



Biochar for Carbon Removal

THE PURO STANDARD

What is biochar?

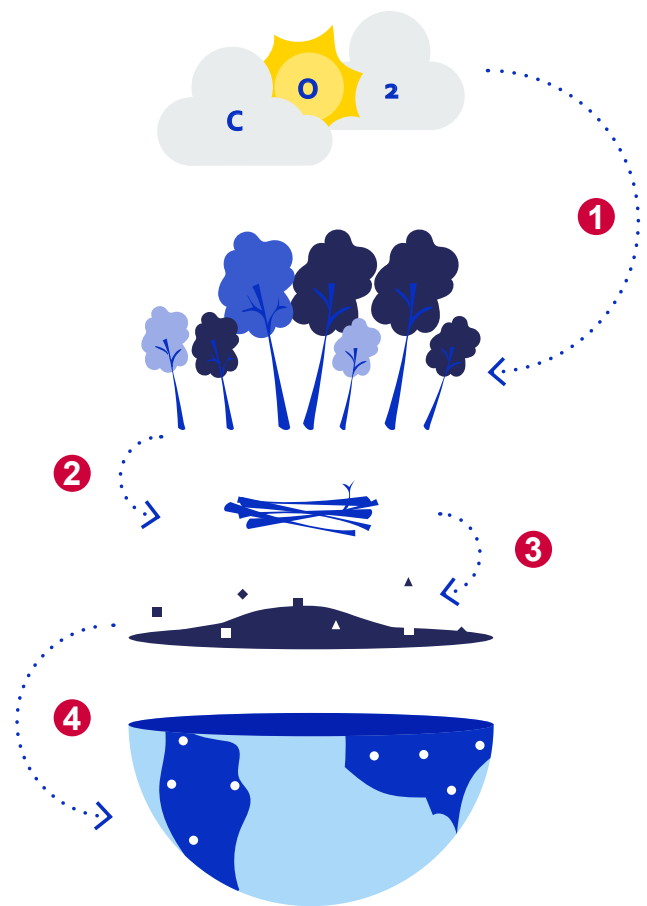
Biochar is obtained from heating biomass (wood, leaves, straw, or other biosolids) at high temperatures without oxygen. This process, known as pyrolysis, concentrates carbon in a form that is very resistant to biological decomposition. Biochar can be used for agricultural and industrial purposes, such as to enhance the quality of soils or remove pollutants from wastewater. **Biochar is a powerful tool for removing carbon dioxide from the atmosphere and has many social and environmental benefits.**

puro·earth

A solution for reversing climate change

Carbon Removal: How it works

- 1 Capture:** Plants absorb CO₂ from the atmosphere via photosynthesis to build their tissues.
- 2 Feedstock:** Biomass that is normally left to decompose is collected as feedstock for biochar.
- 3 Stabilization:** The pyrolysis process turns biomass into biochar which stabilizes carbon in a form that resists decomposition.
- 4 Storage:** Biochar is returned to the soil or added to products where a large fraction of its carbon is sequestered for 100+ years.



During the process of photosynthesis, plants pull carbon dioxide (CO₂) out of the atmosphere. The carbon is then stored within the trees, plants and soil for long periods of time. However, when the trees and plants decompose or are burned through forest fires, the dead organic matter (biomass) release CO₂ back into the atmosphere.

Sustainably managed FSC-certified forests and plantations actively prevent the release of CO₂ through controlled harvesting. The side-streams, such as waste or wood chips, from the harvested wood used to make wood-based products, are used as feedstock for biochar. When the feedstock is heated using the pyrolysis process, the carbon forms a long-term chemical and biological stability. The resulting product is biochar, which when returned to the soil or other products, sequesters carbon for 100+ years.



A leader in biochar carbon removal certification

Puro.earth brought the first carbon crediting standard for engineered carbon removals to the voluntary carbon market. Aligned with the IPCC definition for carbon removal, the Puro Standard brings integrity to the market with high-quality carbon removal methodologies, including the first methodology for biochar.

The Puro Standard

The Puro.earth methodology for biochar was developed in 2019 and was updated in 2022 to include the latest research. We ensure all projects meet the highest environmental standards while guaranteeing **net-negative emissions** through the following project eligibility criteria which are verified by third-party auditors.

“

Choosing Puro, it really came down to trust and integrity...we thought the relationship with Nasdaq was critical to that and we knew in an emerging market like the carbon sequestration market it was important to have the integrity of an organization that had strong standards.”

– Ned Dwyer, CEO,
American BioCarbon, CORC supplier

Click on each icon for more detail.

NET NEGATIVE EMISSIONS GUARANTEE

ENVIRONMENTAL SAFEGUARDS

What is net negative emissions?
Net negative essentially means removing more CO₂ from the atmosphere than an activity produces.

Click on each icon for more detail.

Choose biochar for:

- Trusted carbon removal**
One of the safest, most durable & fastest ways to draw down carbon, according to the IPCC
- Guaranteed permanence of 100+ years**
Lower cost long-term storage with a permanence guaranteed for 100 years, with virtually no risk of reversal
- Positive impact beyond carbon**
Biochar projects can contribute up to 12 out of the 17 **UN Sustainable Development Goals**

Additional benefits of biochar:

- ✓ Improves agricultural productivity, by helping soils retain water and nutrients, and restoring degraded soils
- ✓ Provides additional income to small farmers and creates new job opportunities
- ✓ Can be used for remediation of contaminated sites
- ✓ Can be used as a sorbent for water treatment
- ✓ Generates renewable energy from the pyrolysis process
- ✓ Avoids air pollution caused by biomass burning
- ✓ Diverts organic waste from landfill



Puro.earth's biochar carbon crediting methodology is the trusted choice for:

Biochar producers looking to enter the carbon markets or scale their activities

Companies who want to remove their residual emissions



Puro.earth issues verified CO2 Removal Certificates (CORCs) under the Puro Standard from carbon removal suppliers to climate-conscious companies. Reach out to the Puro Team today to get started on your carbon removal journey:

Contact us at contact@puro.earth
or visit puro.earth

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