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CLIMATE  
ACTION.

GUIDE

# CO<sub>2</sub> COMPENSATION WHAT? WHY? HOW?

Guide to CO<sub>2</sub> compensation. Free access for private individuals, companies and other organisations

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# WHAT IS CO<sub>2</sub> COMPENSATION?

It is well known that the climate of our world is strongly influenced by the greenhouse gases in the atmosphere. The four most important of these gases are nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>), carbon dioxide (CO<sub>2</sub>) and fluorinated gases (HFC, PFC, SF<sub>6</sub>, NF<sub>3</sub>). In our industrial age, the emission of CO<sub>2</sub> plays a decisive role when considering climate change. To simplify calculations, all greenhouse gases are given in CO<sub>2</sub> equivalents. As the CO<sub>2</sub> content increases, the atmosphere becomes increasingly impermeable to the long-wave thermal radiation reflected by the earth, which leads to a rise in temperature (greenhouse effect). Sources of CO<sub>2</sub> emissions include activities from every conceivable area: mobility, production, consumption, food and so on. A life without CO<sub>2</sub> emissions is not possible.

CO<sub>2</sub> offsetting is a climate protection instrument that compensates for the greenhouse gas emissions caused by anthropogenic activities by storing them in carbon sinks and saving them elsewhere. It is irrelevant at which location the emissions are saved. Examples of offsetting projects include reforestation work in rainforests, bog protection and the introduction of efficient technologies in developing countries. The total greenhouse gas emissions from a CO<sub>2</sub>-causing but compensated activity are therefore theoretically net zero.

## How does CO<sub>2</sub> offsetting work?

In the first step, annual (or one-off) CO<sub>2</sub> emissions must be calculated. For this as a private person we recommend to use the climate calculator of WWF or the Federal Environment Agency.



emission calculator of WWF



emission calculator of the  
Federal Environment Agency

For your company's emissions accounting, the compensation partners offer more complex analysis methods. Please contact the respective providers directly for advice.

You then invest the equivalent amount of your emissions in a climate protection project. You can choose from a variety of providers and projects to find the one that suits you best.

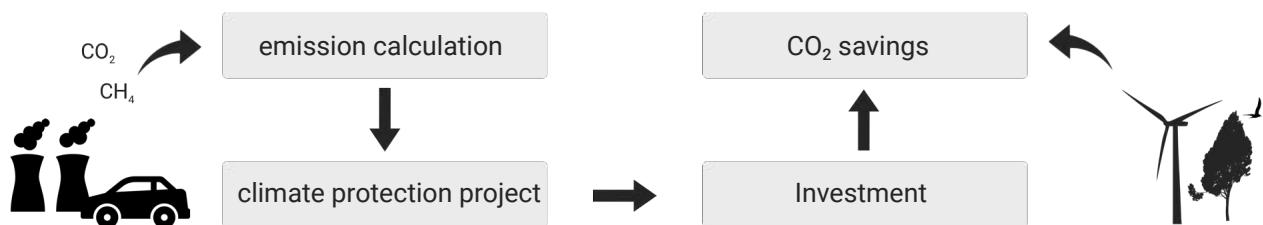
It is important to pay attention to the international certification of the projects. The basis of the compensation process is the Clean Development Mechanism (CDM). The aim of the CDM is to support developing countries in achieving sustainable development and preventing anthropogenic climate change.

Based on the CDM, there are two major standards that verify projects that you can use as a guide:

- **Gold Standard (GS)**
- **Verified Carbon Standard (VCS)**

Projects with these certificates seriously fulfil the criteria developed by WWF and other international NGOs to ensure environmental compatibility, CO<sub>2</sub> reduction and sustainable development.

In the last step you will receive an invoice and a certificate of your compensation from the respective provider. You can use this for marketing purposes or just keep it for yourself. Please note that the compensation is only valid for the calculated amount of CO<sub>2</sub>. To be completely and permanently carbon neutral, the CO<sub>2</sub> footprint has to be offset every year - because you create new emissions every year.



## Where do I offset best?

There are a large number of compensation providers. All the partners considered here reliably meet criteria for compensation and are equally well suited to compensate for CO<sub>2</sub> emissions. Which provider you finally choose depends on your personal preference. In order to give you an overview, we have examined eight very different providers in more detail due to their diversity, characteristics, price range and experience. You can find more providers in the annex of the guide.

## Climate Partner



ClimatePartner has specialised in climate protection solutions for companies. They offer climate protection projects according to the highest standards such as GS or VCS in different regions and with different technologies. The additional social effects of the projects are particularly important: The 17 goals for sustainable development of the United Nations, the SDGs, are the benchmark here. The costs per tonne range from €9 to a maximum of €19 for projects with a regional focus. ClimatePartner is TÜV-Austria certified.

### Climate Partner Deutschland GmbH

Fabio Di Meglio  
f.dimeglio@climatepartner.com  
+49 89 2190974-79  
St.-Martin-Str. 59  
81669 München

## Planetly



Planetly is a climate-tech company, developing a Software through which companies can calculate, reduce, and offset their carbon emissions. Their mission is to make the business world carbon-neutral thereby combining purpose and profit. They firstly offer an interface for simplified data collection to increase the transparency of CO<sub>2</sub> emissions in the company and further reduction solutions as well as a portal for the offsetting of CO<sub>2</sub> emissions. Costs lie between €15-17 per ton CO<sub>2</sub>.

### Planetly

Anna Alex  
anna@planetly.org  
+49 1787325343  
Rosa-Luxemburg-Str.18  
10178 Berlin

## myclimate



Myclimate is one of the world's quality leaders for voluntary CO<sub>2</sub> compensation measures and supports companies, public administrations, non-profit organisations and private individuals in calculating their carbon footprint, offsetting the resulting emissions through a variety of engaging projects and encouraging everyone to make a contribution to our future. With over 125 high-quality offsetting projects in 37 different countries they cover almost all areas of compensation products with a price of €22 per ton CO<sub>2</sub>.

### myclimate

Foundation myclimate  
info@myclimate.org  
+41 44 500 43 50  
Pfungstweidstrasse 10  
8005 Zürich, Switzerland

## Plan A



*Plan A believes that companies have the power to pave the way to a more sustainable future for our world. They have developed a successful emissions reduction Software which allows businesses to calculate, monitor and reduce their carbon footprint on a monthly basis. The software provides personalised sustainability action plans and sustainable development focused offsetting scheme that responds to the companies carbon footprint analysis. The prices for offsetting differ between €15-18 depending on the chosen project.*

### Plan A

PlanA.Earth GmbH  
amy@plana.earth  
Rudi-Dutschke-Straße 23,  
10969 Berlin

## Atmosfair



*Atmosfair is probably the best known compensation provider, especially for private individuals. A large selection of projects in different areas makes Atmosfair particularly attractive. Also, one-off events, such as a flight, can be compensated very easily and without complications. The costs amount to a fixed 23€ per ton, making them the most expensive compensation partner. Part of the offer are worldwide projects according to GS and CDM, but also local projects in Germany.*

### atmosfair gGmbH

Karolin Hornfischer  
hornfischer@atmosfair.de  
+49 (0) 30 120 84 80 – 22  
Zossener Straße 55-58  
10961 Berlin

## South Pole



*South Pole specialises in B2B, Public Sector and Financial Sector & Capital Markets and is very globally positioned. They carry out projects in reforestation, renewable energy, energy efficiency and water. The compensation of one ton of CO<sub>2</sub> costs up to 17€ and is certified by GS and VCS. There is also the possibility to develop tailor-made climate protection projects, also in the own supply chain.*

### South Pole

Main Office:  
info@southpole.com  
+41 43 501 35 50  
Technoparkstrasse 1  
8005 Zurich

## Prima Klima



*Prima Klima is a non-profit organisation, which is particularly suitable for private individuals to compensate. The project focus is on forest protection and reforestation. All projects are GS and VCS certified and are limited to Germany, Bolivia, Nicaragua and Uganda. The costs amount to 15€ per tonne, in addition the implementation of own projects is also possible.*

### Prima Klima

PRIMAKLIMA e. V.  
info@primaklima.org  
02204 - 508 940-0  
Steinhaus 1  
51429 Bergisch Gladbach

## Umwelt-Projekt-Management GmbH



*UPM Umwelt-Projekt-Management GmbH is a global project developer specialising in needs-based climate protection projects with a high contribution to sustainable development. A current example: biogas plants for small farmers in Sichuan, China. However, UPM also has many other offset projects in its own portfolio. In addition, UPM also develops projects specifically for customers and according to their exact specifications when there is a greater need for offsetting. One tonne of CO<sub>2</sub> reduction costs UPM up to 8.00€.*

### UPM Umwelt-Projekt-Management GmbH

Martin Dilger  
mdilger@upm-cdm.eu  
+49 89 122219750  
Lamontstraße 11  
81679 München

## Climate protection projects - examples

GS and VCS certification ensures and regularly confirms the climate protection effect of the projects. One of the most important requirements is that the projects are additional climate protection measures and that the contribution to CO<sub>2</sub> reduction in the atmosphere is clearly measurable. It is guaranteed that the CO<sub>2</sub> emissions saved are only used once to offset CO<sub>2</sub> emissions and that the corresponding certificates are decommissioned. This is done via official registers. The reduction in emissions must also be permanent in order to have a long-term impact on the climate. Factors for this are the repeated purchase of temporary certificates and a large number of compensation measures.

We have divided the various climate protection projects into five categories and compiled an overview:



Afforesrtartion in Niargua (Primaklima)

### Forest protection and afforestation

**Positive:** CO<sub>2</sub> sink over many years, positive side effects: microclimate, biodiversity and erosion control

**Negative:** Use of fertilisers, pesticides and water resources, durability must be guaranteed



Efficient cooking ovens in Nigeria (Atmosfair)

### Efficient technologies

**Positive:** direct impact for families and small communities, projects that would otherwise not be possible, enormous wood savings

**Negative:** small-scale projects often with higher total costs



Flow Trench in Brandenburg (MoorFutures)

### Mire protection/national projects

**Positive:** regional support, "climate protection on your doorstep", great potential as a CO<sub>2</sub> sink

**Negative:** No international standards possible



Wind energy

### Renewable Energies

**Positive:** easily quantifiable, utilisation of 'natural' resources, sustainable

**Negative:** financial effort by promoting and adapting infrastructure and networks



Technology for CO<sub>2</sub> extraction (Climeworks)

### High-tech solutions

**Positive:** CO<sub>2</sub> binding over many years, project-dependent positive side effects: microclimate, biodiversity or erosion control

**Negative:** no cause control, very expensive, high resource consumption

After you have got a rough overview of compensation and the types of projects, it is best to look at the individual projects of the compensation partners that appeal to you the most.

Offset now and become climate neutral today!




## Offset partner in comparison:

Partner	Type of organisation	Focus	Locations	costs per t CO <sub>2</sub>
 ClimatePartner	GmbH	Energy efficiency and renewable energies	worldwide	19 €
 .planetly	GmbH	corporate reduction and offsetting software	worldwide	15-17€
 myclimate shape our future	gGmbH	Energy efficiency, renewable energies and afforestation	worldwide	22 €
 PLANA	GmbH	Software for monthly compensation/reduction	Asia, South America	15-18 €
 KLIMA KOLLEKTE Kirchlicher Kompensationsfonds	gGmbH	Energy efficiency and renewable energies	Central Africa, Asia and Central America	23 €
 atmosfair	gGmbH	Energy efficiency and renewable energies	worldwide	23 €
 20firstclimate	AG	Education, health and water supply	worldwide	3-10 €
 FOKUS ZUKUNFT	GmbH	Reforestation, energy and efficiency	Latin America, Asia	3-10 €
 south pole	AG	Energy efficiency, renewable energies and afforestation	worldwide	17 €
 Moor Futures	GmbH	Mudfields, long-term projects	Northern Germany	40-80 €*

\*Single payment, savings over several years, different model of compensation

**Offset partner in comparison:**

Partner	Type of organisation	Focus	Locations	costs per t CO <sub>2</sub>
 <b>greenmiles</b>	GmbH	renewable energy, drinking water	South Africa, South America	3-10 €
 <b>[COOL]</b> <sup>®</sup> <small>NATURAL CARBON COLLECTION</small>	Consulting GmbH	Afforestation and forest protection	Latin America, Africa	11-15 €
 <b>Klimainvest</b> Green Concepts	GmbH	Afforestation, efficiency, renewable energies	worldwide	4-9 €
 <b>ClimateSeed</b>	SAS	Afforestation, efficiency, community based projects	worldwide	4-14 €