

# Annual Report 2020

Focus:

CO<sub>2</sub>-offsetting under the Paris Agreement  
Forests as a way to mitigate climate change?





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2.9 MW solar installation in Tulear,  
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# Editorial

Dear Readers,

at atmosfair we are constantly asked why we don't do forest projects. The answer is simple: our largest projects in Rwanda, Nepal and India are already protecting local forests from deforestation by selling small biogas systems and efficient cookstoves at low prices with your support. Each system, whether cookstove or biogas system, has proven to save firewood that would previously have been taken from forests that will no longer be able to regenerate due to the rapid rate of deforestation.

But the issue is more complicated than that: planting trees can help the climate, but whether it actually does depends on a number of factors that are hard to control, especially over the several decades needed for the climate to benefit. Forest conservation and afforestation still have an important role to play in climate change mitigation, but are not suitable for carbon offsetting. The more effective solution would be to integrate individual forest projects into long-term, government-level North-South partnerships in order to provide a solid framework for permanence and protection from unwanted side effects. We are pleased that we were able to interview authors from the German Advisory Council on Global Change (WBGU), which has dedicated its current flagship report to the issue (from page 14).

The coronavirus has also left its mark on atmosfair, but we have weathered the pandemic well so far. Although revenues from offsetting air travel have plummeted by 90%, overall revenues in 2020 were down by only a quarter compared to 2019, totalling around EUR 15 million. We were able to do this because our donors see our projects for



what they are, even without offsetting and air travel: the transfer of energy technology from the Global North to the Global South, i.e. which at the same time combats the root causes of migration by creating new jobs. This ranges from rural electrification and the protection of human health to freeing up time for families by providing lighting and clean household energy.

Everything on the ground moved slower than planned in 2020: construction work progressed more slowly due to a lack of materials and personnel, and building applications and permits passed through the administrative process at a snail's pace. Some partners in the manufacturing sector used our emergency loans and special assistance to avoid having to lay off employees. Which is why we are all the more pleased that we now not only have our own factory building in Kano, Nigeria, but also a 100% atmosfair subsidiary, atmosfair Nigeria Limited, which has now started production of the first efficient cookstoves there.

Time and again, we receive correspondence from people who want to get involved in the fight against climate change and lend a hand. Thank you for this support. Especially if you have North-South or technology experience, we look forward to hearing from you!

Yours sincerely,

Sincerely

Dr. Dietrich Brockhagen,  
CEO atmosfair gGmbH





## Efficient cookstoves

atmosfair subsidizes energy efficient stoves in Africa and Asia. The small stoves are very popular as users immediately notice how much wood and money they save.



## Solar, wind and water

Solar, wind, and water are the three pillars of regenerative energy sources. atmosfair supports partners and technologies which further the development of local economies and the environment.



## Biogas & Biomasse

atmosfair partners build small biogas plants which transform cow and pig manure into gas used for cooking and valuable fertilizer. atmosfair also supports electricity production from crop residues and the composting of organic waste.



## Environmental education

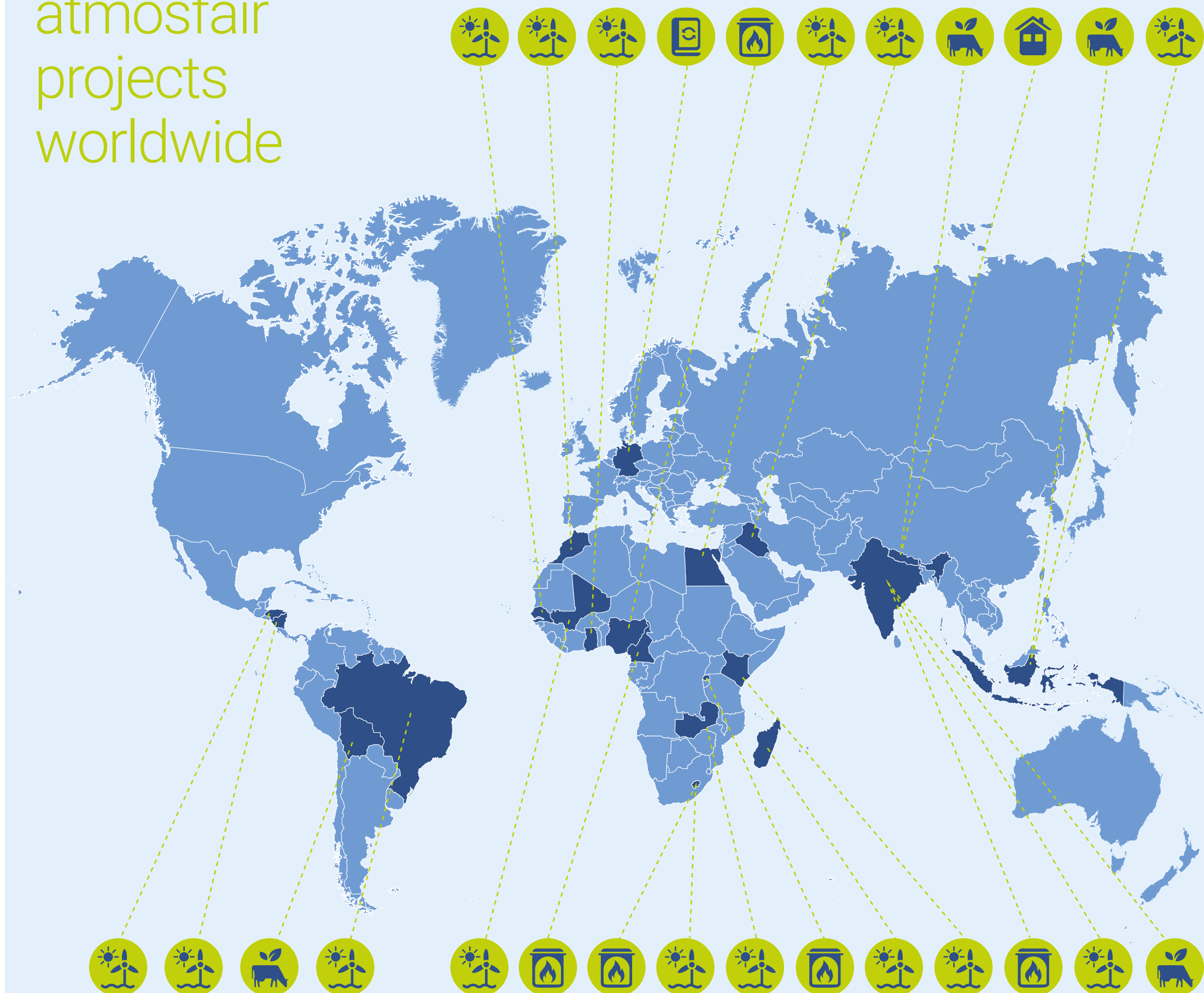
Climate protection starts at your doorstep. This is why atmosfair promotes educational projects in German schools as an investment for the future. We do not claim any resulting carbon reductions.



## Renewable Energies Building

After the violent earthquake in Nepal in 2015, atmosfair supported the construction of energy selfsufficient lodges. This helps shift tourism, an important economic sector in the country, towards an environmentally friendly foundation.

# atmosfair projects worldwide





# Post 2020: voluntary offsetting under the Paris Agreement

On 1 January 2021, the Paris Agreement entered into force and replaced the Kyoto Protocol, which had previously provided the multilateral framework for climate action. This also changes the general conditions for carbon offsetting.

Paris enters into force – what does this mean?

Put simply, the Kyoto Protocol divided the world into countries with binding emission reduction targets

and countries without. This created the opportunity to carry out climate projects in countries without binding targets, and to count the emission reductions towards meeting statutory or voluntary emission reduction targets. Private individuals and companies could buy credits for the emission reductions they achieved in climate projects, which they then used to offset emissions produced in their own value chain or, for example, by unavoidable air travel.

But under the Paris Agreement, all countries have now committed to advancing climate change mitigation in their countries. To this end, each country proposes measures known as Nationally Determined Contributions (NDCs). The countries are allowed to make different commitments depending on their strengths. However, every 5 years at the latest, countries are required to update their NDCs to ensure that the countries' climate measures are increasingly ambitious. This is necessary to achieve the goal of limiting global warming to no more than 1.5° Celsius.

Under the Paris Agreement, emission reductions from a climate project can no longer be transferred between two countries as easily nor can they be used for offsetting. The country where the emissions are saved has an interest in reporting this

reduction as a contribution to achieving its own climate targets. The country would then have to implement fewer climate measures itself because it would reach its targets with the help of the externally financed climate project. If this happens, the person who buys the emission credits from the pro-

ject could no longer claim to have offset their own emissions with the credits, otherwise the emission reductions would be counted twice and the amount of CO<sub>2</sub> that appears to have been offset would end up in the atmosphere anyway (see Fig. 1).

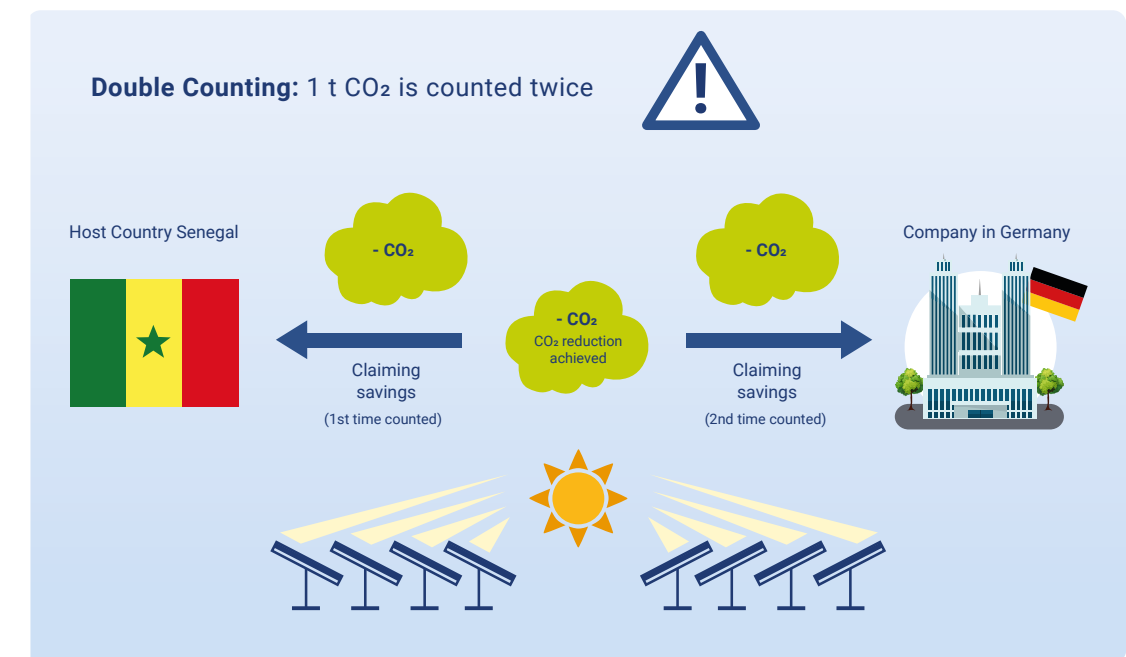


Fig. 1: Double counting of emission reductions under the Paris Agreement

Theoretically, there would be no double counting if emissions were reduced through measures not included in the NDC. But if these emission savings were allowed to be offset, there would be a risk that countries would intentionally not include certain emission reduction measures in their NDCs in order to leave them to international investors with an interest in carbon credits. This would contradict the idea that targets and measures under the Paris Agreement should gradually become more ambitious.

Why do the international Paris rules have such a big impact on voluntary offsetting?

The Paris Agreement establishes rules for legally binding climate targets, not voluntary ones. Still, the voluntary carbon offset market is not totally separate from the Paris Agreement. A project country is required to automatically record all CO<sub>2</sub> reductions in its emissions inventory, regardless of whether they are the result of mandatory or voluntary measures. If, for example, a solar installation in a climate project in India feeds electricity into the grid, India counts the amount supplied as renewable energy and reports the emissions of coal-fired electricity saved as a con-

tribution to the targets set in the Indian NDC. This has been applied to all countries worldwide since 2021 under the Paris Agreement. Voluntary offsetting thus results in double counting under the Paris Agreement just as much as on the market with binding targets.

## Challenges for ensuring the integrity of offsetting

The international community is currently still trying to draft rules to mitigate the aforementioned risks of double counting. One proposal is that if a country agrees to use emission reductions abroad (e.g. for offsetting), it must report these emission reductions when reporting on its NDC and not count them towards its own outcomes (making what are known as "corresponding adjustments", see Fig. 2). Negotiations on implementation of the relevant Article 6 of the Paris Agreement will not be concluded until the end of 2021 at the earliest. Only then will the Parties meet at the next climate conference in Glasgow. However, it is not certain whether a final agreement on all regulations can be reached at this conference. Even if this does happen, it will take time for all countries to establish the technical prerequisites for



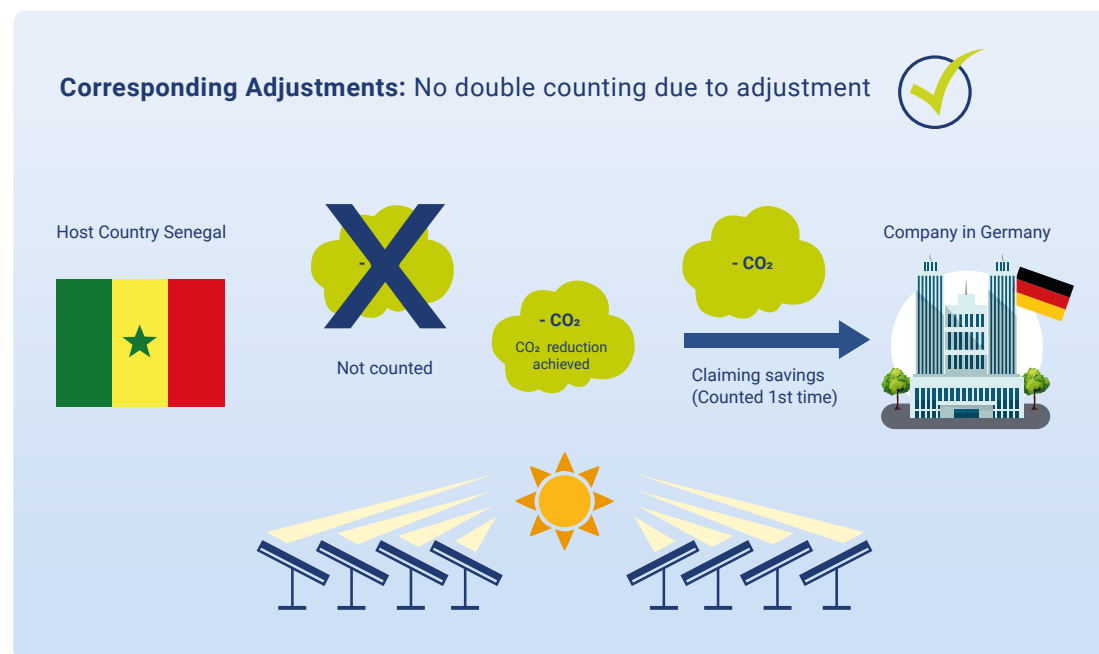


Fig 2: Avoiding double counting through corr. adj.

the implementation of corresponding adjustments. This will probably not be the case before 2023. Asmau Jibril, climate expert from Nigeria, talks about these and other challenges for countries hosting projects under the Paris Agreement in an interview with atmosfair in Box 1.

What does atmosfair do to prevent emission reductions from being counted twice?

Currently, atmosfair can still offer certificates for emission reductions achieved before the end of 2020. They can be used by companies for offsetting because they still fall under the regulations of the Kyoto Protocol, which prevented double counting. But these certificates will run out.

Is it then still possible to ensure the integrity of offsetting and, if so, how? As long as there is no multilateral agreement to prevent double counting, project developers and climate standards organisations must become active in the voluntary market. They must coordinate with the project host countries on how to jointly prevent double counting. atmosfair started this process early on and made good progress in 2020. atmosfair benefits from coordination with host countries because its own projects are registered under the United Nations Clean Development Mechanism (CDM). The countries have already approved these projects once upon registration, recognising their contribution to sustainable development in the country.

If the host country gives its assurance that it will not count the emission reductions towards achie-

ving its climate targets, the certificates can also be used for offsetting in the future.

Until this assurance is given by the host countries, offsetting is conditional. In the absence of international rules to avoid double counting, the purchase of certificates from CDM projects offers the greatest degree of certainty: unlike projects that are only registered under standards in the voluntary market, such as Verra, CDM projects, and also the registry that lists the projects and the emission reductions achieved, are under the supervision of the Parties. They are responsible for ensuring that the general conditions they set for the negotiations at the end of the year do not allow for double counting. Monitoring by the Parties also makes it more likely that countries will actually comply with agreements to prevent double counting.

However, it is also important for certificates from CDM projects to provide evidence of dialogue with the project host country on corresponding adjustments and that the host country does not reject these adjustments. atmosfair can already provide this evidence for most of the countries that host its projects.

Together with Gold Standard, atmosfair is currently working on a framework to transition projects from the Kyoto Protocol to the rules of the Paris Agreement, which will, among other things, define criteria for this transition and provide guidance on how to implement them. For more on what the transition means for Gold Standard as one of the leading standards on the voluntary market, see Hugh Salway, Head of Environmental Markets at Gold Standard, in box 2.

## Alternative “contribution claim”: supporting transformative climate projects without offsetting

The leading standards in the voluntary market, like the Gold Standard, are also in the process of adapting their rules to prevent double counting. It is likely that in the future there will be different products to measure a contribution to climate change mitigation: certificates for which there is an agreement with the host country to prevent double counting and which may be used for offsetting, and what are known as “contribution claims”, which may not be used for offsetting.

The Contribution Claim Model is a way for companies, organisations and individuals to make urgently needed contributions to climate change mitigation and sustainable development without the risk of emission reductions being counted twice. In this model, companies no longer report on climate neutrality or other descriptions that focus on offsetting emissions, but on their contribution to specific climate projects. The host country can use the emission reductions from the projects to achieve its climate targets. One advantage of this scheme is that projects can also be supported that involve relatively high costs to achieve the emission savings and are therefore often not of interest to offset customers, for example, sustainable mobility projects. However, it is precisely these

projects that often have a valuable transformative effect because they advance technologies that we need to achieve the 1.5-degree target.

The contribution to climate change mitigation can continue to be based on the company's emissions. This would set a voluntary price for unavoidable CO<sub>2</sub> emissions and use this amount to support selected climate projects. NewClimate Institute was one of the first companies to embark on this path together with atmosfair. The company has described how this system works transparently on its website (<https://newclimate.org/climate-responsibility>). Carsten Warnecke explains what motivated NewClimate Institute to pursue the Climate Responsibility Approach in an interview with atmosfair in Box 3. Recently, organisations such as the Boston Consulting Group (BCG) and the World Wide Fund for Nature (WWF) also adopted this guiding principle. Leading standards such as the Gold Standard are currently developing products designed to allow the amounts to be independently assessed and attractively presented.

## The transition from Kyoto to Paris from 3 perspectives: Host country, Standard, Company



Challenges for host countries of climate protection projects - 3 questions to Asmau Jibril

Asmau Jibril, climate expert from Nigeria

### I. Which challenges does the transition from the Kyoto Protocol to the Paris Agreement have for Nigeria?

Nigeria as a developing country did not have any commitments under the Kyoto Protocol. This is different now under the Paris agreement. Nigeria has ambitious emission reduction targets, and is obliged to take stock of all emissions and emission reductions which occur in the country. It is no longer free to export emission reductions without accounting. This entails the challenge for Nigeria to decide which emission reductions to keep and use for the achievement of its mitigation targets and which to export.

Another challenge is the development of the necessary accounting structure, in particular a national emission inventory. We are looking forward to the finalization of the rulebook for Article 6, which will hopefully provide guidance on Article 6 mechanisms. Nigeria has to build up new capacity to meet these challenges and it will be good to have support to achieve Paris readiness.

### II. How does Nigeria want to proceed with the registered CDM projects and projects registered under standards from the voluntary carbon market?



Regarding the CDM, the African Group of Negotiators including Nigeria have a common position, but all depends on the outcome of negotiations on the Paris rulebook. It would be a positive signal if many of the activities initiated under the CDM could continue under Article 6. Regarding the Voluntary Carbon Market (VCM), contrary to CDM projects, projects registered under a standard in the voluntary carbon market do not have to request host country authorization. There has thus not been any engagement with the VCM so far. It is therefore at this point not clear how to proceed with VCM projects.



### The Need for Voluntary Carbon Market Standards to take responsibility - 3 questions to Gold Standard

Hugh Salway, Head of Environmental Markets, The Gold Standard Foundation

#### I. What are the challenges for Gold Standard as the leading standard in the voluntary market regarding the transition from Kyoto to Paris?

2021 is effectively the first year of the Paris Agreement's implementation, with commitments under the Kyoto Protocol coming to an end in 2020. However, we do not yet have the fundamental building blocks of market-based cooperation, with Article 6 rules still not agreed and adopted within the UNFCCC. As a standard intent on aligning our rules and programmes with the Paris Agreement, and ensuring the continued integrity of our rules, projects and credits, this certainly creates some challenges. In June, we set out how we plan to move forward, making updates now where we can to reflect the new reality of the Paris era, while waiting to make certain other updates after this November's COP26 negotiations.

We are also working with atmosfair on a Voluntary Carbon Markets Transition Framework, providing guidance for market actors on what the transition means for them. While we're proud to be moving early to align with the Paris era, this is a change that the market as a whole will need to make.

#### II. How should existing Gold Standard projects continue?

Existing projects will need to meet certain new requirements if they wish to continue issuing credits in the post-2020 period. This is a reality

#### III. What are Nigeria's expectations from the voluntary carbon market?

Markets should contribute to Nigeria's goals and objectives under the Paris agreement, not just in terms of emissions reductions but also with regard to other development priorities in the country.

across the market, rather than anything specific to Gold Standard. Ultimately, the changes we will make represent an evolution rather than a transformation from our existing requirements. We intend to make these in as thoughtful a way as we can so that Gold Standard projects can continue to operate and drive positive impact in the Paris era.

#### III. What does Gold Standard expect from the voluntary market in the next 3 years?

This is an exciting time for the voluntary market, with renewed interest, new actors and innovation. We already see major increases in demand. Over the next three years and beyond, we need to ensure that this momentum is harnessed and directed in the right way, so new demand through the voluntary market is channelled towards high-integrity projects, those that reduce emissions while achieving the Sustainable Development Goals, often while supporting vulnerable communities.



### New market environment for offset customers – 3 questions for NewClimate Institute

Carsten Warnecke, NewClimate Institute

#### I. What challenges does NewClimate Institute face as a company as it transitions from Kyoto to Paris?

On the one hand, as a company, we are responsible for our own emissions that have not yet been avoided; on the other hand, as an institute we are intensively involved in the climate negotiation processes. We were already pleased to note the high level of ambition when we first analysed the text adopted in Paris: all countries have reduction targets that have to be increased on a regular basis. The mechanisms for international cooperation to tackle climate change enshrined in Article 6 are intended to enable countries to set even more ambitious targets. However, international cooperation of the kind we know from the Kyoto era is based on the idea that whoever implements a climate project in the Global South is allowed to take credit for the emission reductions. It was already clear to us in Paris that it will be very difficult to reconcile this form of cooperation with stricter reduction targets of the host countries because they now also have an interest in counting the emission reductions towards their own targets. Since then, we have been thinking about our own responsible approach that is as compatible as possible with the ambition level of the Paris Agreement and viable over the long term. Since our Climate Responsibility Approach was published, we have received a lot of encouragement and interest from other companies.

#### II. What is the future of offset projects?

Just as the Paris Agreement has completely turned the general conditions for international climate action upside down, the general conditions for projects have also changed fundamentally. Quality and ambition are the primary focus, while quantity is only secondary. "Business as usual" with the same projects and ideas is not an option. Instead, innovative approaches are needed to promote projects that are clearly outside the capabilities of the host country but have high transformative potential. Projects can support host countries in raising the ambition level of their climate targets in the future by giving the host countries access to the technolo-

gies needed to achieve these targets in the long term to the host countries through the projects. In this context, we have coined the term "high hanging fruits" to make the shift away from the previous focus of many climate projects clear: implement measures at the lowest cost. Projects with this as their focus pick the low hanging fruit that can also be achieved by host countries on their own.

#### III. What does NewClimate expect from the voluntary market?

It is important for the voluntary market to embrace the changed overall conditions and not remain behind in the Kyoto world. To this end, terminology must also be reconsidered. The term offsetting is often no longer an accurate description of what projects can achieve because it creates the impression that negative effects on the climate, for example from fossil fuel combustion, can be completely cancelled out. That said, voluntary activities that go beyond borders and transparent communication about individual contributions are more important than ever before. The voluntary market should therefore continue to drive ambition and commitments to climate change and avoid becoming the agent of corporate goals that are not backed up by concrete measures or misleading product advertising. It is detrimental when companies set short-term climate neutrality targets and use large quantities of cheap certificates to achieve them. The activities of these companies should not supersede the more ambitious commitment to sustainable transformation and decarbonisation of other stakeholders with less palatable goals. We should all learn to recognise this contribution and honour transformative achievements.





Forests help regulate the global climate

© Global magazine

# Protecting forests and planting trees: cure or curse in the fight against climate change?

## Planting trees to offset carbon emissions – what’s the story and how does it work?

Thriving forests – a symbol of a healthy natural environment. They help regulate the global climate, make valuable contributions to biodiversity and human health and well-being.

The newspapers are full of reports about the climate services provided by forests. It is therefore not surprising that many private individuals or companies approach atmosfair and want measures to protect forests. atmosfair has investigated possible approaches for you and talked to specialists from the German Advisory Council on Global Change (WBGU) (see interview on page 14).

## Protecting forests and planting trees are crucial in the fight against climate change

When it comes to tackling climate change and helping to achieve the targets set under the Paris Agreement, the first thing that often comes to mind is reforestation. For a good reason: forests are gigantic carbon sinks that are vital to keeping global warming to 1.5 degrees Celsius by 2050. A beech forest, for example, stores about 12 tonnes of CO<sub>2</sub> annually on an area one hectare in size (about 1.5 football pitches). This is equivalent to the climate impact of four transatlantic flights between Berlin and New York. Tropical forests can sequester much more carbon.

More and more companies are setting ‘net-zero’ targets to show the public that they are taking responsibility. An internationally recognised standard that makes the ambition of their target verifiable and credible is the Science Based Targets Initiative (SBTi). “Net zero” in this case means that CO<sub>2</sub> emissions that cannot technically be reduced to zero by 2050 are to be “neutralised” by measures that permanently remove the same amount of CO<sub>2</sub> from the atmosphere. These measures include carbon capture and subsequent carbon storage in deep geological layers.

For companies, the forest as a carbon store is interesting because of its public relations appeal as well as its ability to neutralise carbon dioxide.

## Why does atmosfair not have any forest projects?

Protecting forests and planting trees are useful and essential if we want to achieve the climate targets set in the Paris Agreement. In our view, however, they are not suitable for carbon offsetting and neutralisation because the existing standards and monitoring mechanisms are not sufficient to guarantee the permanence and fairness of forest projects.

This applies, for example, to respect for human rights: indigenous peoples in developing countries being forced off their ancestral lands for forest measures and denied access to the



Forests sequester CO<sub>2</sub> in their growth phase

© Wikimedia

‘climate’ forests that are their livelihoods is not an isolated case. Websites like REDD-Monitor collect thousands of reports of these crimes that take place in forest projects around the world. The SBTi also notes that neutralisation by forests might not be permanent and that there are conflicts of use with indigenous peoples. In some cases, these projects would therefore need a legal framework.

Another important reason is that it is impossible to be sure how long a forest will be in existence. Since CO<sub>2</sub> is only sequestered when trees grow, a forest has to grow for a long time in order to fulfil its role as a carbon sink. However, forests can disappear for various reasons, e.g. fire or pest infestation. On top of this, in the rural areas of the Global South, people collect firewood for cooking when they lack access to renewable energy and efficient cooking facilities.

To have a significant climate impact, a forest needs to survive for at least 50-100 years. There is not a single operator of forest conservation projects in the voluntary market that can guarantee the survival of the forest over this period of time. After all, the providers are also just companies that, like other companies, are rightly subject to the political will of governments.

In our view, voluntary carbon offsetting or carbon neutralisation through a forest conservation project could only take place over multiple decades and embedded in government-level agreements to ensure permanence and the protection of human rights (see also page 18-21). These projects, however, would be complex and expensive as a result.

Moreover, offsetting or neutralising emissions by planting trees has limitations due to the amount of land available: The German Advisory Council on Global Change (WBGU) has calculated that storing 100 gigatonnes of CO<sub>2</sub> would require an area roughly 13 million km<sup>2</sup> in size – more than the entire area of Europe. By comparison: annual

global CO<sub>2</sub> emissions amount to around 42 gigatonnes. Such high levels of land consumption would further intensify the already existing conflicts of use and endanger food security.

## The first priority is to avoid and reduce emissions. Neutralisation and offsetting only as a last resort

Effective forest conservation means lowering the pressure on forests, for example through measures that reduce the population’s demand for wood. This is the strategy adopted by atmosfair: voluntary offsetting measures, such as efficient cookstoves or switching to renewable energy, locally are an effective means of preventing deforestation, lowering CO<sub>2</sub> and at the same



Effective forest conservation means lowering the pressure on forests and reducing the population’s demand for wood.

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time advancing technology development in the countries of the Global South.

For SBTi, neutralisation is only intended for “unavoidable residual emissions” and cannot be offset against the actual reduction targets. Because one thing is certain: only by avoiding and drastically reducing global CO<sub>2</sub> emissions can we achieve the target of limiting global warming to 1.5 degrees by 2050.



# WBGU interview: “We need more multi- ple benefits, not climate forests”

A current flagship report of the German Advisory Council on Global Change recommends, among other things, that forest conservation and afforestation not be balanced against CO<sub>2</sub> reductions. It also contains detailed analyses and assessments of forest options for climate change mitigation. What does this mean for carbon offsetting with forests? Kerstin Burg-haus and Dietrich Brockhagen from atmosfair spoke with the authors Karen Pittel and Astrid Schulz.

**atmosfair:** Hello Dr Pittel and Dr Schulz. Together with the WBGU, you recently presented a report on land use. We are interested in the question from a climate perspective: how much can afforestation contribute to the 1.5 degree target set in the Paris Agreement in the best-case scenario?

**Karen Pittel:** The question is not easy to answer. It must always be considered which areas can be used without endangering food security or biodiversity. In our report, we mainly advocate ecosystem restoration and reforestation and not the conversion of, for example, grassland ecosystems into forest, which can even lead to CO<sub>2</sub> emissions. We also do not want ecosystem restoration to devolve into plantation management. This is a problem that we are currently seeing at the Bonn Challenge, where a pledge has been made to restore 350 million ha of land by 2030. But many of these commitments are actually based on the creation of plantation forests, which contradicts the goal of biodiversity conservation.

**Astrid Schulz:** Furthermore, most of the figures on how much CO<sub>2</sub> emissions can be reduced with nature-based solutions only relate to the next few decades. After that, however, something of a saturation effect sets in. Any kind of restoration and afforestation will in fact come to an end at some point. This is often not mentioned by the people pushing these measures.

## Rethinking Land in the Anthropocene: from Separation to Integration

*Only if there is a fundamental change in the way we manage land we can reach the climate targets, avert the dramatic loss of biodiversity and make the global food system sustainable. The WBGU proposes five multi-benefit strategies illustrating ways of overcoming competition between rival claims to the use of land. Ecosystem restoration, protected-area systems, diversified agriculture, changing dietary habits and timber-based construction. These should be promoted by five governance strategies, especially by creating suitable framework conditions, refocusing EU policy and establishing alliances of like-minded states.*

*Direct Air Carbon Capture and Storage (DACCS): is a technology for capturing and storing carbon emissions from the atmosphere.*

*BioEnergy Carbon Capture and Storage (BECCS): refers to processes whereby the carbon dioxide produced during the combustion of biomass is subsequently captured and stored.*



**Prof. Dr. Karen Pittel,**  
director of the Ifo Center for  
Energy, Climate and Exhaustible  
Resources and professor  
of economics at the University  
of Munich



**Dr. Astrid Schulz,**  
Senior Scientist, Climate and  
Energy, WBGU Berlin

**Karen Pittel:** ... and if we use the potential of reforestation today to sidestep avoidance, we run the risk of developing the necessary avoidance technologies too late in the game. However, it will then no longer be possible to offset future emissions by planting trees.

**Astrid Schulz:** There are wide ranges in the estimates for the potential savings offered by ecosystem restoration. For afforestation, this amounts to between 0.5 and 5 billion tonnes of CO<sub>2</sub> per year – some studies show much greater potential, although it is not entirely clear how sustainable these are – plus almost 1.5-2 billion tonnes for rewetting peatlands.

**That's not much compared to the more than 40 billion tonnes of CO<sub>2</sub> emitted by humans every year. But I'll use this potential for an idea anyway: Germany produced around 740 million tonnes of CO<sub>2</sub> emissions in 2020. These were offset by about 600,000 km<sup>2</sup> of newly planted forest. This is roughly equivalent to the area Brazil has lost to forest fires since the early 1990s. Now that would be a great story: Germany is reforesting Brazil and becoming climate neutral!**

**Astrid Schulz:** This would be the worst possible interpretation of nature-based solutions imaginable!

**Karen Pittel:** There is a fundamental problem here, just as with similar approaches, e.g. the Carbon Offsetting and Reduction Scheme for International Aviation. The focus is on offsetting, often through planting trees. It is often said that only non-avoidable emissions should be offset through offsetting. However, at no point is it defined which emissions would be unavoidable. In practice, this means people opt for offsetting when avoidance becomes too expensive. This creates negative incentives for avoidance efforts that will come back to haunt us later. And at some point we will run out of space. We cannot offset global emissions through afforestation and reforestation.

Offsetting by planting trees also entails considerable risks. For example, there is a permanence problem. atmosfair describes this problem on its website, and Brazil is the best example. How long will this forest actually be in existence?

## How long will the forest exist? The permanence problem

**Forest can burn down or disappear due to pest infestation, etc. Then the carbon dioxide is returned to the atmosphere and offsetting is negated. In UN projects, the carbon certificates from forest projects are therefore only valid for 5 years. This approach could solve the permanence problem, but not a single offsetting provider uses it. Many voluntary standards, on the other hand, use “buffer”**

**systems: for example, only 80% of the carbon certificates are distributed, 20% of the certificates have to be set aside for a longer period of time in case, e.g. part of the forest burns down. How much confidence can we have in these kinds of buffer systems?**

**Karen Pittel:** I am not sure what the benefit of these buffer systems actually is. Is a reserve of 20% enough to ensure that a forest is preserved? Or would it be more profitable for a forest owner not to preserve the forest? In this latter case, I would have to put my trust in the local institutions to ensure that what was once intact remains for the long term. A certain degree of scepticism is certainly appropriate here if you look at developments in Brazil, for example. To ensure the sustainability of these projects, the right financial incentives are needed, and a buffer system is often not enough. One possibility would be staggered retroactive payments if a forest has been preserved.

**At the moment, the customer pays once today for a forest that has yet to be planted. It's possible that the forest won't exist in 20 years, but the customer will still be able to claim climate neutrality.**

**Karen Pittel:** That's the problem with paying ahead of time. But paying after the fact is often creates difficulties for local people who need payments right away. Poor farmers cannot afford to wait, and then the forest is cut down after all. Paying before or after – both are difficult.

## At war with “climate forests”

**You talked to local inhabitants, and the WBGU report mentions the land use trilemma. Food plays a role here, for example, when farmers are no longer allowed to grow agroforestry products once a forest has been declared a climate forest for investors. How serious are these conflicts of use?**

**Karen Pittel:** Quite considerable. In developing countries in particular, these conflicts arise in forest conservation projects when it is no longer possible to use the protected areas and local farmers have no access. Then the media are full of examples. That's why I'm at war with the word “climate forest” because it implies that forest is good for the climate. But what about people and other aspects such as biodiversity and food security?

This is why we rely on multi-benefit strategies, meaning that we don't just focus on planting trees in plantations to sequester CO<sub>2</sub>. Afforestation should also conserve biodiversity. In addition, protected areas can be combined with sustainable use, e.g. agroforestry, to provide livelihoods for people. Which is why it is so important that our report is not seen as a purely climate report.

**Which stakeholders would then implement these multi-benefit strategies? Is it enough to leave this to offsetting schemes and forestry companies, or do policymakers have a role to play here, and at what level?**

**Karen Pittel:** The best thing would be to do it globally. Otherwise, there is the problem of leakage, especially in sustainable forestry. This happens when e.g., deforestation is prevented or made expensive in one area, and the forest is then cut down outside this area, where it is both possible and cheaper. To prevent this from happening, a sustainable forestry alliance is needed at government level. Germany alone can make a certain difference, the EU can make an even bigger one. But the greatest benefit will come from even more countries joining together and defining sustainability standards that apply to the wood that is allowed to be used. This should also apply to international cooperation as in the Paris Agreement.

For example, demand and supply countries could join forces, e.g. EU countries on the one hand and African countries or Brazil on the other, and conclude long-term lease agreements. This would compel supplier countries to reforest large areas. At the same time, the long-term lease payments would provide financial compensation. An agreement of this kind should also ensure that local communities and local authorities are involved and that biodiversity goals are not forgotten. In the flagship report, we emphasise that this is about cooperation and not about appropriating land along the lines of “we industrialised countries know best what is good for your country”.

## No offsetting of forest with CO<sub>2</sub> reduction, CO<sub>2</sub> not suitable as a parameter

**The lease approach would be a good way to finance reforestation and forest conservation without carbon certificates. We often hear the argument that offsetting with forest projects makes sense because it relies on financing through international carbon markets. Are there financing alternatives?**

**Karen Pittel:** International carbon markets can help financing. However, we constantly emphasise in the report that we do not want any offsetting between avoidance on the one hand and negative emissions and the conservation of carbon sinks on the other. If avoidance and sink targets were separate, then international financing mechanisms could be used wisely. However, the lease solution we propose has the advantage of a longer timeline and thinking beyond carbon storage. Payments that would otherwise flow through the international carbon markets could also be collected in a fund. This would then go to the countries through leases and be used to implement sustainable solutions there.

**Astrid Schulz:** There is another aspect to funding: if the forest is destroyed by fires or storms, and the CO<sub>2</sub> is released, it is not removed from the atmosphere by stopping the flow of money. Good forest management can be achieved through agreements, but how much CO<sub>2</sub> is actually captured in the forest in the long term is beyond our control. CO<sub>2</sub> is therefore unsuitable as a parameter.

**If you could spend EUR 1 billion, would you spend it on planting trees or renewable energy?**

**Karen Pittel:** I would first put it into avoidance and the development of new technologies so that I could prevent even the last tonne of CO<sub>2</sub>. In addition, I would be happy to invest in reforestation, but this cannot be allowed to stop me from developing decarbonisation technologies. It is important to communicate this clearly to companies and to determine how much they first need to avoid and what residual emissions they are allowed to offset. We currently lack this long-term objective and separate accounting.

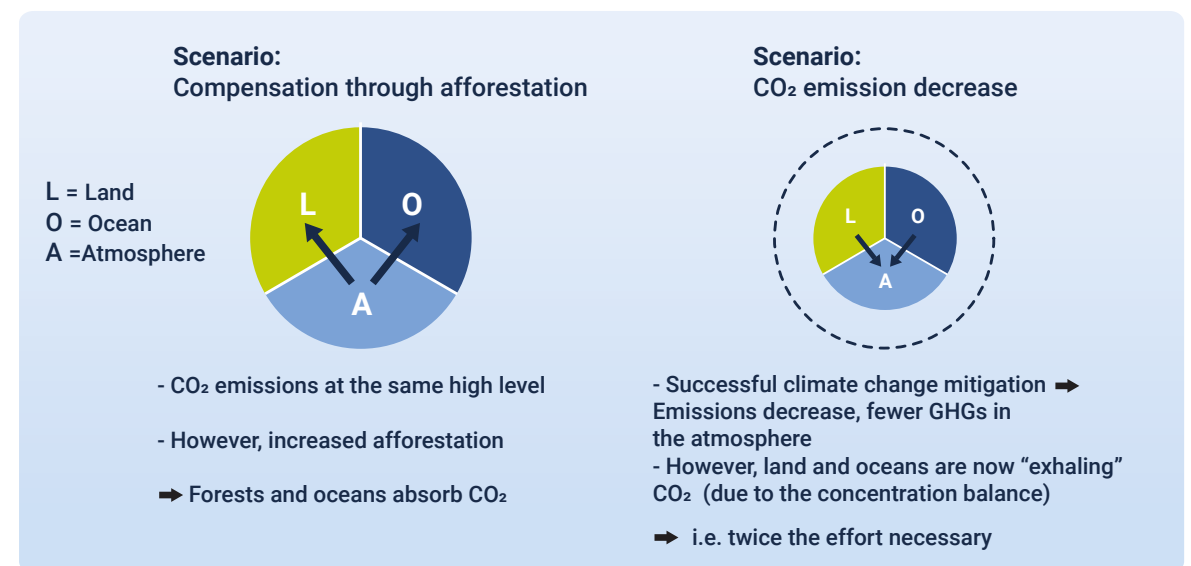
## Pay two tonnes of CO<sub>2</sub>, take one?

**Is 1 tonne of CO<sub>2</sub> afforestation equivalent to 1 tonne of CO<sub>2</sub> savings? The CO<sub>2</sub> is initially captured in the forest, but at some point the forest exhales again when the CO<sub>2</sub> concentration in the atmosphere finally sinks again. Can it then be said that there is a quantitative difference between not emitting a tonne of CO<sub>2</sub> and planting a forest, thereby sequestering a tonne of CO<sub>2</sub>?**

**Astrid Schulz:** There is a slow carbon cycle and a fast carbon cycle: the slow one is where CO<sub>2</sub> was trapped over millions of years by the vegetation of the time and stored in the form of coal, oil or natural gas. This fossil carbon is sealed off from the atmosphere as long as we do not touch it.

But there is also a constant exchange of CO<sub>2</sub> between the atmosphere, ocean and biosphere. Measurement data from the Mauna Loa Observatory in Hawaii impressively shows how much CO<sub>2</sub> the biosphere emits and reabsorbs every year. We also talk here about the “breathing” biosphere. The fast carbon cycle is a biological-chemical equilibrium that we have little influence over, e.g. if we plant a tree and wait a long, long time.

In order for the long-term concentration of CO<sub>2</sub> in the atmosphere to fall by one molecule, two molecules have to be removed from the atmosphere. Because when the concentration in the atmosphere decreases, the ocean and also the biosphere release CO<sub>2</sub> again. This is not necessarily a quantitative difference because the ocean and biosphere previously absorbed about half of our emissions. But you have to remember that they also release this carbon again. There is also still a lot of research to be done in this area.



Title: One ton of CO<sub>2</sub> = ½ ton of CO<sub>2</sub>

Source: atmosfair adapted from C D Jones et al 2016 Environ. Res. Lett. 11 095012

## Technical solutions to remove CO<sub>2</sub> from the atmosphere: the candidates DACCS and BECCS

**The Science Based Targets Initiative (SBTi) says that unavoidable residual emissions must be neutralised, i.e. permanently removed from the atmosphere. What do you see as the most promising technologies here, especially in terms of certainty and sustainability?**

**Karen Pittel:** I must confess that I am not entirely happy with SBTi’s assertions. What are unavoidable emissions? Does this include all emissions that are too expensive to avoid? Do the companies themselves determine which emissions these are? I am sceptical that companies can define which emissions are unavoidable and “buy their way out” of avoidance. But as far as the technological possibilities for neutralisation are concerned: all of them have limited potential. I think DACCS, if it works and is competitive, is a good technology. CO<sub>2</sub> is captured from the atmosphere and stored underground without having to divert land away from other uses. However, there are concerns about whether or not storage is certain. At the moment, it is probably not a realistic option for companies either, as most systems are still in the pilot phase and the costs continue to be very high. And we don’t know yet whether DACCS will actually be effective and affordable on a large scale.

BECCS, on the other hand, is based on the use of biomass, and thus competes with other forms of use. Heating up biomass and storing it underground only makes sense if preference is given to biomass waste rather than farmed biomass.

Then there is the natural process of weathering of rocks and stones, which requires a considerable amount of energy. Rock weathering can fertilise soil, but it can also cause problems with the water cycle.

**Astrid Schulz:** We have to bear in mind that CO<sub>2</sub> is a very stable gas that is difficult to get rid of. So we need to stop producing it from fossil sources in the first place. The word neutralisation bothers me because it sounds like you can actually undo the climate impact of emissions. It is important to be aware of the limitations of all these approaches – they are niche solutions. They all have external effects, and none reverses the climate impact of emissions. Moreover, DAC has mainly been used to date to further process carbon, e.g. into synthetic fuels. The CO<sub>2</sub> is not stored there, but ends up back in the atmosphere.

**Thank you for this interview! Do you want to give atmosfair another take-away?**

**Karen Pittel:** I like that atmosfair does not offer forest projects for offsetting and I like the focus on rural areas in developing countries. I also think the educational projects are great because they are important for changing future behaviour.

**Astrid Schulz:** What I like most of all is that atmosfair has a clear method for what can be offset and what can’t, so consumer goods, for example, which already have good alternatives, cannot be offset. Of course, your business model will have to change in the long run. The goal should be to eliminate offsetting and instead that companies and private individuals get involved on a project basis. I think it’s great that you don’t let yourselves be manipulated into greenwashing.





Between 1990 and 2015, Nigeria has lost 60% of its forest

# Climate change from Africa's perspective: Nigeria

With an area of around 934 km<sup>2</sup>, Nigeria is almost three times the size of Germany

Its 202 million inhabitants make up half the population of West Africa

Around 70% of Nigeria's population uses wood for cooking. Between 1990 and 2015, Nigeria has lost 60% of its forest due to, among other things, the high demand for firewood.

Although Nigeria has the largest oil and gas reserves on the continent, over 40% of the people live below the poverty line

Roughly 60% of the inhabitants are under the age of 25

The official unemployment rate is 21.7% – the number of unreported cases is probably much higher

In Nigeria, Africa's most populous country, climate change is not only evident, it threatens the livelihoods of many people.

This is especially true in the north of the country, where the desert continues to spread. One reason for this is that Nigeria's forests have almost disappeared, thus removing the natural barrier to keep desertification from spreading. Atmosfair has been actively working in Nigeria since 2009 to stop this trend. We have installed over 26,000 efficient cookstoves in the country so far and sold them at subsidised prices. We are now building a new factory in Kano in northern Nigeria (see also the article on page 25). We want to enable even more people to significantly reduce the amount of wood they use for cooking by building this factory. At the same time, we

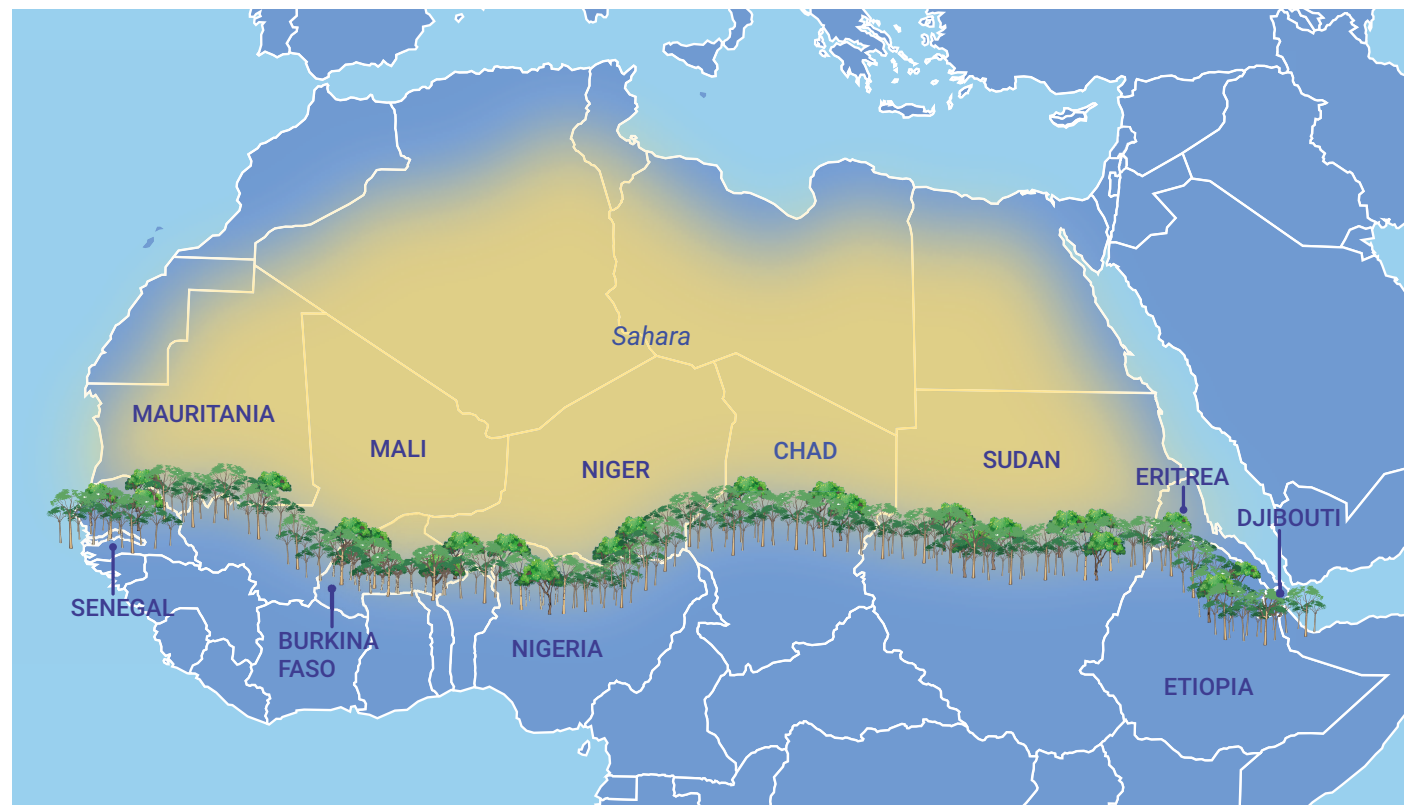
are working to offer alternatives to cooking with wood – for example, by using crop residues as renewable fuel or solar energy.

Pinned between the Niger River and the Atlantic: high land use pressure increases poverty and violent conflict

For many people in Nigeria, climate change is very real: in the south of Nigeria, floods and storm surges occur again and again. In northern Nigeria, the Sahara is continuing to spread and droughts are threatening the crop yields of the people living there. The amount of usable land is shrinking.

Climate change fuels and intensifies violent





The Great Green Wall of trees will be 7,775 km long

conflicts in the country. In January 2021, for example, the [Guardian](#) reported on sometimes deadly clashes between herders from northern Nigeria, who are moving south in search of new pastures, and local farmers.

Nigeria is a rich country with poor people, Nigerians say: as one of the largest oil exporting nations in the world, it generates significant revenues, but very little actually reaches the population. Poverty is worst in rural areas, especially in the north. Here, only very few people have access to electricity. For most people, firewood is the only source of energy.

This has consequences: In Nigeria, the forest has [shrunk by 60%](#) between 1990 and 2015, i.e. at a faster rate than in Brazil.

The Great Green Wall: A protective wall of trees to defy the Sahara

Along the Sahel zone, where the Sahara is advancing and the soil is largely degraded, a strip of trees and renaturalised areas almost 8,000 kilometres long and 15 kilometres wide will be created: The Great Green Wall, an initiative of 20 countries in the region whose aim is to “stop the Sahara” and make the land fertile again.

The Great Green Wall covers an area 156 million hectares in size. The target is to restore [100 mil-](#)

[lion hectares](#) by 2030. [10 million jobs](#) for rural areas will be created in the process.

**The Great Green Wall is much more than a climate initiative. It is a significant symbol of pride and hope – it signifies independence, initiative and pan-African cooperation. However, a large part of the funds needed for the project are still lacking**

According to the UN’s current status report, 18% of the total area has been renaturalised so far. Substantial funds are needed to speed up the process. At a summit in January 2021, donor countries pledged support of USD 14 billion, but this means that two-thirds of the funds needed to reach the 2030 milestone are still lacking.

atmosfair supports the National Agency for the Great Green Wall in Nigeria

The part of the Great Green Wall located in the national territory of Nigeria amounts to 17.4 million hectares. So far, the state agency National Agency for the Great Green Wall (NAGGW) has been able to plant 2,800 hectares of this area.

NAGGW has taken the initiative and appoa-

ched possible supporters, including atmosfair. atmosfair does not finance reforestation projects for voluntary carbon offsets. Providing financial support for NAGGW’s reforestation measures would be new territory for us. Potential CO<sub>2</sub> certificates from this activity will not be used by atmosfair for offsetting. Moreover, we can only participate if we are sure that the forests will remain intact in the long term. For this to happen, the continued existence of the forests would have to be guaranteed at government level, for example through a long-term German-Nigerian agreement, which provides for appropriate instruments for protection and monitoring. Whether an agreement of this kind will be concluded is still unclear.

Still, atmosfair plans to support the activities of NAGGW with complementary measures – for example, by financing photovoltaic systems to operate pumps for the irrigation of the plantations, but also by reducing the firewood demand of local residents.

The pressure on Nigeria’s forests, which serve as a source of firewood, is high. This is why measures that reduce the need for firewood must go hand in hand with reforestation. To this end, we must provide access to affordable, clean energy across the board, especially in the north of the country. In the medium term, atmosfair can contribute to these efforts by setting up solar mini-grids.

However, the first step in the fight against deforestation is the increased production and nationwide distribution of our efficient Save80 cookstoves, which reduce the need for firewood by up to 80%. Bukur Hassan, Director-General of the National Agency for Great Green Wall, emphasises that the cookstoves are crucial for the success of the reforestation measures: “Without a nationwide switch from open fires to economical cookstoves, reforestation has no chance of success”.

atmosfair is building a factory for efficient cookstoves in northern Nigeria

In the north of the country, very close to the Great Green Wall in the city of Kano, we are currently

building a production facility to make our proven Save80 cookstoves made of durable steel locally and in large quantities in the future. atmosfair has even founded a subsidiary in Nigeria (see detailed report on page 25).

To significantly reduce the use of firewood in the north, we would have to sell 10 million cookstoves. One factory alone cannot accomplish this in the short term, but we are making a start: We expect to produce and distribute 50,000 cookstoves over the next two years. From this point on, we will gradually expand production to between 200,000 and 1,000,000 cookstoves per year.

Pellets from crop residues – from Save80 to Save100

Although 80% reduction in firewood from our Save80 cookstoves is already a very big step compared to open or three-stone fires, we want to save the remaining 20% by making pellets for burning from harvest residues. Sugar cane, straw or cotton bushes, for example, are suitable residues for this purpose.

As a first step, atmosfair plans to provide some villages with pelleting machines on a trial basis and offer training in how to use them. The income from the sale of the pellets will be used to maintain and operate the machines. Incorporating the lessons learned from the first machines, we will plan the next steps in the roll-out together with our partners.



# Our standards

## Approach

### Principles

- Offsetting is only ever the second-best solution, avoiding emissions is much more effective
- Climate change mitigation is the priority – not the maximization of revenues
- A key element is building climate awareness – it fosters long-term avoidance of the initial carbon emission
- Optimizing travel with the help of business travel specialists, incl. video conferencing

### Action

- No cooperation with actors that do not comply with atmosfair's standards – e.g. in carbon reporting – despite the possibility of financial gains for atmosfair.
- No offsetting of activities for which better and less carbon-intensive solutions are available – e.g. emissions due to car travel or electricity consumption
- Representation of the real climate impact (see carbon calculation), regardless of the industry

## Carbon mitigation projects

### Principles

- Permanent reduction of carbon emissions
- Additionality
- Contribute to north-to-south technology transfer
- Direct support to local population
- Contribute to protecting the local environmental
- Consideration for local circumstances when choosing technologies
- Coherence with national development efforts

### Action

- All projects must be compliant with two standards: CdM (UN) and Gold Standard (environmental NGOs); up to 10% savings under Gold Standard Microscale
- CdM + Gold Standard + X: X stands for atmosfair's own additional criteria, such as the carbon quota as proof of additionality or the exclusion of unsuitable or high-risk project types (e.g. afforestation projects)
- Calculation and monitoring of carbon emission reductions according to UN standards
- Qualified and UN-certified auditors (e.g. TÜV) who also bear liability
- Documentation of all audit reports on the website of the UN Climate Secretariat
- Projects are planned and developed by atmosfair and implemented alongside experienced partners in developing countries

**Gold Standard**  
Climate Security & Sustainable Development



**United Nations**  
Framework Convention on  
Climate Change

## Carbon emissions calculation

### Principles

- Comprehensive
- Scientifically sound
- Well documented
- Verified

### Action

- Incorporation of all climate effects of air travel (e.g. condensation trails, ozone formation, etc.) based on current scientific findings (IPCC), meaning that the calculated climate impact is significantly higher than CO<sub>2</sub> alone
- Self-developed emissions calculator, verified by the German Federal Environment Agency
- Documentation of all data sources and methods used on the atmosfair website



## Organization & finances

### Principles

- Non-profit
- Independent
- Efficient
- Transparent
- Responsible

### Action

- Low administrative costs: over 90% of donations flow directly into the climate change mitigation projects in the global south, for planning, implementation and operations
- In Germany, donations are tax deductible, under the supervision of German tax authorities
- Legal form gGmbH (non-profit): liability and publication in the commercial register
- Advisory board composed of high-profile patrons and environmental experts, including representatives of the environmental ministry, NGOs and the scientific community



**Bundesministerium  
für Umwelt, Naturschutz  
und nukleare Sicherheit**

atmosfair was created in 2004 as the outcome of a research project led by the German Ministry for the Environment. the project goal was to develop high standards for voluntary offsetting. The atmosfair standards have since then become a benchmark of the growing voluntary offset market. atmosfair has also reached first place in numerous international comparative studies.





A new warehouse in Kigali provides space for stove parts for final assembly

# Nigeria, Rwanda and Berlin: news about progress in establishing local cookstove production

Kigali, September 2020: The sales contract for the building plot in Rwanda's capital has finally been signed and the building permit issued: we are beginning construction on the new cookstove factory with our partners from Safer Rwanda.

We also found a new location for a factory in Nigeria in the north of the country in 2020 and are currently planning the production process and a new distribution structure. In a pilot project, we are testing new, decentralised ways to track CO<sub>2</sub> savings.

In our new test workshop in Berlin, atmosfair is developing and testing the machines for setting up production lines that will enable complete on-site production in these factories.

Two new factories – Two steps towards self-sufficient and widespread cookstove production in Africa's rural areas

Until now, the kits for our Save80 stoves were prefabricated in Germany and our partners in the recipient countries were only responsible for assembly. Now all production takes place locally in Rwanda and Nigeria. This creates jobs and training positions in metal processing for the local population, shortens transport routes and save costs.

By relocating the entire production process to the destination countries, we aim to ensure in the medium to long term that our partners in Rwanda and Nigeria will be able to produce and sell the efficient cookstoves independently and

in large quantities for the mass market, even without funding from atmosfair.

Efficient cookstoves are a direct measure to protect the forests and the health of the local residents

Deforestation caused by cooking on open fires, says Bärbel Höhn, Commissioner for Energy Reform in Africa for the Federal Ministry of Economic Cooperation and Development and former minister, "is a huge problem in many African countries. Which is why we need to prioritise solutions for more efficient and better cooking conditions."

## Rwanda Construction kick-off

19 September 2020. The time has finally come after a lot of effort: Christine Namuwonge, Managing Director of the Rwandan NGO Safer Rwanda and the company SAFER 1 Ltd, signs the long-awaited sales contract for the land. Just a few bushes are still growing on the site, but in just a few months we will be producing our efficient and climate-friendly Save80 cookstoves here.

The coronavirus pandemic delayed the search for a production site. But now the preparations and negotiations with the construction companies are underway. Construction work for the new factory is scheduled to start in February 2021.

Our long-standing partner company Safer Rwanda (SFR) has established the company SAFER 1 Ltd., which will handle construction and operation of the cookstove factory with atmosfair's support.

SFR will still handle distribution of the cookstoves as in the past. Financially supported by atmosfair, storage capacity was already increased in May 2020 because we want to offer significantly higher quantities per year in the future to enable even more households in Rwanda to have access to efficient cookstoves.

We will launch production in the summer of 2021. We are already looking forward to the first completely self-produced Safe80 cookstove leaving our factory premises in Kigali.

## Nigeria: a new factory and new distribution structures

A factory location has also been found in Nigeria and the stage is set for us to produce our Save80 cookstoves entirely locally. We aim to produce



Kigali, Rwanda: start of construction work for the new cookstove factory

several 100,000 cookstoves a year here in the long term.

Right at the beginning of planning, we opted for a production site in the north of the country, in the city of Kano. Although our project is more difficult to implement here than in economic centres like Lagos or Abuja, and the security situation in the region is tense, the forest is rapidly disappearing here and the demand for energy-efficient cookstoves is greatest. In this area, our production facilities are located as close as possible to the end customers in rural regions, where firewood is virtually the only source of energy. In addition, we are contributing to structural change in the region and creating jobs.

As early as November 2019, atmosfair project coordinator Izebe Egwaikhide and CEO Dietrich



Design of the new cookstove factory in Kigali

Brockhagen travelled to Nigeria with a small team to forge contacts with the local authorities and hire several local project managers to prepare for setting up production on the ground. The following February, we founded a Nigerian subsidiary wholly owned by atmosfair. In October 2020, we finally found a suitable location and were able to start planning and renovation.

We will start by producing around 10,000 to 50,000 cookstoves per year. If production and sales get off to a successful start, we intend to grow many times over in the long term, expand our distribution network to cover the whole of





Bernhard Ellmann, project manager at atmosfair

Nigeria and neighbouring countries and gradually increase production to 200,000 - 1,000,000 units.

From Kano to the whole of Nigeria – we are breaking new ground in distribution

To sell the large quantities that we are planning in the long term requires a different distribution system. To this end, we are breaking new



Bernhard Ellmann in the atmosfair test workshop in Berlin

ground: we are no longer selling the cookstoves directly to users, who are usually families, through a few of our own partners as before, but through wholesalers and a network of intermediaries from Kano throughout Nigeria.

To record the actual CO<sub>2</sub> savings achieved, we need to be able to track the cookstoves sold. With this in mind, we are developing a mobile phone app that allows users to register their stoves and are testing possible tracking technologies such as equipping pilot stoves with

GPS transmitters.

In parallel to the preparations for the factory, we will test the new distribution concept, the app and the tracking technologies in a pilot project starting in spring 2021. We sent 3,200 new Save80 stove kits from Germany to Kano for this purpose.

### Berlin: conceptual architect and test workshop

The decision to relocate the entire production process of the Save80 cookstove to Rwanda and Nigeria made it necessary to adapt the production process to local conditions. On-site production should be as independent as possible from highly specialised service providers and machinery. This meant that we had to plan the production process from scratch and redesign machines and stove components.

atmosfair project manager Bernhard Ellmann is in charge of planning and producing the new machines and building the prototypes. We are drawing on our many years of experience in building efficient cookstoves and our close contact with users on the ground to further improve the design of the machines and stove parts.

To ensure easy handling and maintenance of the machines, we switched from laser technology to traditional and proven sheet metal processing for the prefabrication of the cookstove parts, such as plate shears and pneumatic punching machines for cuts and recesses. They are robust and simply designed so that Nigerians can perform most of the maintenance work themselves.

Since January 2020, atmosfair has been using its own test workshop in Berlin-Pankow to test the new production process. The first components for the punching workstations were delivered already in March 2020. Since then, tests have been running, planning is underway and the workshop is filling up with more and more machines and machine parts. After all, practice is the only way to know: how do workplaces and machines need to be designed so that handling is ergonomic and production can run as smoothly as possible and conserve resources?

In the meantime, we have ordered all the machines and components we need for our factories in Rwanda and Nigeria. The production lines

will be completed in our workshop in Berlin and partly in the countries themselves.

We are currently preparing the training sessions for our partners and staff in Rwanda and Nigeria. The originally planned two-week training in Berlin will now be held online due to the coronavirus. The production managers we train will then oversee machine installation and operation on site.



Location of the local atmosfair stove factory in Kano, Nigeria

## “With the factory we create jobs”

“To me this a great milestone achieved as far as our Environment programme is concerned, I am so excited to see the factory constructed, we are very grateful for the commendable partnership with atmosfair. Adding to our past 7.5 years’ successes in the assembly and distribution of improved cook stove to ~70,000 last mile households of Rwanda, our partners atmosfair and us (Safer Rwanda and SAFER 1 Ltd) have decided to take it a big step further by opening a cook stove manufacturing factory in Rwanda. This is a big leap in our quest to enable more Rwandan to have access to the much needed energy efficient cook stoves. The factory operations will not only enable us to quickly upscale our operations but will also support resource efficiency and lower the technology costs and create valuable additional jobs in Rwanda.”



Christine Namuwonge,  
Managing Director of  
SaferRwanda and SAFER 1 Ltd.





Access road to the coconut plantation of Kisiwa Farming Limited, © KFL

# Tansania, Mafia Island: electricity and heat from coconut waste.

atmosfair is working with a local partner to test biomass gasification of harvest residues from coconut processing and is financing additional stages of expansion. Approximately 20% of the existing diesel power grid will be replaced with renewable electricity in the first phase of expansion. This is equivalent to about 10,000 t of CO<sub>2</sub> per year — the average amount of CO<sub>2</sub> emitted annually by 5,000 mid-size cars.

“Mafia Island is a unique place with friendly people and a simple life. It’s a pleasure and an honour to be part of the community here.”



Darius Boshoff, founder and Managing Director of Kisiwa Farming Limited

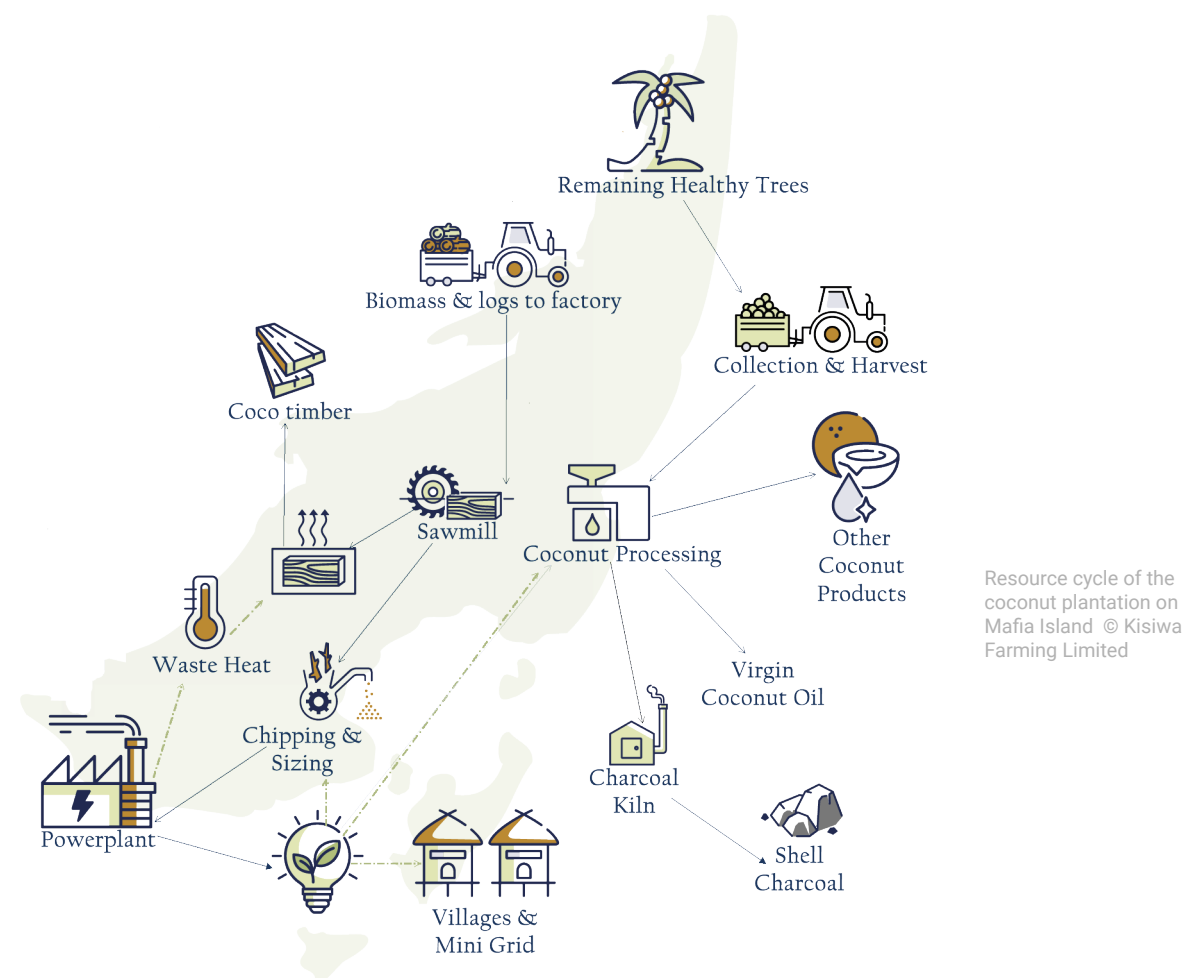


Mafia Island is located off the coast of Tanzania, about 130 km south of Dar es Salaam

## New start for the island’s supply of renewable electricity

Mafia Island is located off the Tanzanian coast in the Indian Ocean. With around 60,000 inhabitants, it is much more sparsely populated and far less developed for tourism than nearby Zanzibar. The landscape is characterised by subsistence farming, fishing and coconut plantations, many of which date back to the time of German colonial rule.





Darius Boshoff has lived here since 2019. When he chanced upon the island a decade ago during a sailing excursion on a traditional wooden sailboat, the process engineer from South Africa immediately developed a passion for this patch of earth. He now calls it home. Darius, himself a specialist in bioenergy, did not know at the time that a biomass power plant had just been built on the island – an unsuccessful venture, as it turned out. The plant was only in operation for a few years.

Today, Darius is the managing director of Kisiwa Farming Limited (KFL), which he founded to make a fresh start on Mafia with renewable energy production and sustainable coconut farming.

Unlike Zanzibar, Mafia is not connected to the Tanzanian electricity grid by cable. The state-owned power utility TANESCO operates a small, diesel-powered mini-grid instead. About 50% of households are connected to the electricity grid.

Palm trees for coconuts and energy – reorganisation of the plantations and operations in line with the principle of circular economy

Kisiwa Farming produces wood for furniture and coconut oil for the cosmetics industry from the island's coconut palms. The centre of operations and the combined heat and power plant are located in the south, in Kilidoni. This is where heat and electricity are generated from harvest residues, most of which are fed back into the cycle: the heat is used to dry the wood products and the electricity is used to process the coconuts. Part of the electricity is fed into the local power grid (mini-grid) and replaces the equivalent amount of diesel power.

After years of mismanagement by his predecessor, there is a lot of work to be done for KFL's Darius Boshoff. Over 2,700 hectares of coconut plantations need to be regenerated and rejuvenated. Coconut trees that are more than 70 years

old and no longer bear fruit are processed into timber.

## Heat and electricity from biomass gasification

With the help of funding from atmosfair, KFL laid the cornerstone for a 49kW combined heat and power plant with biomass gasifier from the German company Spanner Re in March 2021. The Bavarian company specialises in wood gasification technology and has already installed 900 systems around the world. The plant on Mafia is the first on the African continent. "We are very excited to enter the African market with the installation of our wood-fired power plant on Mafia Island, where the rapidly growing demand for energy requires technologies that make sustainable use of existing resources," says Matthias von Senfft, international sales manager at Spanner Re.

The combined heat and power plant will run 24 hours a day, generating electricity that will be used to process the coconuts and supply some 4,000 households on the island with renewable energy. The small power plant marks the beginning – with more to be added in later stages. In the first step, atmosfair and KFL will increase the electricity

capacity more than threefold.

Darius' dream is to supply the island completely with renewable electricity in a few years' time. In addition to biomass gasification, photovoltaic systems will also be part of the energy mix.

## Potential also for other African countries

Biomass gasification also has potential in other parts of East Africa: in agriculture, the most important economic sector in many African countries, the production of cotton, coffee, tea, rice, nuts and sugar cane generates waste products that are hardly used or not used at all. Renewable energy can be produced from these raw materials, following in the footsteps of Mafia – another step towards climate-friendly agriculture in Africa.

# Biomass gasification – how does it work?

**In biomass gasification, biomass is first converted into a gas that is then burned to produce energy. Compared to the direct combustion of biomass, gasification is more efficient and easier to control. The gas is called "wood gas" because wood is mostly used as fuel. However, many types of biomass are suitable, such as crop residues.**

**At the heart of a wood gasification plant is the reactor, also called a "reformer", where gasification takes place. Here, the wood is not burnt directly, but something similar happens: in the absence of oxygen, the biomass is gasified into a mixture of carbon monoxide, hydrogen and methane. The downstream combined heat and power plant burns the wood gas and generates electricity and heat in the process.**

# Mini-grids and electric cookstoves: atmosfair's contribution to rural electrification and climate change mitigation in Malawi and Madagascar

atmosfair is developing new ways to enable rural households to switch to health- and climate-friendly cooking methods where there is already sufficient renewable electricity. We are testing how well new, efficient electric cooking systems are received by communities in two pilot projects. By initially subsidising the price of electricity, we ensure that existing electricity grids (mini-grids) are better utilised and more profitable, and motivate local companies to further promote rural electrification.

Rural areas in the Global South are rarely electrified

Supplying rural areas with energy is a major economic challenge. The greater the distance the electricity has to be transported from the centres, the more expensive it becomes. This is why it is not even provided in sparsely populated areas – the cost is simply too high. According to a recent World Bank sustainability report, 800 million people worldwide still have no access to electricity, 85% of them live in rural areas. They cook on open fires and use diesel generators or conventional batteries for electricity.

The alternative to a centralised power supply are small, independent power distribution grids (mini-grids). They reduce CO<sub>2</sub> emissions by relying on renewable energy such as solar (or even hydro-power).

However, the costs and risks for the operators of these mini-grids are often still very high. Due to sharply falling prices for solar modules and lithium batteries, the systems are becoming more and more cost-effective, but so far they can only be made a reality with high subsidies.

Operators initially have to invest in infrastructure (power transmission towers, lines, house connections, electricity meters, etc.). Moreover, the electricity consumed by the connected households is generally low – usually only a few kilowatt hours are needed to listen to the radio, charge mobile phones or something similar. Monthly electricity consumption in rural areas of the Global South averages a mere 4.5 kWh per month. By comparison: a two-person household in Germany consumes an average of 100 kWh per month.

This means that high operating costs have to be shared among a small number of households with low consumption. The result: electricity is expensive and there are no customers in sight – which in turn leads to reluctant investors. We want to break this cycle.

More electricity consumers make mini-grids cheaper and lower the price of electricity- Electric cookstoves play a role

If a household switches to an electric cookstove, its electricity consumption initially increases by 40-50 kWh per month. The more households that are added and the more electricity is used, the lower the share of fixed costs for the grid infrastructure.

The load on the grid increases with each additional electric cookstove. The profitability of the mini-grids increases and the financing risk decreases. This enables the grid to be expanded more quickly and rural electrification to reach more people.

atmosfair has calculated that even with a tenfold increase in private electricity consumption, the price of the electricity provided by the mini-grid can be reduced by more than 30%.

Electric cookstoves that use renewable energy avoid CO<sub>2</sub> emissions and save time and money

According to the latest World Bank report, 2.8 billion people still cook with fuels that are harmful to the environment and human health. Cooking with wood or charcoal costs the world an estimated USD 2.4 trillion per year, including USD 1.4 trillion in health costs and USD 0.2 trillion in costs for climate damage.

Electric cookstoves eliminate the smoke caused by burning wood, which is harmful to human health. It prevents the CO<sub>2</sub> emissions that result from the use of diesel generators. On top of this there are the emissions from the fire itself, and the forests that are protected from deforestation.

A good track record: combined with the most economical cooking option possible, a solar system can prevent 5-7 times what it saves by just replacing diesel.

In addition, households save considerable time in collecting firewood and the electric cookstoves are available all day and night "at the touch of a button".

atmosfair is testing the first electric cookstoves in Malawi and Madagascar

In Malawi and Madagascar, atmosfair is testing how rural households receive the new technology. It is not only important that the cooking systems we develop are as energy-efficient as possible, but also whether they are suitable for local cooking habits.

Two cooking systems are being tested: the more straightforward version consists of a hotplate, matching pots (pots used on an open fire have a round base, which means they don't fit) and a "Wonderbox", an insulated container where the freshly cooked food continues to cook and stays warm for hours. This saves electricity. The Wonderbox has already proven successful in Rwanda and Lesotho, in combination with our atmosfair Save80 cookstoves.

The other cooking set consists of two insulated "multi-cookers". The burner, pot and Wonderbox are integrated in the multi-cookers and are particularly energy efficient: the sets use very little power, less than 1,000 watts (conventional stoves up to 2,000 W). This is especially important for solar mini-grids, where consumption peaks that are too high can lead to technical problems.

atmosfair is supplying the technology and providing start-up financing

In this phase of technology development and testing in Malawi and Madagascar, CO<sub>2</sub> reductions are recorded by atmosfair, but not counted as offsets. We expect an annual CO<sub>2</sub> saving of 3-4 tonnes per household in the pilot phase, saving about 2,400 t of carbon dioxide in Malawi and 3,000 t in Madagascar.

In the start-up phase, atmosfair subsidises electricity prices until electric cookstoves have become established and the electricity grids are better uti-



Malawi: Leticia Namwendo and Peter Chikosi are happy about the brand new atmosfair cooking set

lised as a result – fixed costs and operating costs drop along with the price of electricity.

The cooking sets developed by atmosfair are also subsidised in the pilot phase and can be paid off by households in several monthly instalments. Billing is handled by the existing payment system for electricity, so there are no additional transaction costs and the risk of default is very low.

Our local partners: in Malawi, we are working with the mini-grid operators Mulanje Electricity Generation Agency (MEGA) and Mulanje Renewable Energy Agency (MuREA). In Madagascar we work with the mini-grid operator ANKA and the climate action organisation ADES.



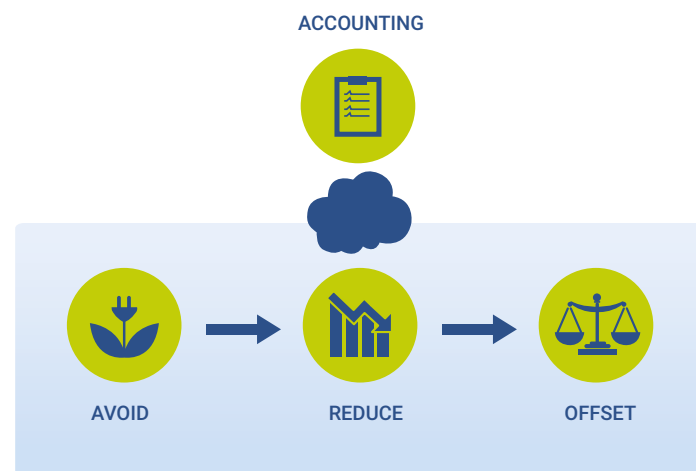
# Climate neutrality in companies – is it even possible?

Customers often ask us if we can help them on the path to “climate neutrality”. But what does “climate neutrality” actually mean and how can a company achieve it? The term is not used consistently in communication. For consumers, it is not transparent what climate neutrality means for a certain company or a product. The IPCC defines “climate neutrality” as the state in which human activities result in no net effect on the climate system, including bio-geophysical effects such as the hydrological cycle. This goal is not achievable for companies. More realistic claims are carbon neutrality or net-zero emissions.

atmosfair helps companies determine their footprint, set reduction targets and implement mitigation measures.

Good offsetting is not enough: why do we have to prioritise avoidance and reduction first?

To limit global warming to a maximum of 1.5 degrees Celsius, we need to cut global greenhouse gas emissions in half by 2030 and reach “net zero” by 2050. “Net zero” means that only as many greenhouse gases may enter the atmosphere as are simultaneously removed from it (“neutralisation”). Businesses, large and small, can make an important contribution to achieving the 1.5 degree target by reducing their carbon emissions. They cannot



Greenhouse gas accounting empowers companies to take action. At atmosfair, it is the key to effective climate measures in line with the guiding principle “Avoid first, reduce second, offset last”

achieve this target solely through offsetting as it only reduces the amount of CO<sub>2</sub> that was previously emitted by the company, i.e. emissions are not reduced.

Laying the foundation: Greenhouse gas accounting creates transparency

But where is the best place for a company to start if it wants to contribute to reaching the 1.5 degree target? The corporate carbon footprint (CCF) is the key to identifying the potential for avoidance and reduction. According to the Greenhouse Gas Protocol Standard, a company records its significant emissions: starting from its own site to the goods it purchases to the products it disposes of at the end of their life cycle.

The classification of emissions into 3 “scopes” makes it possible to determine the extent of a company’s influence on emissions. It is high for direct emissions generated within the company in scope 1 (e.g. own electricity generation) and for emissions from purchased energy (e.g. district heating or electricity) in scope 2. Scope 3 spans the entire upstream and downstream value chain of a company (e.g. emissions from goods purchased, logistics, business travel, use and disposal of sold products). The company’s influence

here can be quite different depending on factors such as purchasing volume, geographic distance, etc.

atmosfair offers companies emissions accounting through hot-spot analyses to identify the individual potential for avoidance and reduction

## Double counting commonplace

In scopes 2 and 3, there is “double counting” of emissions if, for example, an electricity supply company accounts for emissions from electricity generation in its scope 1 and a company accounts for emissions from this purchased electricity in its scope 2. There are also alternative approaches to accounting without double counting, e.g. by added value.

How much does a company need to reduce emissions to contribute to the 1.5 degree target?

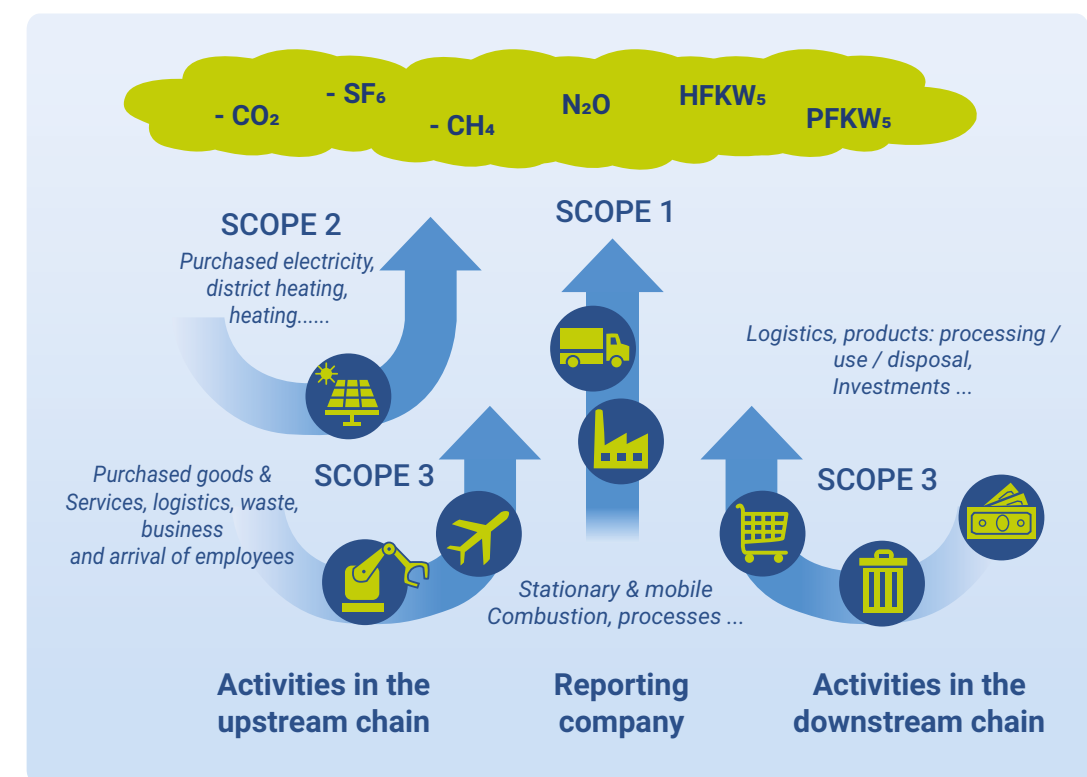
The Science Based Targets Initiative (SBTi) is a partnership between CDP, United Nations Global Compact, World Resources Institute (WRI) and WWF established in 2015. It has developed science-based methods for companies to set reduction targets in line with the 1.5 or 2 degree Paris targets. It is based on greenhouse gas accounting as defined by the GHG Protocol Standard and requires ambitious targets in scopes 1 and 2. In scope 3 (often the largest source of emissions in the

company), companies should also set reduction targets if more than 40% of total GHG emissions are generated in this area. Setting scope 3 targets can be challenging as companies may have little control over their scope 3 emissions or may be heavily dependent on supplier and customer relationships.

atmosfair’s consulting on corporate climate strategy is based on the SBTi methodology and develops the appropriate roadmap depending on the company’s point of departure – also for scope 3.

With our expertise from climate projects in the Global South, we put a special focus on renewable energy, energy efficiency and mobility for reduction targets and measures, both at the company site (scope 1 and 2) and in the value chain (scope 3).

One example of measures in the value chain is the reduction of carbon emissions in cotton production through energy-saving measures and renewable energy for cotton-growing regions in Africa, which we are implementing with the Cotton Made in Africa Initiative.



When accounting for greenhouse gas emissions in the company according to the GHG Protocol Standard, atmosfair records emissions in 3 scopes. In Scope 3, the focus is on the most important categories in the company.



## Offsetting and carbon neutrality: do they go together?

Back to the question at the beginning: how can a company become carbon neutral? Similar to the term "climate neutrality", there are currently different definitions for "carbon neutrality", which makes it difficult to know just what is behind it. There are, for example, certifications that allow a company to immediately call itself carbon neutral or even climate neutral by proving that it has offset all existing emissions. However, the terms "carbon neutrality" and "climate neutrality" are not trademarked, which is why providers of these types of certifications currently use different criteria to meet the standards, which affects the transparency and credibility of these certifications. The German Wettbewerbszentrale, a German body that polices anti-competitive practices, has also criticised this practice for this reason.

SBTi is currently developing a new international standard for "carbon neutrality" (or net zero) in companies, which is consistent with the "net zero" definitions of the United Nations Intergovernmental Panel on Climate Change (IPCC). Accordingly, a company can only achieve "carbon neutrality" (or net zero) if it has followed a reduction pathway in scopes 1 to 3 (including the value chain) in line with the global 1.5 degree target and neutralises residual emissions. This means that, according to the SBTi definition of net zero, a company cannot achieve this goal by offsetting.

Offsets according to the SBTi are only considered to be an option for companies to make progress towards the net-zero target as part of a "climate positive approach". This means that companies offset unavoidable residual emissions while the company works towards the defined net-zero target with effective reduction

and neutralisation. This way, the company is accelerating the global transformation to meet the 1.5 degree target beyond its own value chain. The new SBTi standard is scheduled to be published in 2021.

atmosfair develops consultancy services for credible corporate climate strategies, which, in addition to setting climate targets also includes the meaningful use of offsetting. Together with the Baden-Württemberg Ministry of the Environment, we have created a climate action guide that helps companies to decide when offsetting makes sense and how to identify good projects.



Climate action guide: When and how companies can make use of carbon offsetting

## Pitfalls in communication

"Do good deeds and tell people about it" is an old mantra of corporate communication. In the area of climate action, however, the wrong communication can quickly backfire for companies. Greenwashing can then become expensive. atmosfair is a critical consultant for companies in this area because, according to our by-laws, we are committed only to climate action and pursue no commercial interests.



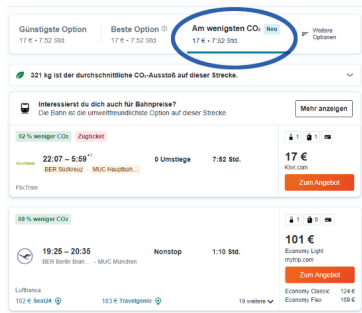
# Climate-conscious selection: idealo and KAYAK

Have you ever searched for travel options online and wished that you could see, in addition to the price and the length of the trip, the climate impact of the travel option?

We created the opportunity to do just that last year in collaboration with our cooperation partners idealo and KAYAK. In addition to the fastest and cheapest travel route, you can now also find the most climate-friendly travel option. atmosfair has calculated the emissions for several hundred thousand air and rail routes. KAYAK and idealo have made it possible for you, our readers, to now compare your travel options with all the information you need and keep the climate in mind when planning a trip. Did you know, for example, that a flight from Berlin to Munich in economy class produces around 5 times more emissions harmful to the climate than a journey in second class on the ICE? Or that the emissions of different airlines can sometimes differ by more than half? The differences are caused, for example, by different aircraft capacities, aircraft seating or aircraft models.

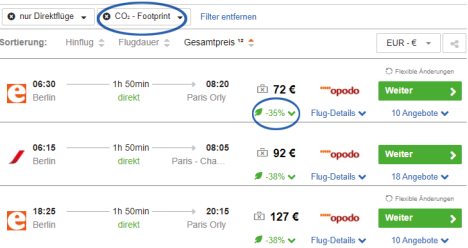
You can now compare all these differences clearly on idealo and KAYAK and take them into account when planning your trip, isn't that great?

Entered flight search: Berlin - Munich



Search for flights on KAYAK: KAYAK is offering users the option to sort flights by CO2 emissions („least CO2“) in their search results, making it easier for travelers to make more sustainable flight decisions. In addition, KAYAK offers bus and train connections where available.

Entered flight search: Berlin - Paris



idealo also gives customers the option to compare "only flights with a small carbon footprint" and shows the emissions caused compared to the average route. In the detailed view, idealo links to atmosfair and informs customers about the possibility of carbon offsetting.



# From donation to results

## Climate protection expenses slightly decreased during Corona pandemic

Since 2005, atmosfair has been funding and managing climate change mitigation projects in the whole world, with the help of voluntary climate donations. First, we establish a funding agreement with the project developer. This explicitly stipulates the amount of carbon emissions that are to be saved through the project on a yearly basis, as well as the conditionalities of atmosfair's financing. One and a half years then approximately separate the initial donation from the actual carbon saving – the time-frame we need to develop and run the project. UN-accredited auditors then certify the reduced emissions.

### The timeline goes as follows:

#### Following your money – from donation to project

- Day 1:** Reception of your voluntary climate payment
- Months 3 to 6:** atmosfair, or a partner, purchase the necessary hardware like construction materials or solar panels locally, prioritising local value chains. This is not always possible, as many African countries for example don't produce steel and import it instead. Nevertheless, we produce as many components locally as possible – for instance pots for the efficient cookstoves, although the quality is sometimes lower than when using stainless steel. One of our 'most local' technologies are the small biogas plants for farmers in Nepal or Kenya, which are made almost 100% from materials that are readily available in the region, in this case, baked clay tiles and screed.
- Months 7 - 9:** Delivery of the materials to the project partner. When importing materials, we often face issues with custom controls. Sometimes, deliveries can get stuck in harbours for numerous months or we get charged considerable custom charges. We try to send mem-

- bers of our local teams and involve experts to lead negotiations with the authorities, but they are always delicate situations, especially regarding our zero tolerance for corruption policy. Building up logistics in project countries is also rarely an easy task, safety issues in particular can create delays.
- Months 10 - 16:** Production and distribution of the climate change mitigation products (efficient cookstove, biogas plant) or building of plants (e.g. PV system for a village). Different technologies require different amounts of time and effort. Efficient stoves as so far in Rwanda only require stamping, bending and screwing together of steel sheets, as it will be the case in the future in our local stove production in Nigeria and Rwanda. In Nepal, the biogas plants are built on small construction sites within a few days, whereas photovoltaic systems are more complex during their installation and require a detailed planning process. For household projects on the other hand, we must take into account the distribution, as the voluntary climate payments allow us to sell these technologies at a highly subsidized price. For the distribution of the efficient stoves in particular, the sales teams often have to drive their delivery trucks hundreds of kilometres to organize sales events and deliver the goods to remote villages. This step requires the most local employees, and in some large projects their numbers can go up into the hundreds.
- Months 17 - 30:** Initial operational period of project, carbon emissions are physically avoided. Launching operation of the technology immediately saves carbon because, for example, a diesel generator is now replaced and can be turned off – users are pleased.
- Months 31 – 34:** Verification of the carbon reductions by UN-accredited external auditors, drawing up of the test report. This step is then repeated yearly. The auditors test installations and measuring instruments (e.g. the electricity meter linked to a PV system), conduct interviews with operators, and control all collected data required by the corresponding UN method. On this basis, they calculate the actual carbon savings accumulated over an indicated period. The auditors themselves

## Expenses for compensation and education projects 2020

Project category	Project name	Expenses 2020*
Efficient stoves	Indien	29,8%
	Lesotho	
	Malawi: Electric cooking	
	Nigeria	
	Ruanda	
Biogas and biomass	Kenya: Small biogas plants for dairy farms	29,8%
	Nepal: Biogas	
	India, Tonk: Electricity from crop residues	
	Indonesia: Compost	
	Tanzania: Compost	
	Tanzania: Power generation from coconut wood residues on Mafia Island	
Wind, water, sun	Germany: Test project DAC*	29,2%
	Honduras: Small hydropower plant	
	Iraq: Energy for the refugee camp Mam Rasha	
	Kenya: Solar-powered water treatment	
	Madagascar: Clean solar power replaces heavy fuel power	
	Madagascar: Rural electrification	
	Mali: Rural electrification	
	Senegal: Solar	
	Venezuela: Solar power grid	
	Ghana: Solar kiosk	
	Lesotho: Solare Home Systems	
	Morocco: Solar Drip Irrigation for Smallholder Farmers	
	Madagascar: Clean electricity and organic food	
	Brazil: Agriphotovoltaics	
	Germany: Pilot project green hydrogen*	
Educational and transformative projects	Germany Education: ‚Energiesparmeister‘ and DUA	10,7%
	Germany: Transformative projects	
	Kenya: Electro Taxis	
	Germany: Green transport*	
Renewable Energies Building	Nepal: New energies (Helambu and the Langtang Trek)	0,6%
	Nicaragua: Climate friendly island	
Total expenses in 2020: 15.359.332 €		Total 100%

\*atmosfair PtL: Production plant for carbon-neutral e-kerosene

- have to renew their accreditation by the UN every three years, and bear liability if a mistake were to occur. Their reports are published by the UN on publicly available websites, in order for any affected or interested party to be able to access and possibly raise objections. This allows for an exceptional degree of transparency and accountability for project support through NGOs.
- Months 35 - 39:** Specific UN bodies carry out cross-examinations of the test reports and additional auditing is performed by the Gold Standard, which, in addition to emission reductions,

- confirms the project's contribution to sustainable development in the host country. This step is almost exclusively administrative in nature and, in practice, consists of a back and forth between the auditor and the UN committees, until all the committee's questions are answered.
- Goal, Month 40:** The UN climate secretariat issues the carbon reduction certificates to atmosfair's register at the German Emissions trading Authority (UBA). This final step does not affect the project itself anymore, but is nonetheless important for atmosfair's documentation (see below). Registering



# Offset obligations and carbon reductions achieved in 2020

Greenhouse gas reductions, achieved and verified by UN auditors <sup>(1)</sup> [1.000 t CO <sub>2</sub> ]		2005 - 2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 <sup>(2)</sup>	Total projections incl. 2021 <sup>(2)</sup>
Efficient stoves	Nigeria: Efficient cookstoves	1,8	17,0	2,3	18,2	0,0	123,0	85,5	36,2	39,5	21,6	272,0
	India: Efficient cookstoves			5,6	0,0	0,0	39,1	0,0	0,0	0,0	298,1	124,6
	Cameroon: Efficient cookstoves		3,2	9,0	9,9	0,0	9,3	19,6	0,0	0,0	0,0	51,0
	Lesotho: Efficient cookstoves		3,3	17,8	21,8	24,8	27,6	28,9	28,7	26,2	25,0	179,1
	Rwanda: Efficient cookstoves				6,5	0,0	27,6	107,8	124,3	160,6	195,7	497,3
	Ethiopia World Food Program: Efficient cookstoves								24,5	0,0	0,0	24,5
Biogas & Biomass	India: Generating power from harvest residues	18,8	117,4	0,0	119,9	69,3	0,0	56,1	68,6	61,9	47,3	512,0
	India: Biogas plants for households	24,1	21,1	19,5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	64,7
	Kenya: Biogas plants for dairy farms					2,8	0,0	5,4	6,6	0,0	6,9	14,8
	Thailand: Biogas from waste water			50,5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	50,5
	Nepal: Biogas					60,0	298,9	213,9	711,8	484,8	741,9	1.769,4
	Indonesia: Composting household waste					2,3	0,0	2,5	0,0	2,4	0,0	7,2
Wind, hydro, solar	Honduras: Small hydropower plant	64,0	59,2	22,7	0,0	41,0	0,0	0,0	28,8	34,2	34,3	249,9
	Nicaragua: Wind power	118,7	0,0	45,0	102,7	0,0	0,0	0,0	0,0	0,0	0,0	266,3
	Vietnam: Wind power					10,0	32,0	0,0	0,0	0,0	0,0	42,0
	South Africa: Warm Water for households through solar						9,3	0,0	0,0	0,0	0,0	9,3
	Senegal: Clean solar power for household								49,8	84,5	68,4	134,2
	<b>Total, GHG reductions, achieved and verified by UN auditor</b>	<b>227,4</b>	<b>221,2</b>	<b>172,5</b>	<b>279,0</b>	<b>210,2</b>	<b>566,7</b>	<b>519,7</b>	<b>1.079,2</b>	<b>894,1</b>	<b>1.439,2</b>	<b>4.268,8</b>
Reduction obligations based on received voluntary climate payments		439,5	96,8	106,9	132,9	148,6	225,3	325,1	503,3	281,0		
Reduction obligations from carbon mitigation projects commissioned by clients		122,6	66,4	80,3	60,3	149,9	251,5	207,9	312,0	358,0		
Reduction obligations, total		562,1	163,2	187,2	193,2	291,0	476,8	533,0	815,3	639,0		
<b>Accumulated GHG reduction obligations</b>		<b>562,1</b>	<b>725,3</b>	<b>912,5</b>	<b>1.105,7</b>	<b>1.396,7</b>	<b>1.873,5</b>	<b>2.406,4</b>	<b>3.221,7</b>	<b>3.860,7</b>		
<b>Actual GHG reductions, as verified by UN auditor, accumulated</b>		<b>227,4</b>	<b>448,5</b>	<b>621,0</b>	<b>900,0</b>	<b>1.110,2</b>	<b>1.676,9</b>	<b>2.196,6</b>	<b>3.275,8</b>	<b>4.169,9</b>	<b>5.609,1</b>	

1 GHG reductions in the table are indicated according to the year in which they are verified by an auditor and certified by a standard. Therefore, emissions reductions achieved in 2020 might not be included in that year, as they are still in the process of being certified.

2 The indicated GHG reductions for the year 2021 are a forecast and therefore subject to possible changes in future annual reports.

atmosfair's emission reductions with the UBA is a guarantee for donors, as the data is processed and saved by an official governmental body that acts as an independent third party.

In total, it takes about:

- half a year for your donation to be used in an existing project
- a year and a half for your donation to physically offset carbon emissions
- three years for the first savings to be officially verified by an independent auditor
- three and a half years for atmosfair to receive the UN's official documentation for the carbon emission reduction

The table above shows the carbon emission reductions atmosfair has achieved all the way – in other words, emissions that have been saved, verified, reviewed, and confirmed by the UN. Documents relating to these reductions are also available as part of the test reports published on the website of the United Nations Framework Convention on Climate Change (UNFCCC), independently from atmosfair. Links to these UNFCCC pages are available on our atmosfair website.

At the end of the table, these CO<sub>2</sub> reductions are compared with atmosfair's CO<sub>2</sub> reduction obligations for the donors. As described above, we have shown the CO<sub>2</sub> reductions on the last time step, but the reduction obligations on the first time step, with the receipt of your climate protection contribution on the atmosfair account.

Even though it takes three and half years for a donation to turn into actual UN-certified carbon emission reductions, the figures show that

atmosfair was able to reduce this timespan to almost zero. The approx. 3.8 million tons of CO<sub>2</sub> reduction obligations that atmosfair entered into with its donors and clients by the end of 2020 were thus already offset by 4.17 million tons of formally confirmed CO<sub>2</sub> reductions at the end of 2020. This means that atmosfair not only settled all its obligations in 2020, but also built up a headstart of over 300,000 tons of CO<sub>2</sub> reductions for 2021.

This is due to the numerous technologies, mainly the stoves, the biogas plants and the photovoltaic systems, that were already installed years ago and thus continue to achieve yearly reductions. In 2020, almost 1 million tons of CO<sub>2</sub> reductions in atmosfair projects were certified by UN auditors. The COVID-19 pandemic delayed expansion in some projects. Nevertheless, we spent almost 15.5 million euros on climate protection projects (see financial section, pages

42-47). Of these, about 30% went into cooking stove projects, nearly 30% went to biogas and biomass projects and 30% were allocated to solar power projects, including solar-powered agriculture (agrophotovoltaics) and solar-powered water treatment projects. Approximately 10% of spending in 2020 were allocated to the development of educational and transformative projects in Germany.

In some of the ongoing projects, the table indicates zero carbon reductions. This only means that while the project is running successfully and carbon emissions are being physically saved, the UNFCCC has not published a report on the project during this calendar year. Since the verification periods of projects can begin and end independent of calendar years and do not always run exactly 12 months, emissions reductions listed here can fluctuate year by year, even for projects running constantly.



# Financial report

## Overview

Revenues declined by almost 7 million euros to just under 15 million euros.

Nevertheless, atmosfair was able to manage the Corona pandemic without state aid during and invest around 16 million euros in climate protection projects.

No public funds and no big spenders with donations exceeding 10 percent of our total annual income – in 2020 again, the non-profit organization atmosfair has kept its financial independence. Next to raising funds through voluntary climate donations, atmosfair has been generating revenue through economic business activity for over ten years, which in turn helps in covering some of the costs incurred by our non-profit activities. Looking through all the finances since the foundation of atmosfair, we can rightfully claim that in 2020 for every 100 Euros donated, about 91 Euros were invested in the direct purchase of climate change mitigation technologies – e.g. efficient stoves or household solar systems – or paid to the planners and developers of projects for green electricity generation. From this same 100 Euros, only 9 Euros were spent on atmosfair's own needs, for customer care staff as well as other costs such as IT-systems, accounting, public relations, rent for office spaces, banking and credit card fees.

## Organization / non-profit

The Foundation for Sustainability (Stiftung Zukunftsfähigkeit), based in Bonn, remains atmosfair's only shareholder. The four-person advisory board – consisting of two members of the German Federal Ministry for the Environment (BMU) and two representatives of environmental NGOs – ratified the new grant agreements for climate change mitigation projects; a process in which none of the board members received any form of payment or refunds for incurred expenses. Tax exemption was re-approved by the German tax authorities for the year 2020. Donations receipts were duly issued for all voluntary climate donations received in the course of 2020.

## Financial independence – no public funding

In 2020, atmosfair's activities were fully financed through voluntary donations for carbon offsetting as well as revenue generated by economic business activities, the latter of which is permitted to non-profit organizations to a limited

extend. In 2020, atmosfair received no public funds and thereby maintained its financial independence. Furthermore, no payments were emitted between the only shareholder, the Foundation for Sustainability, and atmosfair.

## Expenses, developing climate change mitigation projects

The largest share of expenses was incurred by the development and management of climate change mitigation projects. These include the purchase of technologies and material (e.g. efficient stoves), setting up and running projects, including the verification by UN-accredited auditors, and the salaries of the local project teams. For 2020, this share amounted to about

16 million Euros (see also table on page 46-47). Other expenses include personnel costs for project planning and implementation, which amounted to about 800,000 Euros in 2020. In total, atmosfair has funded climate projects worth 71 million Euros since its creation.

To calculate an upcoming year's financial grants for climate change mitigation projects, we usually calculate with the average revenue of the two previous years. This not only allows using funds in a timely manner. It also provides us sufficient security to grant long-term financial support to our partners in the Global South, and design and implement new projects, even in the case of decreasing incomes. Furthermore, the preparation span of one to two years between a project idea and the corresponding investment of funds in hardware, such as efficient stoves or solar power systems, leaves little room for any other way of financial planning. From 2019 to 2020, atmosfair's revenues

## Balance sheet 2020

Assets	2020 EUR	2019 EUR
<b>A Fixed assets</b>	<b>272.041,00</b>	<b>525.873,00</b>
I Intangible assets	3,00	3,00
II Tangible assets	22.038,00	25.870,00
III Financial assets	250.000,00	500.000,00
<b>B Current assets</b>	<b>9.230.188,82</b>	<b>13.225.210,09</b>
I Inventory	2,00	2,00
II Receivables		
Trade accounts receivables	380.681,45	1.593.580,39
Other assets	230.316,03	188.188,36
III Cash on hand, bank balances, etc.	8.619.189,34	11.443.439,34
<b>C Prepaid expenses and deferred charges</b>	<b>7.608,00</b>	<b>7.773,00</b>
<b>Balance sheet total</b>	<b>9.509.837,82</b>	<b>13.758.856,09</b>



decreased by 7 million euros. According to the above mentioned rule of timely disbursement, 2020 should have seen an investment capacity of around 13,5 million Euros. However, with more than 16 million invested, atmosfair has largely surpassed expectations and was even able to liquidate reserves of about 2 million Euros. In consequence, the bank balance fell from 11.4 Million (in 2019) to about 8.6 million in 2020. Furthermore, in 2020 atmosfair retained reserves of about 1.5 million Euros, after about 6,5 million worth of reserves from the previous year were liquidated. These new reserves are mainly destined for the construction of the stove production plants in Africa and rural electrification of villages with photovoltaic modules.

## Salaries under the German public-service salary scheme (TVöD) for employees and management

After project-related expenditures, personnel costs are atmosfair's second most important cost factor. The salaries of atmosfair employees are derived from the German public-service salary scheme (TVöD), whereby the positions from project manager to CEO earn

pay grades 11 to 15. General administrative costs for telephone, postage, insurance and office supplies amount to around 370,000 Euros, while 75,000 Euros were spent on rent.

## Administrative costs of 9%

One of atmosfair's standards is the efficient use of donations, which is why only a small percentage of donated funds can be used to cover the organization's own costs. These include all costs that are not directly linked to project costs but are needed for administration and fundraising. In 2020, these internal costs accounted for about 982,000 Euros, which were allocated to personnel and material costs in public relations, IT, accounting, credit card fees, travel expenses etc. (see table on pages 46-47, Expenses block b) and c)). The overall share of administrative costs represents less than 9% of total revenue. atmosfair was able to keep these costs low by renouncing all types of paid advertisement and only made itself visible through gratuitous publication of its achievements and work. The voluntary support of numerous celebrities also helped increase the public's awareness about atmosfair's work.

nisation and for climate protection projects.

## Reaching our goals

Including the CO<sub>2</sub> reductions certified in 2020, atmosfair has achieved more CO<sub>2</sub> reductions in its climate protection projects between 2005 and 2020, i.e. since the beginning of atmosfair, than the reduction obligations resulting from voluntary climate protection contributions and customer orders - a surplus of around 300,000 tons of carbon emissions (see also table on pages 40-41); thus, atmosfair has largely fulfilled and even surpassed its obligations towards its donors and clients.

## The CEO's review and discharge

The 2020 financial statement was audited, approved without any objections issued and fully certified. On the 18th of June 2021, the shareholders assessed and approved atmosfair's financial statement for 2020 and discharged the board of directors from all liability.

## Profits generated increase the funding volume for climate protection projects

In 2020, atmosfair's business activities yielded around 130,000 Euros after tax. These are services provided for business clients, ranging from providing climate change mitigation project management, carbon offsetting, the sale of CO<sub>2</sub> balancing software and consulting services on climate and sustainability issues. These were used directly in 2020 to build up the orga-

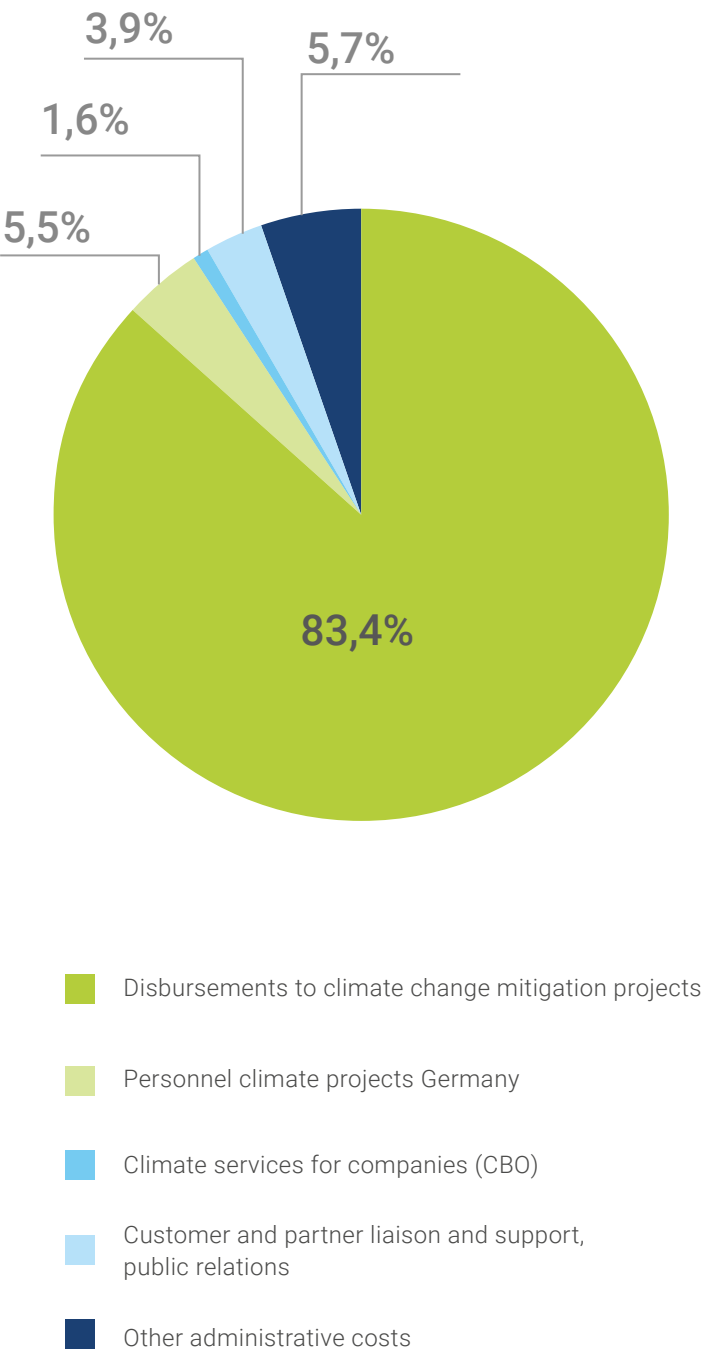
Liabilities	2020 EUR	2019 EUR
<b>A Equities</b>	<b>3.761.637,99</b>	<b>5.631.896,67</b>
I Subscribed capital	25.000,00	25.000,00
II Reserves provided by the articles of association for projects		
Short-term reserves for climate change mitigation projects	520.803,21	747.980,52
Available reserves (also for climate projects)	3.215.834,78	4.858.916,15
<b>B Accruals</b>	<b>5.432.192,80</b>	<b>7.105.477,61</b>
Tax accruals	58.807,00	232.911,14
Accruals for climate change mitigation projects	5.350.000,00	6.850.000,00
Other	23.385,80	22.566,47
<b>C Liabilities</b>	<b>300.625,09</b>	<b>1.021.481,81</b>
Trade accounts payable	273.335,55	869.467,91
Other	27.289,54	152.013,90
<b>D Deferred income</b>	<b>15.381,94</b>	<b>0,00</b>
<b>Balance sheet total</b>	<b>9.509.837,82</b>	<b>13.758.856,09</b>



# Income statement 2020

	2020	2020	2019
Income	EUR	%	EUR
Voluntary climate mitigation contributions for climate change mitigation projects	12.566.304	83,9	19.832.745
Climate change mitigation projects on behalf of customers and funds towards the purchase of technologies, before taxes (CBO)	1.767.255	11,8	1.434.379
<b>Sub-total climate change mitigation projects</b>	14.333.558	95,7	21.267.124
CO <sub>2</sub> -accounting software, consulting etc., before taxes (CBO)	385.743	2,6	518.012
Additional income (interests, etc.)	262.075	1,7	29.810
<b>Total</b>	<b>14.981.377</b>	<b>100,0</b>	<b>21.814.946</b>
Expenses			
<b>A Climate change mitigation projects for carbon offsetting, private and business customers</b>			
Direct expenses (Planning, setup, operation, technology purchase, verification, staff in developing countries)	-15.866.609	105,9	-19.376.174
Creation of net provisions, reserves, non-deductible input tax	1.500.000	-10,0	-1.644.624
Claim – 6500k EUR; allocation of provisions 5000k EUR			
Amortisation of accruals	1.870.259	-12,5	956.765
<b>Balance climate change mitigation projects carbon offsetting with use of earlier provisions</b>	<b>-12.496.350</b>	<b>83,4</b>	<b>-20.064.033</b>
Personnel: Project planning and support by atmosfair staff in Germany and in project countries	-817.218	5,5	-492.875
<b>B Administrative costs: support for donors and partners, fundraising, public relations work</b>			
Personnel costs	-520.048	3,5	-313.648
Editorial work for PR	-58.021	0,4	-10.550
<b>Total</b>	<b>-578.069</b>	<b>3,9</b>	<b>-324.100</b>
<b>C Other administrative costs</b>			
Office management (telecommunication, postage, office supplies, insurance, membership fees, depreciations)	-370.429	2,5	-121.309
Rent and maintenance	-75.082	0,5	-78.274
Credit card fees, payment services, account fees, exchange rate differences	-83.739	0,6	-141.995
IT (fees, maintenance costs, server rental fees)	-64.951	0,4	-79.507
Accounting, tax advisory services, annual financial statement, financial auditor	-64.940	0,4	-62.448
Printing costs for publications	-7.587	0,1	-10.920
Service contracts	-107.821	0,7	-89.648
Travel expenses	-11.226	0,1	-12.702
Non-deductible taxes	-64.130	0,4	-57.923
<b>Total</b>	<b>-849.907</b>	<b>5,7</b>	<b>-655.027</b>
<b>D Commercial business operations: climate services for companies</b>			
CO <sub>2</sub> -accounting software	-32.476	0,2	-39.903
Personnel: climate service for companies	-148.585	1,0	-89.614
Taxes on income from climate services and climate change mitigation projects for corporate customers	-58.774	0,4	-149,290
<b>Total</b>	<b>-239.834</b>	<b>1,6</b>	<b>-278.913</b>
<b>E For informational purposes: use of surpluses</b>			
Surpluses generated through commercial business activities in 2020, after tax	133.173	0,9	362.167
<b>Total</b>	<b>-14.981.377</b>	<b>100,00</b>	<b>-21.814.946</b>
<b>Results after creation of reserves for climate change mitigation projects and use of surpluses</b>	<b>0</b>		<b>0</b>

# Expenses of atmosfair gGmbH 2020 (%)





# References & Partners

# Awards

## Corporate partners

50Hertz  
Ableton AG  
Aldi Nord, Aldi Süd  
Bayerische Landesbank  
BayWa r.e. renewable energy GmbH  
borisgloger consulting GmbH  
Carlson Wagonlit Travel  
Chiesi GmbH  
Consileon Business Consultancy  
Daimler Benz AG  
DB Cargo AG  
Dentons  
Deutsche Bahn AG  
DHL Dolby Germany GmbH  
Dr. Babor GmbH & Co. KG  
FlixBus  
FKP Scorpio Konzertproduktionen GmbH  
Greiner AG Hannover Rückversicherung AG  
HRG Sports  
Infectopharm  
ING DiBa  
Janssen Cilag GmbH  
JustWatch GmbH  
Lufthansa AirPlus Servicekarten GmbH  
net group Beteiligungen GmbH & Co. KG  
Quantum Immobilien AG  
QVARTZ  
SICK AG  
TravelPerk  
Vector Informatik GmbH  
VW Volkswagen AG

## NGOs, political and academic institutions, trade associations

24 Gute Taten e.V.  
Alfred Wegener Institut  
Berliner Energieagentur GmbH  
Bundesverband Solarwirtschaft e. V.  
Deutsche Bundesregierung  
Deutsches Zentrum für Luft- und Raumfahrt e. V.  
Engagement Global  
ETH Zürich  
European Green Party  
German Doctors e. V.  
Greenpeace e. V.  
Harvard University  
Helmholtz-Zentrum für Umweltforschung GmbH  
Landeshauptstadt Düsseldorf  
Landeshauptstadt München  
Lions Clubs International  
Öko-Institut e. V.  
Schweizer Umwelt Bundesamt  
Skateistan  
Stadt Hamburg  
Stiftung Entwicklungs-Zusammenarbeit

## Events

Besondere Orte  
Umweltforum Berlin  
Deutsche Hospitality  
Fachagentur Nachwachsende Rohstoffe  
GEOMAR Ocean Deoxygenation Conference Kiel 2018  
International Transport Forum  
ITB  
Die Toten Hosen  
Tollwood

## Tourism

Aldi Suisse  
Contrastravel  
DAV Summit Club GmbH  
Durchblick Leserreisen  
Forum Anders Reisen  
Frosch Sportreisen  
Hauser Exkursionen  
Hofer  
Laade Gartenreisen  
Neue Wege Reisen  
RTK Reisebürokooperation  
World Insight



atmosfair has been named winner in ten international comparative studies. All comparative studies for offset providers conducted since atmosfair's foundation in 2005 are available for download on our website ([www.atmosfair.de/en](http://www.atmosfair.de/en)).

We have selected two examples:



**Stiftung Warentest**  
(Finanztest, issue 3/2018)

“Above the clouds” – carbon offset providers compared

The consumer rights agency Stiftung Warentest tested a number of organizations that offer voluntary carbon offsetting. Evaluation criteria included ‘quality of offset’ and ‘transparency’.

The criterion ‘quality of offset’ mainly evaluates the standards of the climate change mitigation projects generating the carbon emission reductions, while also taking into consideration involvement in the project’s development process.

‘Transparency’, another important factor, examined the accessibility of the organization’s financial data including the access to administrative and marketing-related expenditures, as well as the distribution of project funds to individual projects.

You can find the complete article here (only available in German, download fee 1 Euro):  
<https://www.test.de/CO2-Kompensation-Diese-Anbieter-tun-am-meisten-fuer-den-Klimaschutz-5282502-0/>

**Overall rating:**  
Total score: **0,6 (very good)**  
Offset quality: **very good**  
Transparency: **very good**  
Quotation: **„Testsieger“**



**Eberswalde University for Sustainable Development – Germany (2010)**

Greenhouse gas offsetting providers in Germany

“... And the winner is – the multiple award winner atmosfair.”

In 2010, the Federation of German Consumer Organisations (vzbv) commissioned a study from the Eberswalde University for Sustainable Development to compare more than 20 different organisations offering carbon offsets. The study analyzed the overall quality of the offsetting projects, the accuracy of the calculation, and donor relations. atmosfair was the only provider to be awarded the rating ‘very good’.

**Overall rating:**  
Truthful calculations: **very good**  
Offset quality: **very good**  
Donor relations: **very good**  
Total score: **very good**



# The Team

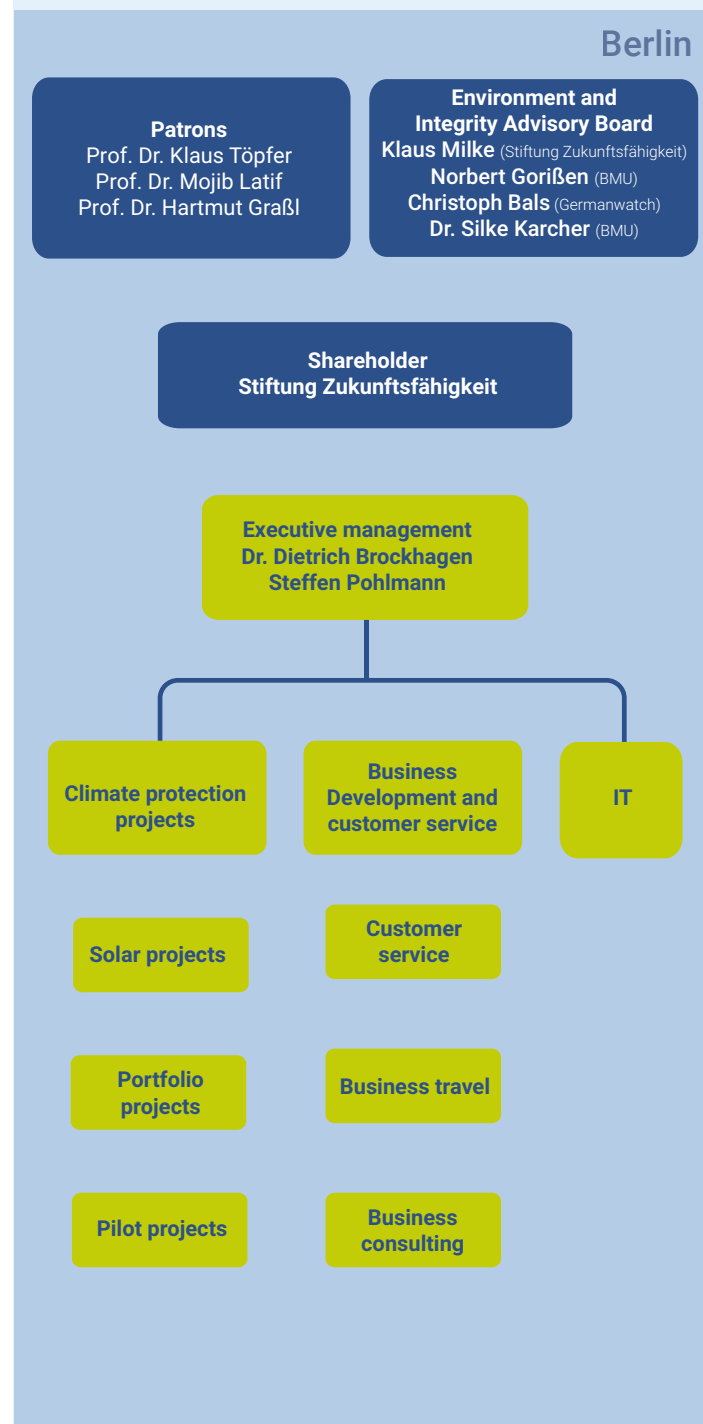
# Press review

Project  
countries

Organigram atmosfair  
atmosfair

Germany

Country managers  
in key countries  
and project partner



External  
experts and  
support staf



09.04.2020

## "Carbon offsetting - Can there ever be such a thing as guilt-free flying?"

Say you wanted to know how much CO<sub>2</sub> emissions were generated by a return flight from Manchester to Nairobi. Many companies' calculators give a result of 2.12 tonnes of CO<sub>2</sub>, which would cost £16 to offset. One company though, atmosfair, suggests a CO<sub>2</sub> footprint of 4.29 tonnes, which in turn costs £84 to offset, a significantly higher figure. So why the difference? Julia Zhu from atmosfair explains: "As recommended by the UN we include other pollutants like nitrogen oxide or soot particles that warm the climate in addition to CO<sub>2</sub>. For this reason, the impact of a flight with atmosfair is higher and stricter than with most other emissions calculators as we believe this represents the real climate impact of flying."

## Frankfurter Allgemeine

01.03.2020

### "Blind Gate"

Auf dem Leihfahrrad zum regionalen Essen – das passt zur zweiten Besonderheit von Unplanned: Alle Reisen sind klimaneutral. Wer so etwas wirklich will, muss viel rechnen. Etwa so: Der Airbus A320 hat 180 Plätze und verbraucht auf dem zweistündigen Flug von Berlin nach Dublin rund 6000 Kilogramm Kerosin. Laut des CO<sub>2</sub>-Rechners des Umweltbundesamtes erzeugt das auf Hin- und Rückreise 740 Kilogramm CO<sub>2</sub>. Dafür müsste eine helle LED-Glühbirne etwa 30 Jahre lang brennen. Das muss kompensiert werden, und deshalb arbeitet „Unplanned“ mit „Atmosfair“ zusammen. Der Verein aus Bonn fördert klimafreundliche Projekte, vom Wasserkraftwerk in Honduras bis zur Solarenergie in Asien.

## taz.die tageszeitung

27.01.2020

### "Für jeden Flug ein Baum"

Die Idee, mit Aufforstung und Moorschutz lokal CO<sub>2</sub> zu kompensieren, klingt für die Klimaschutzorganisation Atmosfair erst mal gut. „Wir brauchen auch in Deutschland den Wald, und die Wiedervernässung ist ein wirksames Mittel, um den CO<sub>2</sub>-Ausstoß von Mooren zu senken“, sagt Geschäftsführer Dietrich Brockhagen. Aber jede Tonne CO<sub>2</sub>, die so eingespart werde, erfasse die Bundesregierung selbst und rechne sie sich auf ihre Klimaziele an. „Das heißt im Klartext, dass dafür dann zum Beispiel der Verkehr in Deutschland wieder umso mehr CO<sub>2</sub> ausstoßen kann“, sagt Brockhagen. Dazu komme, dass jedes Moor über Jahrzehnte feucht gehalten werden müsse, sonst werde das CO<sub>2</sub> wieder frei. „Wald- und Moorschutz sind wichtige Klimaschutzmaßnahmen, sollten aber nicht über CO<sub>2</sub> Kompensation finanziert werden“, findet der Atmosfair-Geschäftsführer.



16.11.2020

## "Madagascar : 44 unités solaires mobiles d'une capacité combinée de 2,9 MW installées à Tuléar au sud de l'île."

(Agence Ecofin) - À Madagascar l'énergéticien français Akuo Energy a mis en service 44 unités mobiles d'une capacité combinée de 2,9 MW à Tuléar au sud de la Grande île. Il a réalisé ce projet en partenariat avec Enelec, une filiale du groupe Filatex. Chacune de ces unités mobiles est composée de 200 panneaux et peut fournir environ 66 KW. [...] La mise en œuvre du projet a coûté 6 millions d'euros alloués, entre autres, par Atmosfair dans le cadre d'un financement à long terme. L'organisation basée en Allemagne a pour mission de fournir des solutions de compensation aux émissions de gaz à effet de serre d'un grand nombre d'activités.

## CincoDías

06.10.2020

## "Cómo organizar viajes de negocios cuando no hay viajes de negocios"

Travelperk, creada en Barcelona hace cinco años, ha abierto más de 60 ofertas de trabajo en los últimos 90 días. Es la segunda compañía de la lista de Top Startups de LinkedIn España que más lo hizo. La pandemia no pudo frenar su crecimiento. TravelPerk aprovechó el hueco que se abre entre las agencias tradicionales a las que recurren las grandes empresas para gestionar viajes de trabajo y las webs de ocio vacacional. Según Meir, los viajeros demandan flexibilidad y cada vez muestran una mayor preocupación por las emisiones de CO derivadas de los desplazamientos. "Ahora la gente está muy centrada en la pandemia, pero pronto volveremos a poner el foco en el medio ambiente", afirma. TravelPerk ha firmado este marzo un acuerdo con Atmosfair, una entidad sin ánimo de lucro que provee de hornos solares a comunidades de Ruanda para que no talen árboles y quemen madera para cocinar o que dirige la instalación de centrales de biomasa para generar electricidad en India. Los clientes de la plataforma pagan un suplemento que de media asciende a 4% para compensar las emisiones que acarrea el viaje de negocio de turno.



<https://www.atmosfair.de/wp-content/uploads/pressespiegel-final-reduced.pdf>

This is only a small extract of a wide range of German and international press releases. A complete review of all publications can be found in the press review available to download on the atmosfair webpage.





## Johannes Strate

"Tackling climate change is an issue very close to my heart. For me, responsible travel is part of everyday touring. With Revolverheld we only fly when we really have to – but it can't always be avoided. By offsetting unavoidable flights with atmosfair, I can make my contribution to the urgently needed energy transition and, for example, supply people in the Global South with electricity."

Johannes Strate is a German singer, songwriter and musician. As the front-man of the rock band Revolverheld, he has sold over one million records to date. For their five studio albums and ten top 10 hits, Revolverheld have been awarded many double platinum, platinum and gold records as well as various prizes such as the MTV Europe Music Award, the Echo, the VIVA Comet, the 1Live Krone and the LEA Award.

In addition to his activities as a musician, Johannes Strate is very involved in social and charitable work, including his commitment to the SOS Children's Village, Seawatch, WWF and as an ambassador for the programme "Lifelong environmental awareness" at Werder Bremen.

think • go climate conscious

