



Global Cooling – the base of the new carbon sink economy



Global Cooling – the base of the new carbon sink economy

CO₂ emissions cause a global warming effect for thousands to millions of years. To compensate such emissions completely, the same amount of CO₂ must be extracted from the atmosphere and stored as a carbon sink (C-sink) for an equally long time. However, to avoid accelerating climate change, we need climate action now.

A carbon sink that persists only for 10 years contributes to climate change mitigation and has a global cooling effect during these 10 years as large and efficient as a carbon sink that will persist for a thousand years. The majority of carbon sinks do not persist for thousands of years and are therefore not considered as long term. Therefore we must not solely focus on long-term C-sinks.

Temporary carbon sinks are as essential to save the climate as long-term carbon sinks. The present certification method allows a correct accounting of short-, mid-, and long-term carbon sinks and their combination in C-sink portfolios.

It can be expected that global cooling services and not CO₂ offsets will become the base of the new carbon sink economy.

Global Cooling considers the cooling effect of C-Sinks and integrates them into an overall system of reliable climate actions.



With a sustainable lifestyle, we can further reduce our climate emissions. With Global Cooling, a system has now been developed with which I can reliably compensate my previous and remaining emissions. Of course, this also works for companies, which can choose the cooling plan according to their needs.

Natalie Steiner
Head of Customer Success Center



Pilot phase

Carbon Standards and Ithaka Institute have developed the Global Cooling Services and are pleased to present them to you in a pilot phase. You are invited to get one of a maximum of 99 pilot certificates.

Please register your interest

- Private individual
- Company
- Organization

Register



Partnership Programs

Our Global Cooling Partnership programs are relevant to carbon credit suppliers and future Global Cooling Traders. Simply join our new partnership programs now and be part of the Global Cooling Community. As a Global Cooling Partner, you will be published on our website.

Please register your interest

- C-Sinks supplier
- Trader (implement your first clients in the pilot phase)

Register



Following the successful implementation of the pilot phase, the service will be handed over to Global Cooling Traders in 2024.

Get in touch with us to become part of the Global Cooling Community.

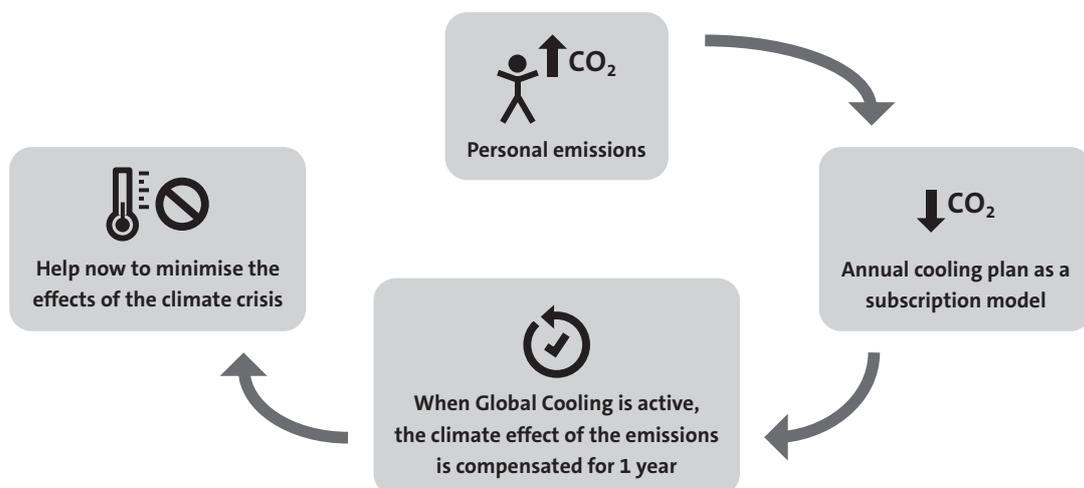


Global Cooling Services

A carbon sink (C-sink) is defined as carbon that has been removed from the atmosphere and is stored in an environmental compartment other than the atmosphere in a controlled manner. The most important C-Sinks are found in soils, plants, built materials and bodies of water. A C-sink is the physical unit of stored carbon that is certified and registered. Any C-sink provides a global cooling service that counterbalances the climate warming effect of emissions of the same amount of CO₂e for as long as the C-sink persists.

A global cooling service is a measured and certified effect on the climate that a C-sink has over a defined period of time. Global cooling services can only be traded by endorsed Global Cooling Traders. Just calculate your emissions and compensate your climate effect with Global Cooling Services.

With Global Cooling Services, you compensate for the climate effect of your emissions for one year or, if required, long-term.





How Global Cooling works

The first step is to calculate the amount of CO₂e emitted which has accumulated over several years and is causing a warming effect. Even though CO₂ has been partly absorbed by the planetary carbon pools over the years, the total emissions have to be compensated. This must be done because when the concentration of CO₂ in the atmosphere is reduced, carbon from carbon pools flows back into the atmosphere.

Once your personal emissions have been calculated, you can decide from which year you want to compensate for your climate effect. You can either compensate for the emissions of the current year or retroactively neutralise the climate effect of the last few years or even your entire life.

The difference to traditional compensation is that Global Cooling allows you to compensate your climate effect annually and not just long-term. This means that the costs are significantly lower and private individuals, but also companies, can compensate for their climate effect with a realistic budget. Global Cooling also opens up a new market for short and medium-term C-sinks. All types of carbon sinks are reliably integrated.



Quantify your climate emissions



Evaluate your cooling plan



Compensate your climate effect with Global Cooling Services

The three Global Cooling models:



My Life – I compensate for my whole life and start at the earliest in 1990, before climate change was not sufficiently known. The highest costs can be expected.



Current Year – Emissions from the current year onwards are recorded and compensated.



Individually – I can start earliest in 1990.

Participation in the pilot phase

Global Cooling services can be used from individuals, companies and organizations. Everyone is invited to participate in our pilot phase, but only 99 certificates will be issued.



As a modern farm, it is important to us to produce our products in a climate-neutral way. With Global Cooling Services, we ensure every year that our valued customers can purchase climate-neutral products from us at any time.

Markus Schütz
Organic farmer



Together with the team at Carbon Standards, we quantified my personal emissions. When calculating the emissions, we took into account that a sustainable lifestyle is important to my family. I chose my cooling plan based on this.

Even if we are able to gradually reduce our climate emissions further over the next few years, we also need reliable carbon sinks in order to achieve our climate targets. It is important to have a new opportunity with Global Cooling Services to participate more actively in climate protection as a private individual and compensate my emissions.

Adèle Thorens
President of bio.inspecta AG
Former member of Swiss Parliament



I am an enthusiastic cyclist, 22 years old and eat a regional and organic diet whenever possible. I try to keep my ecological footprint as small as possible.

With Global Cooling Services, I compensate my remaining emissions with a cooling plan. Because it is cheaper than my mobile phone subscription, I can afford it.

Jeannot Rey
Project Manager



The Global Cooling Principles

1. Global Cooling is calculated on annual bases.
2. Global Cooling Services are time dependent. The date of CO₂e emission and CO₂e removal are decisive parameters for the calculation of global warming and global cooling effects.
3. All carbon emitted must be compensated by at least the same amount of carbon sequestered in a C-sink during the annual reference time. We always compensate carbon with carbon as all fossil carbon that has been emitted must be returned to the terrestrial stores. Ten tons of CO₂e emitted means at least 10 tons of CO₂e sequestered, no matter when the emission happened and when the sink was built. It is always and only carbon that is traded.
4. The global warming effect of a CO₂e emission must at least be met by a same-sized cooling effect during the reference time. An emission can only be compensated by a sink if, for each individual year, the global cooling of the sink is at least as large as the global warming of the emission. The global warming of the emission and the global cooling of the sink must thus always be calculated and compared. If the cooling is smaller than the warming, although the emitted and removed carbon quantities are equal, more sink capacity must be made available. The latter is the case if an old sink is used to compensate for a recent emission. The sink must then contain more carbon than was emitted.
5. The cost of annual global cooling services comprises the direct cooling effect of the C-sink and the preservation of the C-sink. Preservation of an additional C-sink maintains the indirect, natural cooling (natural distribution of atmospheric CO₂ to the biosphere and oceans).
6. A carbon sink can only be considered a carbon sink when it is additional to the natural carbon sinks. A forest or marshland that exists for many decades or centuries is a natural carbon sink that is an essential part of the natural carbon cycle upholding the reduction of emitted CO₂ in the atmosphere. As an additional carbon sink, for example, the planting of a new forest on barren land or the pyrolysis of annual crop residues that would not have been produced without human intervention can be considered.

Some of our C-Sink standards

Global Artisan C-Sink – production of biochar by local farmers in developing countries

In the global south, our C-sink farmers use the Global Artisan C-Sink Standard for the production, processing and application of biochar in agriculture. Smallholder farmers cultivate most tropical agricultural land, the certification of carbon sinks and the accumulation and storage of carbon in soil and biomass must be organized in a generic and decentralized manner.

Following the Global Artisan C-Sink Guidelines, all aspects of the biochar's quality are monitored and documented. Beside this, C-sink credits can be generated by using the biochar for agricultural purposes. For the farmers this offers the possibility to sell C-Sink credits and generate additional income.



Global Tree C-Sink – reforestation projects

The Global Tree C-Sink standard is a novel certification guideline for the reliable quantification and adequate valuation of climate services generated by living plant biomass in either new plantations or natural afforestation. With Global Tree C-Sink, we expect an epochal shift in the fight against climate change, which is why we have also integrated biodiversity criteria into the standard.

A pivotal component of the certification process involves evaluating the biological diversity inherent in the C-sink projects. Subsequently, every certified initiative is categorized into one of three distinct biodiversity classes.

With Global Tree C-Sink only the amount of carbon stored annually in a tree is certified and recorded in the Global C-Sink Registry.



EBC and WBC C-Sink – production of biochar as a long-term CO₂ store in the soil and building materials

The European Biochar Certificate (EBC) is the most recognized label in the Biochar market in Europe and was established already back in 2012. EBC has also played a significant role in accrediting Biochar as a carbon sink. Production of biochar goes far beyond the borders of Europe with industrial pyrolysis plants. The World Biochar Certificate (WBC) was developed based on the EBC guidelines and therefore still include strict quality requirements that are scientifically based.

Today, such Biochar projects are among the most popular offset projects in the voluntary C-Sink trading market. Unlike CO₂ emission reduction projects, Biochar provides an active carbon sink that lasts for hundreds or thousands of years.

As in our other standards, EBC and WBC offers the opportunity to combine the biochar and C-Sink certificates, allowing producers to demonstrate the carbon sink potential of their Biochar through a single certification process. Precise calculation of the C-Sink potential, but also tracking of the Biochar until its final destination fosters trust in the C-Sink market.





 **CARBON STANDARDS**
international

Member of
 **EASY-CERT**
group