



# Overview of carbon offset projects and prices

This portfolio gives you an overview of a selection of high-quality carbon offset projects which are certified according to international standards, as well as background information on the standards and Sustainable Development Goals (SDGs).

Technology	Region	Country	Standard	Beschreibung
Clean cookstoves	Nyungwe	Rwanda	GS VER	more details
Afforestation	Rio Kama	Nicaragua	VCS	more details
Biomass	Soacha	Colombia	GS VER	more details
Hydropower	Virunga	DR Congo	VCS	more details
Solar energy	Outapi	Namibia	VCS	more details
Forest protection	Mataven	Colombia	VCS, CCBS	more details
Regional projects	Tree planting	Germany	Double project, VCS, CCBS	more details
Clean oceans	Plastic Bank	Worldwide	Double project, GS VER	more details
Clean drinking water	Kono	Sierra Leone	GS VER	more details
Social Impact	Nationwide	India	GS VER	more details
Wind energy	Northeast	Brazil	VCS	more details
	Clean cookstoves  Afforestation  Biomass  Hydropower  Solar energy  Forest protection  Regional projects  Clean oceans  Clean drinking water  Social Impact	Clean cookstoves Nyungwe  Afforestation Rio Kama  Biomass Soacha  Hydropower Virunga  Solar energy Outapi  Forest protection Mataven  Regional projects Tree planting  Clean oceans Plastic Bank  Clean drinking water Kono  Social Impact Nationwide	Clean cookstoves Nyungwe Rwanda  Afforestation Rio Kama Nicaragua  Biomass Soacha Colombia  Hydropower Virunga DR Congo  Solar energy Outapi Namibia  Forest protection Mataven Colombia  Regional projects Tree planting Germany  Clean oceans Plastic Bank Worldwide  Clean drinking water Kono Sierra Leone  Social Impact Nationwide India	Clean cookstoves Nyungwe Rwanda GS VER  Afforestation Rio Kama Nicaragua VCS  Biomass Soacha Colombia GS VER  Hydropower Virunga DR Congo VCS  Solar energy Outapi Namibia VCS  Forest protection Mataven Colombia VCS, CCBS  Regional projects Tree planting Germany Double project, VCS, CCBS  Clean oceans Plastic Bank Worldwide Double project, GS VER  Clean drinking water Kono Sierra Leone GS VER  Social Impact Nationwide India GS VER

# The costs per tonne of CO<sub>2</sub> include, but are not limited to the following ClimatePartner services:

- Comprehensive consultation regarding the selection of appropriate carbon offset projects
- Administration and retirement of CO<sub>2</sub> certificates in the respective registry (TÜV Austria certified)
- · Provision of a recognized identification label with an individual ID in different languages
- Online tracking of the compensation and project details for highest transparency
- · Provision of certificates
- Extensive communication material on all carbon offset projects
- Invitation to the biannual ClimatePartner-Academy in various cities of the DACH region





# How cookstoves help protect the rainforest

### Clean cookstoves, Nyungwe, Rwanda

Nyungwe Forest National Park in the southwestern corner of Rwanda is the largest mountain rainforest on this side of the African continent and the country's most important site for biodiversity. However, the growing population in areas around the park and their increasing use of firewood for cooking is putting more and more pressure on the unique rainforest ecosystem.

Our project enables households to reduce their wood consumption. Traditionally, families here cook over an open three-stone fire. This is inefficient and also a serious threat to health due to the heavy smoke pollution. The project introduces efficient cooking stoves made of local clay and sand. The so-called Canarumwe model is produced by a local cooperative and consumes two thirds less fuel than the three-stone fire. The stoves are offered at a subsidized price so that low-income households can afford them.

## How do cookstoves help fight global warming?

In many of the world's poorer regions, families cook their meals over an open fire, often in enclosed spaces. This method of cooking is however not energy efficient, as large amounts of heat go to waste. Clean cooking stoves are often simple devices made from metal or clay that use energy more efficiently. Families can thus save fuel and cut down on carbon emissions. Sometimes the stoves are even used in small businesses.





#### SDG 1 · No Poverty

More time for income generating activities.

#### SDG 3 · Good Health and Well-Being

Reducing smoke during cooking helps prevent respiratory and other diseases.

#### SDG 4 · Quality Education

More time for education and attending school.

#### SDG 5 · Gender Equality

Improving health conditions and reducing workload, especially for women and children.

#### SDG 7 · Affordable and Clean Energy

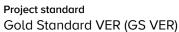
Access to clean and economic cooking for all households in the project area.

#### SDG 13 · Climate Action

The project saves an average of 10,000 tonnes of  $CO_2$  per year.

### SDG 15 · Life on Land

Preserving Nyungwe National Park's biodiversity with 300 bird species and 13 recorded primates including chimpanzees and colobus monkeys.



Technology Clean cookstoves

Region Nyungwe, Rwanda

Annual volume 10,000 t CO<sub>2</sub>e

Verified by SustainCERT

Further information www.climatepartner.com/1197









Tristan A. Foerster





# **Bamboo for deforestation-free products**

### Afforestation, Rio Kama, Nicaragua

Our project in eastern Nicaragua has planted more than 1 million plants of a native species of giant clumping bamboo, covering 2,361 hectares while protecting an additional 1,000 hectares of old forest as a conservation zone. It has transformed a degraded landscape into a flourishing and biodiverse ecosystem. Bamboo is one of the most efficient biological tools for fighting climate change. The project contributes to mitigation by preventing deforestation and capturing  $CO_2$  as well as to adaptation by reducing temperatures, creating micro-climates, supporting a low-carbon economy and creating livelihoods for vulnerable communities.

In contrast to cutting trees, harvesting giant clumping bamboo does not kill the plant. Once fully mature, selective poles are harvested from each bamboo clump annually, leaving enough time for other poles to regenerate. Thus the carbon stored within the bamboo becomes a permanent sink, with the bamboo clumps having a lifetime of 80 years. The bamboo fibre from the plantations forms the base for a broad range of substainable, deforestation-free products like fibers or building materials.

www.climatepartner.com/1216

## How does afforestation help fight global warming?

Forests are not only among the planet's most important carbon reservoirs. They also are home to an enormous diversity of species and are the livelihood for all people. However, global forest areas have declined sharply in recent decades due to increasing settlement, agricultural use, illegal logging and mining.

The afforestation of new or reforestation of degraded areas is an important contribution to increasing the biosphere's carbon storage capacity. Afforestation takes place in different ways. Sustainable forestry is able to absorb large quantities of carbon due to the use of fast-growing species. Other projects aim at providing shade and soil improvement in agroforestry. The storage capacity of afforestation areas depends on the type of tree and the geographical location. New forests create habitats for animal and plant species and opportunities for local people.





#### SDG 3 · Good Health and Well-Being

Medical checks for all employees, full-time nurses on site during harvesting season, awareness campaigns on good health.

#### SDG $6 \cdot Clean$ Water and Sanitation

Provision of clean water to all surrounding communities.

#### SDG 10 · Reduced Inequalities

Providing equal opportunities to all individuals, focus on overall sustainable community development.

# SDG 12 · Responsible Consumption and Production

Sustainable production of fibre as a base for deforestation-free paper products.

#### SDG 13 · Climate Action

The project saves an average of more than 37,000 tonnes of CO<sub>2</sub> emissions per year.

### SDG 15 · Life on Land

Regenerating landscapes at scale, restoring the key functions of ecosystems: soil, water, climate, biodiversity.









Project standard Verified Carbon Standard (VCS)

Technology Afforestation

Region Rio Kama, Nicaragua

Annual volume 37,000 t CO<sub>2</sub>e

Validated by Rainforest Alliance

Verified by TÜV NORD CERT GmbH

Further information www.climatepartner.com/1216





# Fossil-fuel phase-out in a coal paradise

#### Biomass, Soacha, Colombia

Soacha is a fast-growing suburb in the metropolitan area of Bogotá. Young people from rural areas try their luck there; others had to leave their villages during the civil war. Countless simple mudbrick houses are being built, and brick kilns make a good living. Since coal is cheaply available in Colombia, nearly all of the region's 40 brickworks use it to fire their kilns.

Except for the Santander brickyard, that is. Its owner, Miguel Diaz, has converted his business so that it operates modern, energy-efficient kilns – and he also runs them with up to 80 percent renewable biomass. This way, the brickyard saves 18,000 tons of carbon emissions each year.

This exclusive ClimatePartner carbon offset project was the first project in Colombia to receive Gold Standard certification.

## How do biomass projects help fight global warming?

Biomass projects involve energy being created from renewable biomass, which could be coconut shells, sawdust, wood chips, the residue of sugar cane processing, bamboo or wood from sustainable sources. No trees are felled, or fossil fuels burned, so no  $CO_2$  is emitted. As an additional greenhouse gas reduction measure, such projects mostly involve preventing biomass from rotting in the open air, so that no methane (CH<sub>4</sub>) is released.





#### SDG 1 · No Poverty

The project secures jobs and income for 115 people in Soacha

#### SDG 3 · Good Health and Well-Being

Less air pollution from burning coal, high health and safety standards for employees

#### SDG 7 · Affordable and Clean Energy

Efficient energy production from renewable biomass; the project is a positive example of modern biomass technology

# SDG 12 · Responsible Consumption and Production

Use of renewable biomass and waste products instead of coal for energy production

#### SDG 13 · Climate Action

The project saves 20,000 tonnes of carbon emissions per year

# SDG 16 · Peace, Justice and Strong Institutions

Long-term employment opportunities help reduce social conflicts









Project standard Gold Standard VER (GS VER)

Technology Biomass

Region

Soacha, Colombia

Annual volume 20,000 t CO<sub>2</sub>e

Validated by

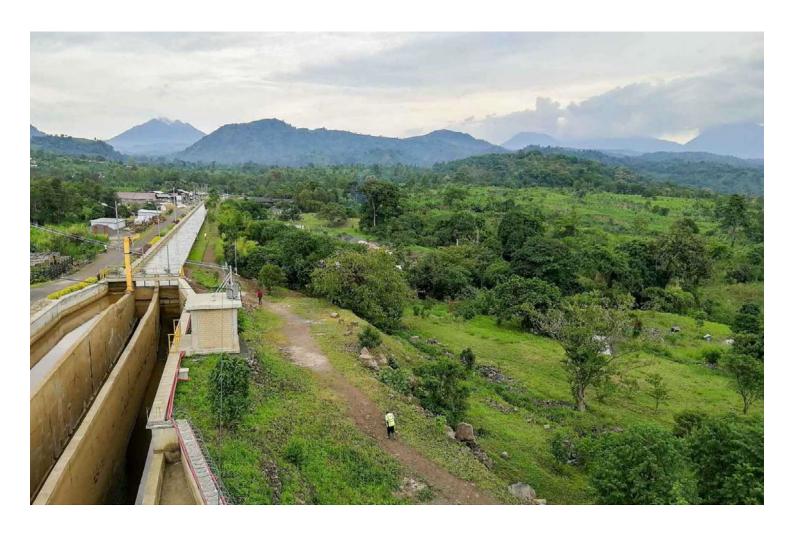
TÜV Rheinland (China) Ltd.

Verified by TÜV NORD CERT GmbH

Further information www.climatepartner.com/1070

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# Hydropower, creating resilience

### Hydropower, Virunga, DR Congo

Virunga's waters are both a source of life and energy. Rivers and streams within the National Park nurture unique plants and animals, such as the world's last remaining wild mountain gorillas. Africa's oldest national park on the eastern border of the Democratic Republic of Congo has the greatest biodiversity of the entire continent.

The currents of the Rutshuru River are used to generate sustainable energy through the small Matebe run-of-river power plant. With a capacity of 13 megawatts, the plant generates clean electricity for households and small businesses giving about four million inhabitants access to electricity for the first time. Street lighting provides more safety after dusk and new businesses create jobs, while the generated electricity provides local residents with an alternative to expensive kerosene and to the charcoal trade. These measures additionally protect the forests of the national park. With responsible economic development, our project contributes to more stability and peace in the region.

## How does hydropower help fight global warming?

Since hydropower is created without burning fossil fuels, it is considered emission-free. The growth of renewable energy production is essential to limiting global warming and securing energy supplies for the future. The amount of emissions saved by a hydropower project is calculated using the baseline method: how much CO<sub>2</sub> would be released by generating the same amount of energy using standard energy production methods for the region?





#### SDG 1 · No Poverty

Electricity facilitates economic development in one of the poorest regions of the world.

#### SDG 7 · Affordable and Clean Energy

Affordable and Clean Energy: The 13.26 MW hydropower plant provides clean electricity to 5.000 households and many small enterprises via a local micro-grid.

# SDG 11 · Sustainable Cities and Communities

More safety through street lighting in the villages.

#### SDG 13 · Climate Action

The hydropower generates energy free of carbon emissions.

#### SDG 15 · Life on Land

The project helps preserve the biodiversity and landscape of Virunga National Park.

# SDG 16 · Peace, Justice and Strong Institutions

Alternative jobs to illegal coal trade help to weaken militias and secure peace in the region.



Technology Hydropower

Region Virunga, DR Congo

Annual volume 46,000 t CO<sub>2</sub>e

Verified by TÜV NORD CERT GmbH

Further information www.climatepartner.com/1072













# **Using Namibia's potential for solar energy**

### Solar energy, Outapi, Namibia

In Namibia, the sun shines an average of 10 hours a day — it is one of the sunniest countries on earth and therefore has enormous potential for solar energy. However, the country imports 60 percent of its electricity from neighbouring countries and 40 percent of the rural population has no access to electricity at all. In northern Namibia, a ten-hectare solar energy farm produces 9,000 MWh of energy per year.

Producing power since July 2018, it was developed with the support of ClimatePartner. The project contributes to increasing the share of renewable energies in Namibia's electricity mix to increase and improve the national and regional power supply.

### How does solar energy help fight global warming?

Since energy from solar panels is created without burning fossil fuels, it is considered emission-free. The growth of renewable energy production is essential to prevent global warming and secure energy supplies for the future. The amount of emissions saved by a solar energy project is calculated using the baseline method: how much  $CO_2$  would be released by generating the same amount of energy using standard energy production methods for the region?





#### SDG 1 · No Poverty

10 percent of the shares are donated to Outapi Community Trust - an organizationthat helps provide better medication and expansion of schools.

#### SDG 4 · Quality Education

Renovation of local schools. Among other things new sanitary facilities were installed.

#### SDG 7 · Affordable and Clean Energy

Every year, it feeds 9,425 MWh of energy into Namibia's grid, helping to make the country independent of energy imports and improve electricity supply.

# SDG 8 · Decent Work and Economic Growth

The power plant has created new jobs. Local companies benefit from improved energy supply.

### SDG 13 · Climate Action

The project saves an average of tonnes of  $9,300\ CO_2$  emissions per year.





### Project standard Verified Carbon Standard (VCS)

Technology Solar energy

Region Outapi, Namibia

Annual volume 9,500 t CO<sub>2</sub>e

Validated by TÜV NORD CERT GmbH

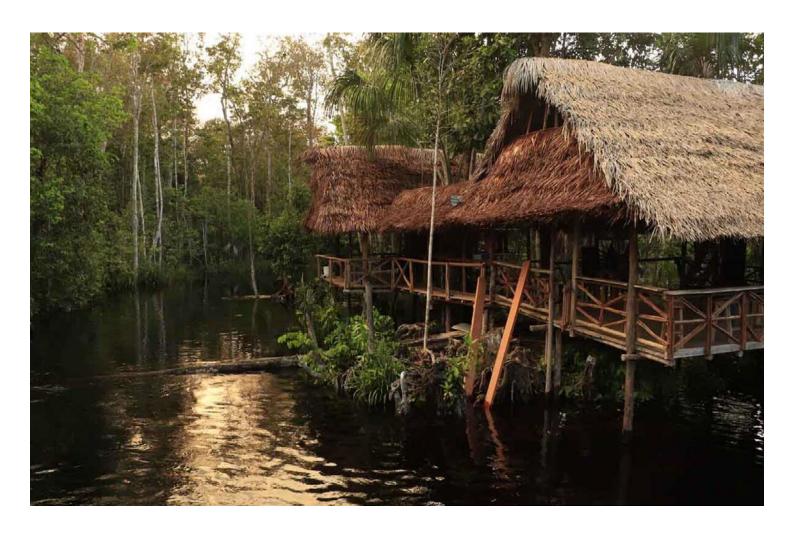
Verified by TÜV NORD CERT GmbH

Further information www.climatepartner.com/1094









# Supporting indigenous peoples to avoid deforestation

### Forest protection, Mataven, Colombia

As the biggest REDD+ Project in Colombia this initiative protects 1.150,200 hectares of tropical forests, safeguarding its biodiversity. It provides education, healthcare, sanitation, food security, nutrition, and further social benefits for 16,000 indigenous people. The project works hand-in-hand with the communities to constantly inform and train them, improve living conditions and promote sustainable economic growth.

The project follows a holistic approach to make a lasting change in the behavior towards sustainable practices, forest protection, and conservation. The different scopes of the project focus on reducing the vulnerability of indigenous territory through strengthening governance through the communities, improving surveillance and control of the territory, as well as the system of communication and transportation. Besides, the project helps improve food self-sufficiency for six different ethnic groups.

# How does forest protection help fight global warming?

Forests are not only among the planet's most important carbon reservoirs. They also are home to an enormous diversity of species and are the livelihood for all people. However, global forest areas have declined sharply in recent decades due to increasing settlement, agricultural use, illegal logging and mining.

Forest protection projects ensure that forests are preserved in the long term and that the protection of forests is given a higher value than their deforestation. Together with the local population, project participants protect the area from negative influences. To allow for this the projects create alternative sources of income and educational opportunities. Depending on the project region, forests store varying amounts of carbon per hectare. Particularly high amounts of carbon are stored in the vegetation and soil of tropical swamp forests, primary rainforests or mangroves.





#### SDG 2 · Zero Hunger

Ensuring food security and proper nutrition for 3,600 families.

#### SDG 4 · Quality Education

Enhancing education access and learning conditions for children.

#### SDG 5 · Gender Equality

The project is raising the participation and empowerment of 7,600 indigenous women.

#### SDG 10 · Reduced Inequalities

Promoting inclusive and sustainable economic growth for 265 indigenous communities.

#### SDG 13 · Climate Action

The project saves an average of 3,600,000 tonnes of  $CO_2$  emissions per year.

#### SDG 15 · Life on Land

Protecting the biodiversity of Orinoco – Amazon transition zone; including 249 bird species, 198 butterfly species, 33 dung beetle species, 121 plant species, among others.







Verified Carbon Standard (VCS) CCBS

Technology

**Project standard** 

Forest protection

Region

Mataven, Colombia

Annual volume 3,622,000 t CO<sub>2</sub>e

Validated by

Colombian Institute for Technical Standards and Certification (ICONTEC)

Verified by EPIC Sustainability Services Private Ltd

Further information www.climatepartner.com/1288



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# CO. compensation and regional climate action: our linkage projects

### Regional projects, Tree planting, Germany

European ecosystems are, too, affected by climate change: forest fires are destroying large areas. Drought and heat weaken widespread tree species such as spruce, which, with their shallow roots, do not reach deeper, hydrous soil layers. Weakened forests are more vulnerable to damage from storms and pests which may cause severe economic damage. That is why we support the afforestation and change of local forests throughout Germany.

Although these initiatives are not suitable for offsetting emissions, we nevertheless make regional commitment possible - through linkage projects: CO<sub>2</sub> offsetting is achieved entirely through one of our certified forest protection projects in Brazil (climatepartner.com/1056) or Colombia (climatepartner.com/1288). For every tonne of CO<sub>2</sub> offset in Brazil or Colombia, we plant a tree in Germany. Thus, we can guarantee carbon neutrality and contribute to adapting our forests to climate change.

# How does climate protection work with regional projects?

Our regional initiatives protect natural habitats such as native forests, moors, the Alps or contribute to the agricultural turnaround. They are important for adapting to climate change. However, due to strict requirements for carbon offset projects, these initiatives are not suitable for CO<sub>2</sub> offsetting. To nevertheless promote regional commitment to climate action, we offer so-called double projects: In this case, CO<sub>2</sub> offsetting is achieved via one of our certified carbon offset projects, for example, our forest protection project in Colombia. For every tonne of CO<sub>2</sub> offset, we make an additional contribution through our double project depending on the regional initiative, for example by planting a tree or supporting sustainable development in the Alpine region. Thus, we can guarantee carbon neutrality and promote regional climate action.





#### SDG 3 · Good Health and Well-Being

Forests reduce noise and the amount of pollutants and dust in the air. The positive health effect of staying in the forest has been scientifically evident.

#### SDG 6 · Clean Water and Sanitation

Forest soils filter rainwater, provide clean groundwater and ensure high drinking water quality.

# SDG 11 · Sustainable Cities and Communities

Forests are diverse recreational areas for all population groups. They also protect from erosion, avalanches, flooding and high tide.

#### SDG 13 · Climate Action

Forests store large amounts of CO<sub>2</sub>. They have positive effects on the global, regional and local climate.

#### SDG 15 $\cdot$ Life on Land

For many animal, plant and fungal species, the forest is the habitat that provides them with food and shelter.





# Project standard Kopplungsprojekt VCS CCBS (double project VCS CCBS)

Technology Regional projects

Region

Tree planting, Germany

Implemented by Schutzgemeinschaft Deutscher Wald e.V.

Further information www.climatepartner.com/1111





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# Stopping plastic waste from entering the oceans

### Clean oceans, Plastic Bank, Worldwide

Over 8 million tons of plastic waste end up in the sea every year. Especially developing countries often lack infrastructure for proper waste disposal.

Stopping ocean plastic while improving the lives of those who are most affected - this is the approach taken by the Plastic Bank. In Haiti, Indonesia, Brazil and the Philippines, people collect plastic waste. At local collection points, they can exchange it for money, food, drinking water or even school fees. The project makes sure that less plastic ends up in the sea. Instead, it is recycled and turned into so-called Social Plastic, which serves as raw material for new products such as packaging.

The carbon offset is done via a Gold Standard project, a wind farm in the Philippines: www.climatepartner.com/1091 or our wind power project in Aruba: www.climatepartner.com/1040. For each compensated tonne of CO<sub>2</sub>, 10 kg of plastic waste is collected.

# How do clean oceans contribute to climate protection?

The ocean stores a quarter of the  $CO_2$  from the atmosphere and even 93 percent of the heat caused by the greenhouse effect - making it a major brake on climate change. Warming, overfishing, pollutants and waste endanger this balancing function. Several initiatives prevent plastic waste from entering the sea and thus indirectly protect the climate. Because these activities do not generate vertified emission reductions, ClimatePartner supports ocean protection initiatives in combination with internationally recognized carbon offset projects. This allows for climate neutrality and ocean protection at the same time.

www.climatepartner.com/1087





### SDG 1 · No Poverty

Members receive a fair & stable income for the plastic they collect. Plastic Bank pays additional incentives to further improve quality of life and access to life necessities.

# SDG 9 · Industry, Innovation and Infrastructure

In regions that lack integrated disposal infrastructure, Plastic Bank connects local transporters, plastic processors, freighters, and other industry members to create a circular recycling industry.

#### SDG 13 · Climate Action

Healthy oceans are vital to stabilizing the climate; the wind park in the Philippines generates verified Gold Standard emissions reductions.

#### SDG 14 · Life below Water

By offsetting one tonne of CO<sub>2</sub>, 10 kg of plastic are collected. This corresponds to approx. 500 plastic bottles. In this way, the project protects marine life, microorganisms and endangered species.





# Project standard Kopplungsprojekt Gold Standard VER (double project Gold Standard VER)

Technology Clean oceans

Region Plastic Bank, Worldwide

Implemented by Plastic Bank

Further information www.climatepartner.com/1087





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# Climate action through clean drinking water

### Clean drinking water, Kono, Sierra Leone

Sierra Leone is a largely rural country where households typically use wood fuel on inefficient three-stone fires to purify their drinking, cleaning, and washing water. This process results in the release of greenhouse gas emissions from the combustion of wood – however, these emissions can be avoided by using efficient borehole technology that does not require fuel to supply clean water.

Our carbon offset project is helping communities in the Kono region to restore 57 wells. In cooperation with the local population, damaged wells are repaired and regularly maintained, which secures the regional water supply. The availability of clean drinking water eliminates the need to boil water, saving an average of 10,000 tonnes of CO<sub>2</sub> emissions per year.

Thus, it not only contributes to climate action but also impacts gender equality. Girls and women are particularly affected by poor water conditions due to the responsibility of household water supply. Providing clean water through boreholes reduces their time spent collecting water and firewood, which can now be used for education or additional income.

www.climatepartner.com/1353

# How does technology for clean drinking water help fight global warming?

Two billion people in the world have no access to clean drinking water. Many families have to boil their drinking water over an open fire, resulting in  $CO_2$  emissions and deforestation. Where water can be cleaned chemically (e.g. with chlorine) or mechanically (with filters), or where groundwater can be provided from wells, these  $CO_2$  emissions can be avoided.





#### SDG 3 · Good Health and Well-Being

By providing safe water from boreholes, the project removes the need to boil water for purification, therefore, decreasing the amount of air pollution. It also reduces diseases caused by drinking unsafe water.

#### SDG 5 · Gender Equality

Reducing the time collecting water and gathering firewood enables women to focus on work and education opportunities.

#### SDG $6 \cdot Clean$ Water and Sanitation

The project provides more than 3,000 additional people with access to safe water.

#### SDG 7 · Affordable and Clean Energy

The boreholes will be powered entirely by emission-free technologies such as handor solar-powered pumps.

#### SDG 15 $\cdot$ Life on Land

By reducing the demand for firewood, the project contributes to preserving local forests and biodiversity.









Project standard Gold Standard VER (GS VER)

Technology Clean drinking water

Region Kono, Sierra Leone

Annual volume 10,000 t CO<sub>2</sub>e

Further information www.climatepartner.com/1353





# How health and climate benefit from microcredits

### Social Impact, Nationwide, India

Over 700 million people in India cook over open fire. However, the smoke produced by this method of cooking has serious health implications. Our carbon offset project aims to counteract this problem: By granting microcredits, consumers are enabled to purchase efficient cookstoves and solar lights.

Families buy the products locally at market price - a best practice from the microfinance sector, as giving products away for free would hit the local economy and lower the value of the products. Buying the products locally strengthens small businesses, with the project additionally supporting suppliers with training and start-up capital. And the climate benefits: Using the efficient products saves an average of 100,000 tonnes of CO<sub>2</sub> per year.

# How does climate action with social impact projects work?

Social Impact projects include one or more technologies that create direct social added value in addition to climate action. Such projects involve the distribution of efficient cooking stoves, solar-powered light sources or drinking water purification:

Efficient cooking stoves make better use of the energy supplied and reduce the smoke produced when cooking over an open fire. A similar problem exists when households do not have access to clean drinking water, as the water must be boiled over an open fire first before it can be used without hesitation. Remedies include the provision of drinking water treatment aids, such as filters, or access to groundwater from wells. In addition, solar lights help to illuminate the rooms and replace expensive paraffin lamps, which are a frequent cause of fire accidents.





#### SDG $3 \cdot \text{Good Health}$ and Well-Being

The products promoted by the project make an important contribution to the health and well-being of households.

# SDG 8 $\cdot$ Decent Work and Economic Growth

The project supports local retailers with training and start-up capital, thus promoting the local economy.

# SDG 12 $\cdot$ Responsible Consumption and Production

Efficient cookstoves and solar lights allow for more sustainable use of wood as fuel.

#### SDG 13 · Climate Action

The project saves an average of 100,000 tonnes of  $CO_2$  per year.









Project standard Gold Standard VER (GS VER)

Technology Social Impact

Region Nationwide, India

Annual volume 100,000 t CO<sub>2</sub>e

Validated by Gold Standard

Verified by Gold Standard

Further information www.climatepartner.com/1350





# Clean wind energy with various social benefits for Brazilian communities

### Wind energy, Northeast, Brazil

This carbon offset project comprises the implantation and operation of 14 wind power plants in the states of Piauí and Pernambuco in the northeast of Brazil. The clean and renewable electricity delivered to Brazilian Interconnected System by the project provides an important contribution to environmental sustainability by reducing carbon dioxide emissions that otherwise would have occurred in the absence of the project, through fossil fuel-based electricity generation.

The relevant socioeconomic and environmental co-benefits of this project are also listed to reflect the important actions that are been implemented alongside with the energy generation. The project's specific focus on the necessities of the local communities through collective construction helps to transform realities and collaborate to a legacy in the territory generating shared value for the stakeholders.

### How does wind energy help fight global warming?

Since wind energy is created without burning fossil fuels, it is considered emission-free. The growth of renewable energy production is essential to limiting global warming and securing energy supplies for the future. The amount of emissions saved by a wind power project is calculated using the baseline method: how much CO<sub>2</sub> would be released by generating the same amount of energy using standard energy production methods for the region?





#### SDG 1 · No Poverty

Support for local producers to increase their productivity and marketing.

### SDG 4 · Quality Education

Training and further education of teachers, construction of a new school including infrastructure, improvement of the quality of community education by promoting teachers and head teachers.

#### SDG 6 · Clean Water and Sanitation

Drilling and rehabilitation of wells, construction of pipelines, awareness campaigns on water use.

#### SDG 10 · Reduced Inequalities

Development of basic infrastructure in rural households with a focus on sanitation, food and water supply.

### SDG 13 · Climate Action

The project saves 650,000 tonnes of CO<sub>2</sub> per year.





Project standard Verified Carbon Standard (VCS)

Technology Wind energy

Region Northeast, Brazil

Annual volume 650,000 t CO<sub>2</sub>e



Earthood Services Private Limited Earthood Services Private Limited

Further information

www.climatepartner.com/1138







#### **Annotations**

#### International mechanisms for climate action

# Clean Development Mechanism and Joint Implementation (CDM/JI)

The principle of compensating Greenhouse Gas (GHG) emissions is one of the flexible mechanisms of the Kyoto Protocol: the Clean Development Mechanism (CDM) and Joint Implementation (JI). Both mechanisms are essential tools for global climate protection. They provide flexibility to industrial countries to achieve their emission reduction targets. While carbon offset projects in developing and transition countries are implemented through the CDM. JI projects are situated in industrial countries committed to the Kyoto Protocol. A prerequisite for the implementation of JI projects is that the  $\mathsf{CO}_2$  savings of these projects are calculated from the respective national greenhouse gas balance in order to avoid double counting. In developing and transition countries. the CDM acts as a driver for the transfer of clean technologies and sustainable economic development.

#### **VER - Verified Emission Reduction**

Emission reductions from voluntary carbon offset projects work according to the same concept as the CDM and JI. Each project is verified by independent service providers who regularly review the emission reductions. A project generates emission reduction certificates, known as Verified Emission Reduction (VER), in the amount of these savings. Companies that are not subject to mandatory emissions trading can use these certificates to offset their emissions. The voluntary market also allows for projects with lower volumes of CO<sub>2</sub> savings to gain access to financing through the sale of certificates. In addition to CO<sub>2</sub> reductions, most projects make additional contributions to local sustainable development.

### Criteria for carbon offset projects

Carbon offset projects must fulfill internationally recognized criteria and standards and must be certified accordingly. The most important criteria are the following:

### Additionality

It must be ensured that the implementation of the project would not have been possible without the additional funding through emissions trading. The project must therefore rely on revenue from the sale of certificates to cover its financing demand.

### Exclusion of double counting

It must be ensured that the avoided carbon emissions are only credited once (to the certificate owner's emissions). Specifically, this means that emission certificates can only be sold once and must subsequently be retired in the corresponding registry.

### Permanence

The emission reductions must be secured in the future, for example carbon sequestration in forests must be guaranteed long-term.

Afforested land that is re-transformed into a pasture through slash-and-burn practices after just a few years cannot generate emission certificates as a carbon offset project.

# Regular verification by independent third parties

Carbon offset projects must be verified periodically by independent third parties (e.g. TÜV, SGS, DNV) to ensure that all the above criteria are met. Through the verification, the effectively avoided carbon emissions are determined retrospectively before the emission certificates can be traded.



### Standards for the certification of carbon offset projects



#### VCS - Verified Carbon Standard

More than half of the global voluntary emission reductions are validated and verified according to the Verified Carbon Standard (VCS). The standard contains precise regulations for the determination of  $\mathrm{CO}_2$  reductions for different project types like afforestation, wind power or cookstoves. Control through independent third parties, transparency and a conservative approach for the calculations are binding requirements. Credits generated by these projects are called Verified Carbon Units (VCU).

Further information about the VCS: verra.org/project/vcs-program



# CCBS – Climate, Community and Biodiversity Standard

The Climate, Community and Biodiversity Alliance (CCBA) was founded in 2003 by a cooperation of NGOs und research institutions. Their purpose is to support land use and forestry projects that fulfil other social and ecological criteria in addition to  $\mathrm{CO}_2$  reduction. For certification, a project must meet a total of fourteen criteria, whereby the standard can only be awarded to projects in addition to other standards, such as the VCS. The CCB "Gold Level" status is given to projects that achieve exceptionally positive effects in adapting to climate change, promoting local communities and preserving biodiversity.

The CCB Standards are additional standards designed to support and promote land management activities, which sustainably combat global climate change, improve the well-being and poverty of local communities and conserve biodiversity. The CCB standards alone do not result in the delivery of greenhouse gas credits.

Further information about the CCB Standard: verra.org/project/ccb-program



#### **Social Carbon Standard**

Another additional standard is the Social Carbon Standard, which analyses the social, ecological and economic impacts of a carbon offset project in detail to ensure sustainable development with the participation of the local population. The standard determines the concrete progress of a project by means of transparent indices and it documents their progress over time.

Further information about Social Carbon Standard: www.socialcarbon.org

### Gold Standard

#### Gold Standard (GS)

The Gold Standard for carbon offset projects was developed with the participation of the WWF and 40 other NGOs. The standard sets particularly strict requirements regarding additionality, sustainable development and involvement of the local population and has so far only been applicable to renewable energy, energy efficiency and waste management projects. The methodology was extended in 2013 with the adoption of the CarbonFix Standard, so land use and forestry projects may now also be certified according to the Gold Standard.

Further information on the Gold Standard: www.goldstandard.org

# FAIRTRADE CARBON CREDITS™

#### **Fairtrade Carbon Standard**

Only projects with renewable energies or energy efficiency already certified according to the Gold Standard can be certified with the Fairtrade Carbon Standard. They generate the so-called Fairtrade Carbon Credits.

The Fairtrade Carbon Standard supports small farmers and rural communities in the global South. The communities also receive a Fairtrade bonus enabling them to adapt to climate change.

Fairtrade Carbon Credits are only available for certain companies and products: only Fairtrade-certified products are allowed to become climate neutral, and companies have to meet certain sustainability requirements.



#### Plan Vivo Standard

The Plan Vivo Standard supports rural communities and small farmers in the sustainable usage of their resources, their livelihoods and the preservation of local ecosystems. The standard has its roots in a Mexican research project conducted in 1994 by ECCM (Edinburgh Centre of Carbon Management) and the British Department for International Development. Since 2013, clear guidelines have been included to involve the local population at an early stage and to share the proceeds from emissions trading with them. Income from the sale of certificates is distributed directly to the participating communities with the aim of reducing rural poverty and improving livelihoods.

Further information about the Plan Plan Vivo Standard: www.planvivo.org





#### The Sustainable Development Goals

The United Nations have set 17 goals for a sustainable development. Both industrial and developing countries are supposed to create better living conditions for all humans by the year 2030. This means reasonable economic growth, but also social justice and environmental conservation. In order to achieve the goals politics, the private sector as well as civil society need to take action. The Sustainable Development Goals are:



### Goal 1 No Poverty

End poverty in all its forms everywhere: By 2030 nobody shall have to live on less than 1.25 USD per day.



### Goal 2 Zero Hunger

End hunger, achieve food security and improved nutrition and promote sustainable agriculture.



### Goal 3

Good Health and Well-Being

Ensure healthy lives and promote well-being for all at all ages.



# Goal 4 Quality Education

Ensure inclusive and equitable

quality education and promote lifelong learning opportunities for all.



# Goal 5 Gender Equality

Achieve gender equality and empower all women and girls.



#### Goal 6

Clean Water and Sanitation

VEnsure availability and sustainable management of water and sanitation for all.



#### Goal 7

Affordable and Clean Energy

Ensure access to affordable,

reliable, sustainable and modern energy for all.



# Goal 8 Decent Work and Economic Growth

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.



### Goal 9 Industry, Innovation and Infrastructure

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.



#### Goal 10

**Reduced Inequalities** 

Reduce inequality within and among countries.



### Goal 11 Sustainable Cities and Communities

Make cities and human settlements inclusive, safe, resilient and sustainable.



### Goal 12 Sustainable Consumption and

Production

Ensure sustainable consumption and production patterns.



#### Goal 13

**Climate Action** 

Take urgent action to combat

climate change and its impacts.



# Goal 14

Life below Water

Conserve and sustainably use

the oceans, seas and marine resources for sustainable development.



#### Goal 15 Life on Land

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.



### Goal 16 Peace, Justice and Strong Institutions

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build accountable and inclusive institutions at all levels.



# Goal 17

Partnerships for the Goals

Strengthen the means of implementation and revitalize the global partnership for sustainable development.



# Your partner for climate action

Barcelona | Berlin | Boston | Essen | London | Milan | Munich | Paris | Stockholm | The Hague | Vienna | Zurich



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