need to make a positive impact on the environment through engaging discussions, practical activities, and action planning.

**4. Climate Change: From Awareness to Action Workshop** aims to upscale global climate literacy by providing general understanding about the causes of climate change and its consequences on a global scale and national context.

2023

# Water2Carbon



The "Water2Carbon" concept has been developed by Water Solutions South-East Asia, Planetzero.earth in cooperation with ATB Water GmbH. The principle of the concept is to combine wastewater treatment with carbon capture and storage.

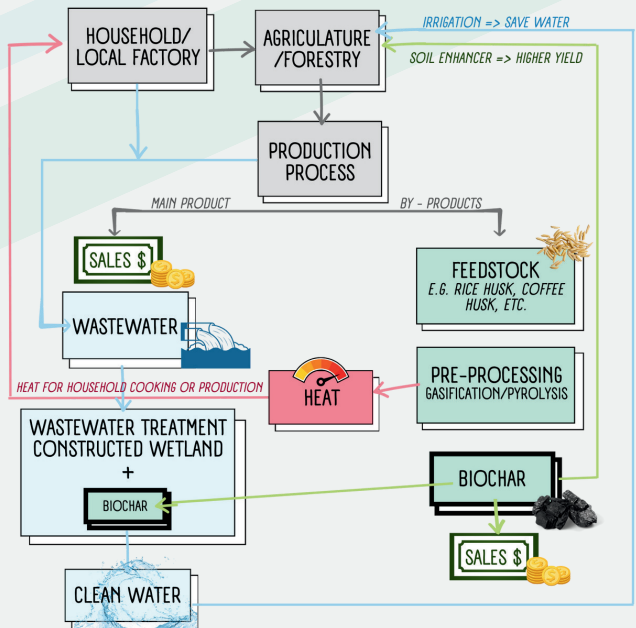
Wastewater is efficiently treated in a wastewater treatment plant and combined with a nature-based solution, such as a constructed wetland. The treated wastewater is used to irrigate a bamboo plantation. Bamboo grows and efficiently adsorbs carbon.

The bamboo is regularly harvested and removed from the biosphere, by burying it or making biochar. This concept creates permanent carbon sinks.

## Why Bamboo for Carbon Sequestration?

Bamboo is excellent for carbon sequestration due to its rapid growth, high biomass production, and significant carbon content (1.8 tons of CO<sub>2</sub> per ton). Moreover, bamboo can thrive in various environmental conditions and requires minimal maintenance, making it a sustainable and versatile choice. Sustainable harvesting practices, where bamboo can be used for construction and other products, allow ongoing carbon sequestration.

## WATER2CARBON





2023

# Coffee4Climate



## “Make your coffee a carbon-neutral beverage”

The significance of coffee bean production in Vietnam, along with its substantial contribution to the country's GDP, makes it a pivotal sector in the nation's agricultural landscape. Yet, the adverse consequences stemming from coffee production and processing are profound, with far-reaching environmental pollution, health concerns, and the limited economic involvement of farmers and their communities.

"Coffee4Climate" is a circular economy concept for coffee production. Converting coffee husks and other by-products into biochar, reducing the use of chemical fertilizers, utilisation of heat for roasting or drying, and re-use of treated wastewater for irrigation - lowering the overall carbon footprint.

The adoption of our solution will have transformative impacts on society:

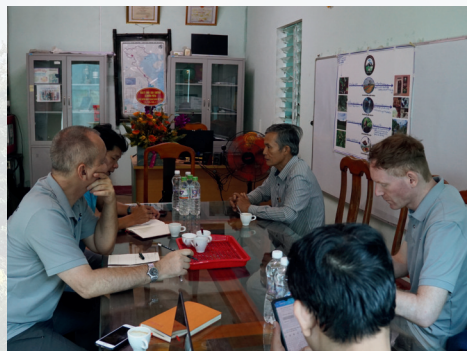
- **Empowered Minority Communities** - Economic prospects of minority communities will improve, reducing dependency on external resources and enhancing self-reliance and socio-economic conditions.
- **Sustainable Livelihoods** - Waste reduction, reduced chemical fertilizer usage, and biochar for soil improvement bolster the sustainability of coffee farming, securing income and long-term viability.
- **Mitigation of Climate Change** - Reduced emissions and sustainable practices directly contribute to climate change mitigation, ensuring a livable planet for future generations.
- **Community Resilience** - Adoption of sustainable practices makes communities more resilient to external shocks, strengthening their ability to weather economic and environmental challenges.

2023

# Community Development in Quang Tri, Vietnam supported by climate-neutral Annual Conference 2023 in Germany

The German Water Partnership (GWP) Annual Conference 2023 was hosted by the (GWP) in Berlin, with a carbon footprint estimated at 10 tons of CO<sub>2</sub>e.

Planetzero.earth's strategy for carbon sequestration involves converting atmospheric carbon dioxide into lasting carbon sinks. Using FSC-certified bamboo from Huong Phung commune, Huong Hoa district, Quang Tri province, the innovative approach transforms bamboo into biochar. This FSC-certified bamboo biochar, derived from low-quality or residual bamboo, enriches agricultural soils, adhering to standardized carbon sequestration practices.



*"What really distinguishes Planetzero.earth as consultant from others is their comprehensive and integrated approach to sustainability. They tailored their services to our expectations, maximising our input."*

**- ATB WATER GmbH**



*"There are climate impacts when holding our annual conference. But it's not just the event itself, but also arrivals and departures, overnight stays in hotels, the production and delivery of advertising materials or printed matter that cause further CO<sub>2</sub> emissions. This year we decided not only to pay attention to sustainability when selecting the venue and the catering, but also to offset the associated CO<sub>2</sub> emissions."*

**- German Water Partnership**

Chenh Venh community forest is the first community-managed natural forest certified by the International Forest Stewardship Council (FSC) for sustainable forest management for non-timber forest products and by the FSC for ecosystem services for carbon storage and sequestration in Vietnam.

**Our local partners are Medical Committee Netherlands-Vietnam (MCNV) and Chenh Venh Commune Forest Protection Committee (FPC).**

For more information about our partners MCNV please visit their website: <https://mcnv.org/>





## JTI CO<sub>2</sub> Compensation Project

JTI (Vietnam) Pte Ltd. wanted to compensate their carbon emissions and create additional value for small rural communities. Since 2020 different volunteer activities were organized annually for volunteers from JTI Vietnam and Vinataba. On behalf of JTI Vietnam the activities compensated their annual carbon emission by:

- 3 hectare of bamboo plantation in Thanh Hoa province, Vietnam
- 30~40 tons of low-quality bamboo burial annually

Our local partner - Phu An Bamboo Village is carrying out burial of low-quality bamboo and planting an ethnographic botanical garden model to continue teaching children about environmental protection and biodiversity conservation.

## Water2Carbon Concept Pilot Project in Vietnam

One of the first projects was implemented in Soc Trang province, Vietnam. By treating wastewater from a school and a nearby market using a constructed wetland with carbon capture.

The wastewater treatment plant minimizes the energy consumption, making the concept applicable for Vietnamese conditions.



## TransAsia TanTec Ltd

Technical consultancy for carbon sequestration and compensation within the premise of TransAsia TanTec Ltd based on the Water2Carbon concept.

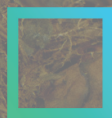
*"TransAsia TanTec Ltd is currently operating a tannery in Trang Bang Town, Tay Ninh Province, Vietnam"*





PZE Magazine

# Roadmap to Net Zero



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**water:hub**  
South - East Asia



**ESG ALLIANCE**

FSC certificate Number: SGSHK - COC - 011397