

Removing Carbon. Boosting Income. Enhancing Soil.

Smallholder farmer biochar

Together with our local implementation partners, Carboneers develops decentralized biochar projects with the aim to provide in much needed durable carbon dioxide removal.

We provide farmers with the right training, tools and technology, in order to covert biomass to biochar. Biochar is an inert carbonized material, that is a stable carbon sink for over a thousand years. Besides being a direct carbon sink, biochar offers great beneficial characteristics in tropical agriculture; it stores nutrients, increasing crop yields; it increases the water holding capacity, aiding in climate adaptivity; and it houses microorganisms, raising the organic carbon content of degraded soils.

Combined, we work with 750 farming communities who convert their agricultural corn, fruit tree trimmings, cacao pods, millet & peanut stalks to biochar. Every step in the biochar production and application is registered with a mobile application by our supervisors and management team. The project is audited by Ceres Cert and certified by Carbon Standards International under the Global Artisan C-Sink Standard. Added together, our Ghanaian Carboneers have the capacity to sequester 12.500 tons of carbon dioxide on a yearly basis.





Project ID: GCSP1025

Location: Upper West, Volta and Oti

regions, Ghana

Registry: Carbon Standard International **Methodology:** Global Artisan C-Sink 2.1



Carboneers United B.V.

www.carboneers.earth

Maliebaan 77, 3581 CG, Utrecht

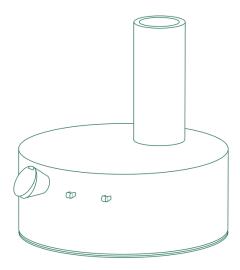
The Netherlands

Our Tech and Monotoring

In Ghana, we are producing biochar in the traditional soil pits and our new mid-tech solution. We engineered the Earth kiln for decreased methane emissions, lower H/C ratios and reduce safety risk. In the process, we also extensively tested the soil pits with a hood over it to compare with the Earth kiln. To our satisfaction, the new kiln is an improvement but the soil pits proved to deliver as well. More information can be provided upon request.

Our distributed model of biochar production has robust traceability, strict protocols, and complete transparency to deliver high-quality biochar carbon removal credits. Data collection begins in the field using a mobile app, which records every step of the biochar production process, from the source of biomass and pyrolysis to the bagging and application of biochar. Each action is documented with time-stamped and GPS-tagged photos, ensuring precise tracking. Supervisors collect this data, which is then cross-referenced by our management team using IoT sensors and machine learning programs for accuracy and consistency.







Our impact in Ghana

- Carbon credit finance increases farmers' average income by 23% to 80%.
- Over 51% of the jobs created through our projects are filled by women.
- After applying biochar and manure, crop yields rise by 19% to 40%
- Dependency on chemical fertilizers decreases by 20% to 50%,
- Soil nutrient retention improves by 15% to 25% and water-holding capacity grows by 10% to 20%
- In Ghana, we have removed over 20.000 tonnes of CO2.

These are more than just statistics. They translate directly into progress on the Sustainable Development Goals and real change in people's lives. We've met farmers who, for the first time, were able to grow tomatoes on previously depleted, dry land on which farming was close to impossible before biochar application. With the income from climate finance, they invested in machinery for their farms to expand their businesses. thanks to our partnership with And Terraspect, women - who often lead the fieldwork - receive payments directly to their mobile phones, driving both financial inclusion and gender equality.

What drives us is the direct impact we can make in the field. We see the direct financial impact on the first trip to a specific farm, the incredible increase in cropyield in the second trip and hope to see the effect of the removed carbon the rest of our lives.





























Removing Carbon. Boosting Income. Enhancing Soil.

Smallholder farmer biochar Odisha / Assam - India

Together with our local implementation partners, Carboneers develops decentralized biochar projects with the aim to provide in much needed carbon dioxide removal. In our Indian Carboneers project, we are very proud to work with Rajesh Aggarwal and his family. His company, Together for Restoration, has been working with rural farming communities for over two decades.

Together, we provide farmers with the right training, tools and technology, in order to convert biomass to biochar. Biochar is an inert carbonized material, that is a stable carbon sink for over a thousand years! Besides being a direct carbon sink, biochar offers great beneficial characteristics in tropical agriculture; it stores nutrients, increasing crop yields; it increases the water holding capacity, aiding in climate adaptivity; and it houses microorganisms, raising the organic carbon content of degraded soils.

In both Assam and Odisha, we work with over 3000 farming communities, who convert their cornstovers, rice straw and cotton stalks to biochar. The project is audited by Ceres Cert and certified by Carbon Standards International under the Global Artisan C-Sink Standard. And added together, our Indian Carboneers have the capacity to sequester 100.000 tons of carbon dioxide on a yearly basis!





Project ID: GCSP1024

Location: Assam and Odisha, India

Registry: Carbon Standard International

Methodology: Global Artisan C-Sink 2.1



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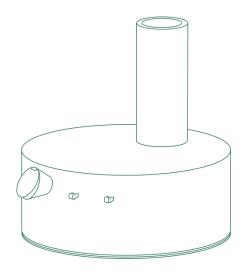
Our Tech and Monotoring

In India we are producing biochar in the traditional soil pits and our new mid-tech solution. We engineered the Earth kiln for decreased methane emissions, lower H/C ratios and reduce safety risk. In the process, we also extensively tested the soil pits with a hood over it to compare with the Earth kiln. To our satisfaction, the new kiln is an improvement but the soil pits proved to deliver as well. More information can be provided upon request.

Our distributed model of biochar production requires robust traceability, strict protocols, and complete transparency to deliver high-quality biochar carbon removal credits. Data collection begins in the field using a mobile app, which records every step of the biochar production process, from the source of biomass and pyrolysis to the bagging and application of biochar.

Each action is documented with time-stamped and GPS-tagged photos, ensuring precise tracking. Supervisors collect this data, which is then cross-referenced by our management team using IoT sensors and machine learning programs for accuracy and consistency.







Our impact in India

- Carbon credit finance increases farmers' average income by 23% to 80%.
- Over 51% of the jobs created through our projects are filled by women.
- After applying biochar and manure, crop yields rise by 19% to 40%
- Dependency on chemical fertilizers decreases by 20% to 50%,
- Soil nutrient retention improves by 15% to 25% and water-holding capacity grows by 10% to 20%
- In India, we have removed over 100.000 tonnes of CO2.

These are more than just statistics. They translate directly into progress on the Sustainable Development Goals and real change in people's lives. We've met farmers who, for the first time, were able to grow tomatoes on previously depleted, dry land on which farming was close to impossible before biochar application. With the income from climate finance, they invested in machinery for their farms to expand their businesses.

What drives us is the direct impact we can make in the field. We see the direct financial impact on the first trip to a specific farm, the incredible increase in crop yield in the second trip, and hope to see the effect of the removed carbon for the rest of our lives.

Let's partner up, remove carbon, boost income, and enhance soil together!

























