



## Product Data Sheet

# Ukraine Hemp Carbon Credits

### Product Name

Ukraine Hemp Carbon Credits by Tao Climate, the way to carbon neutral. Available for purchase: 13/07/2023. Available quantity 500 tonnes CO<sub>2</sub>e/credits, derived from 620 tonnes of hempcrete to be used in the project in 2022/23 with a net carbon gain of 500 tonnes CO<sub>2</sub>e.

### Product Description

Hemp Carbon Credits are a carbon offset product, generated by capturing carbon in industrial hemp plants through the process of photosynthesis, grown in Ukraine. The carbon is sequestered, safely and permanently, in hempcrete construction material which is used to build apartment buildings for internally-displaced people near Lviv in western Ukraine, see construction operations in the pictures below. The growing and making operations are being undertaken by our partners, Hemp Ukraine Recover. The carbon credits are created by the Tao Climate Platform, a software technology application that monitors and verifies the amount of carbon sequestered in the hemp plants and hempcrete outputs, and then issues the credits for sale to companies and individuals looking to offset their carbon emissions.



# Carbon Benefits

The hemp plants used to generate the carbon credits sequester carbon from the atmosphere through the process of photosynthesis. For every metric tonne of carbon sequestered in the hempcrete, one carbon credit is issued. Each credit represents one metric tonne of CO2-equivalent emissions that have been avoided or removed from the atmosphere.



## How Tao Climate Hemp Carbon Credits work

1. Tao Climate software connects carbon credit markets to the global Hemp industry.
2. Industrial Hemp captures at least 15 tonnes CO2e/hectare in just 4-5 months.
3. The Hemp carbon fibre is used to make hempcrete, a sustainable construction material, replacing concrete and cement.
4. The hempcrete is used to build housing, which is cosy, non-toxic, thermally efficient and pest/mould resistant, locking the CO2 away for centuries. At this stage, our Hemp Carbon Credits are available for purchase by companies, with two thirds of the retail price paid to the hemp grower and the maker.
5. The Hemp seeds from the crop are additional to the carbon fibre, and can be used to make biofuels, bioplastics, foods, and 100s more carbon-zero products. Visit Taoclimate.com for more.

# Crop Outputs

In this Ukraine project, the following crop outputs will be produced per metric tonne of sequestered carbon, with an overall net carbon gain of 500 tonnes after deducting carbon emissions generated by crop harvesting and transportation.

Hemp Ukraine Recover - 2022		Hemp Ukraine Recover - 2023	
Metric tonnes hempcrete	120.00	Metric tonnes hempcrete	500.00
Hempcrete mix, 4:1:1		Hempcrete mix, 4:1:1	
Hemp carbon fibre used, mt	80.00	Hemp carbon fibre used, mt	333.33
Carbon content, 44%	35.20	Carbon content, 44%	146.67
Multiply carbon by 3.67 to get CO2e	129.18	Multiply carbon by 3.67 to get CO2e	538.27
Gross carbon gain	129.18	Gross carbon gain	538.27

# Certifications

Tao Climate Hemp Carbon Credits are certified by internationally recognised third-party organisations that ensure the carbon offset value is credible, fully considered, and meets rigorous standards. We aim to have this Ukraine project verified by an NGO during 2023 and this will be communicated to all credit owners on the understanding that we cannot confirm the NGO at the time of writing because of conditions in Ukraine. Our product vision is that we will use technology to deliver trust and transparency into carbon credit markets at scale. The credits are verified and registered on a transparent registry at TaoClimate.com.

# Pricing

The pricing for the Ukraine Hemp Carbon Credits is based on the co-benefits delivered by the specific Hemp Carbon Credit product within our range. These Credits have an additional social benefit in housing 90+ people who have lost their homes in the conflict. We are pricing these HCCs at €120/tonne CO<sub>2</sub>e, with €80 going directly to the project partners, Hemp Ukraine Recover. Please contact Tao Climate for additional pricing information, including bulk discounts.

# Benefits of Hemp Carbon Credits

There are many benefits to using hemp carbon credits to offset carbon emissions. These include:

- **Sustainability:** Hemp is a sustainable crop that can be grown without the use of pesticides or herbicides. It also requires less water than other crops, such as corn or soy.
- **Transparency:** The carbon sequestered by hemp is independently verified, ensuring that businesses are getting a genuine offset.
- **Scalability:** Hemp can be grown in a variety of climates, making it a scalable solution for businesses around the world.
- **Hemp is a faster-growing crop than trees,** so it can sequester carbon more quickly. A study by the University of Minnesota found that hemp can sequester up to 12 tonnes of carbon dioxide per acre per year, while trees typically sequester only 2-3 tonnes per acre per year. This means that hemp can be used to offset carbon emissions more quickly and efficiently than forestry.
- **Hemp can be grown on a variety of different land types,** including marginal land that is not suitable for other crops. This makes it a more scalable solution for carbon offsetting, as it can be used to offset emissions from a wider range of businesses and organisations.
- **Hemp can be used to make a variety of sustainable products,** including hempcrete, which is a carbon-negative building material. This means that the carbon sequestered by hemp can be used to offset the carbon emissions associated with the production and use of these products.

In addition to these benefits, hemp carbon credits are also more transparent and traceable than forestry and direct air capture credits. This is because blockchain technology will be used to create a secure and immutable record of carbon credits generated through hemp projects. This ensures that the carbon offsetting claims are verifiable and trustworthy, mitigating the risk of greenwashing.

Overall, hemp carbon credits offer several advantages over forestry and direct air capture credits. They are faster-growing, more scalable, and more transparent and traceable. This makes them a more sustainable and effective solution for carbon offsetting.

## Overview

These Ukraine Hemp Carbon Credits offer a unique opportunity to offset carbon emissions while also supporting sustainable products and practices. By purchasing Tao Climate's Ukraine Hemp Carbon Credits, companies and individuals can take an active, measurable role in fighting climate change while also supporting the reconstruction of Ukraine. Tao Climate is in negotiations with numerous projects around the world, and we aim to quickly bring millions of tonnes of Hemp Carbon Credits to market.



## Tao Climate contact details

Get in touch to purchase these carbon credits, or to learn more about how our products can help your business achieve sustainability goals.

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