

think • go climate conscious

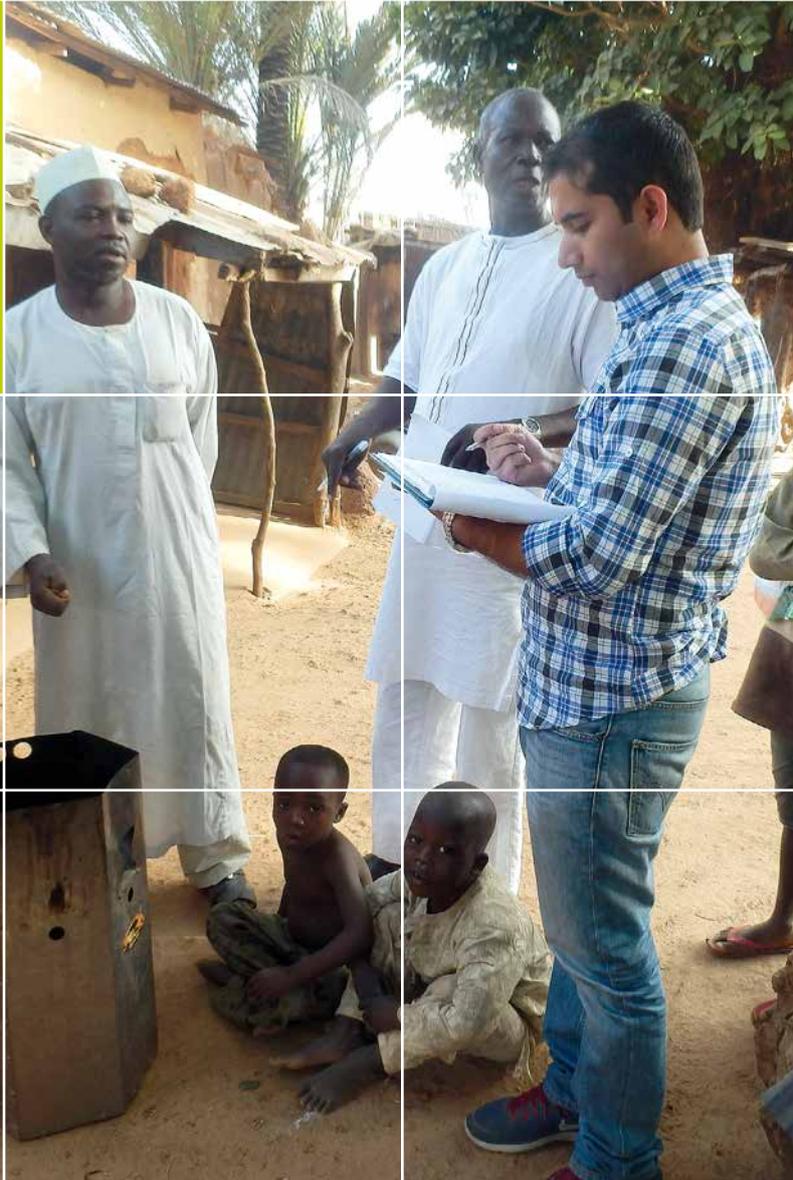
atmosfair



ANNUAL REPORT 2014

FOCUS

When the auditor pays a visit
The UN audits atmosfair projects



SOLAR POWER

Homemade solar thermal power station



EFFICACY
Offsetting cruises?



How does CO₂ offsetting work?



The CO₂ emitted stays in the atmosphere for many decades and is distributed as greenhouse gas across the globe. atmosfair offsets activities that create CO₂ and for which there are no climate-friendly alternatives.



2 °C goal
Limit global warming to 2°C

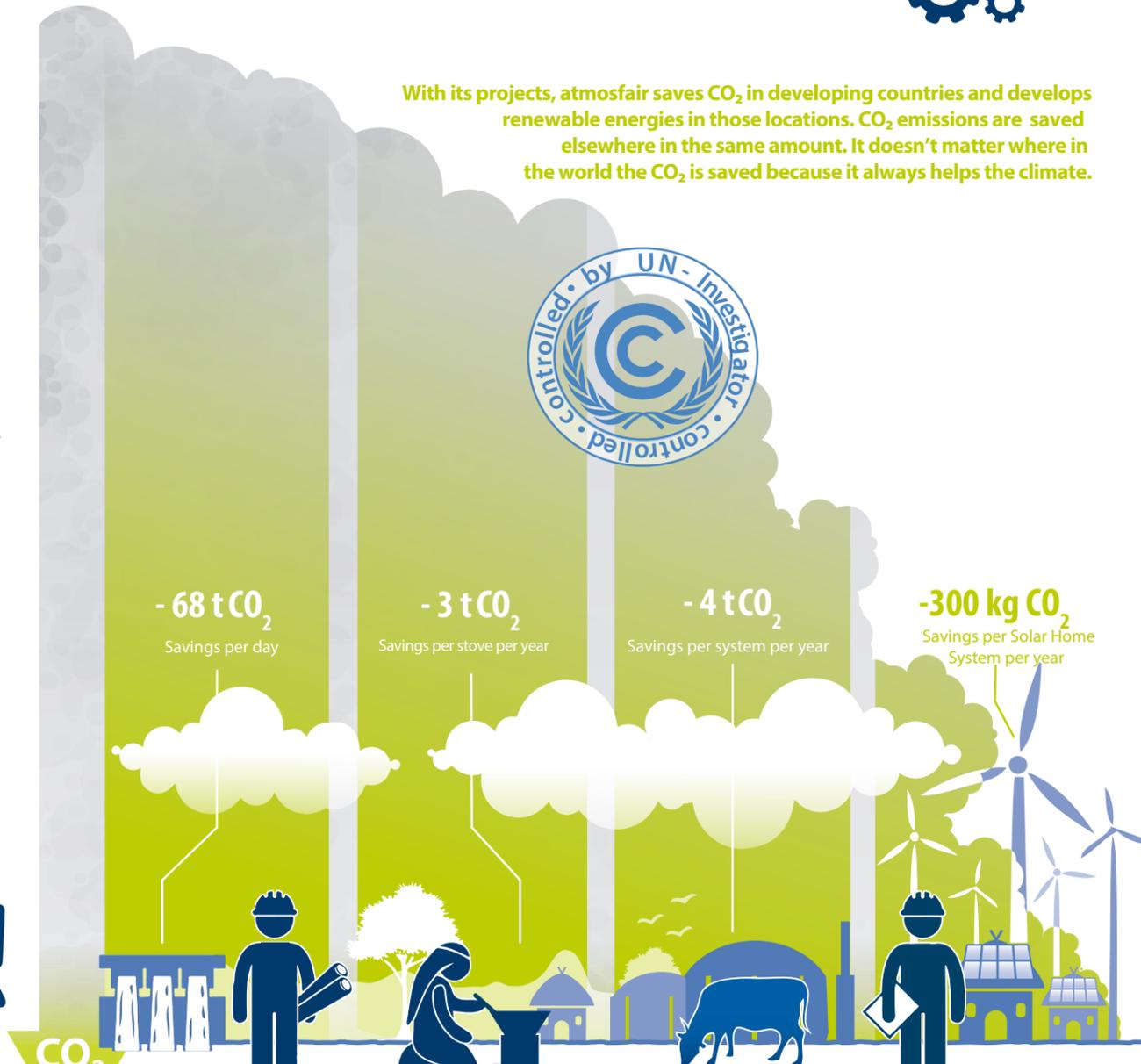


Participating in a conference
Conferences can only partly be replaced by videoconferences, which is why travel is often unavoidable.

A flight from New York to London
Far-off destinations can usually only be reached by plane. The only climate-friendly solution would be to avoid flying altogether. It will be decades until technology makes flying CO₂-free.

Manufacturing and location of a company
During the manufacturing process, CO₂ can be reduced through energy efficiency and green energy sources. Often, greenhouse gases are left over, and currently, there are no technical solutions for avoiding these.

With its projects, atmosfair saves CO₂ in developing countries and develops renewable energies in those locations. CO₂ emissions are saved elsewhere in the same amount. It doesn't matter where in the world the CO₂ is saved because it always helps the climate.



Small hydropower plant in Honduras
The small plant works using a natural incline and provides a remote region with electricity that had otherwise suffered from frequent power outages.

Efficient cookstove instead of open fire
Using wood leads to deforestation and pulmonary diseases from the smoke. Our stoves save 80% of the wood normally used, avoid smoke, and leave more money for families.

Biogas systems and biomass
Dairy farmers receive clean biogas around the clock when cow dung is fermented in small systems on farms. atmosfair pays for a critical subsidy.

Solar energy and wind energy
Renewable energies are common in German, but not yet in many countries in Asia and Africa. atmosfair helps with planning and financing these projects.





Source: NASA VisibleEarth

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Dr. Dietrich Brockhagen, Managing Director of atmosfair

Dear readers,

While climate change has been disappearing from editorials of mainstream media, the consequences of global warming have been oppressing ever more people in developing and emerging countries. According to the International Organization for Migration (IOM), 38 million people were displaced worldwide in 2010 due to climatic reasons, and this trend is increasing. Among these are many internally displaced people, i.e., farmers that must leave their land due to drought and water scarcity and migrate to the slums of the big cities. In the past year, I primarily visited families and households that live a subsistence existence in rural regions on trips to visit our projects in Nigeria and Nepal. Erosion, water scarcity, or extreme rainfall takes away the little that these people own. In 2007, Ban Ki Moon said that the war in Darfur was already a consequence of climate change: Arab cattle owners and black farmers lived peacefully together until it ceased to rain repeatedly in succession – with catastrophic results. Climate change has already arrived, just not for us.

Thus, the worldwide demonstrations for more climate protection, which took place for the first time on September 21st of last year, were all the more gratifying. Hundreds of thousands of people took to the streets in over 160 cities to demand ambitious climate protection goals. This was an encouraging sign during times in which international climate politics are sooner characterized by standstill. atmosfair was there in Berlin at the Brandenburg Gate, and in a short speech, I talked about the growing climate inequity.

In 2014, donations to atmosfair grew to an all-time high of 4.6 millions euros. Thank you so much! Our projects in Rwanda and other countries have been structured so that we can use each donation directly for purchasing additional efficient stoves (which cost around 30 EUR each) or small biogas systems (around 200 EUR). Our local partners are happy about each new delivery!

In 2014, we signed on for our biggest project yet. In Nepal, we are using your donation money to build systems that use cow dung and sewage water to produce biogas for farms in particular and improve health and hygiene at the same time. Families that own a biogas system no longer need firewood in order to cook. Besides the farms, there will also be systems in guesthouses along the many touristy trekking routes. Our project partners are Nepalese biogas system builders, NGOs, microfinance institutions, cooperatives, and the government. Our partners use financing from atmosfair in order to maintain existing systems and build additional ones. Read more about it on page 22.

The standards that atmosfair uses for all of our projects are especially important to us. In order to help our donors understand the testing processes that all atmosfair projects undergo, we have decided to focus on project review in this Annual Report. You can find the reports and interviews on the certification and continuous controlling by the UN and Gold Standard Foundation on pages 32 to 36.

Die 10 saubersten Airlines der Welt

Schmutzfink oder Saubermann? Der „Atmosfair Airline Index“ vergleicht die CO₂-Emissionen pro Passagier und Flugkilometer von 193 weltweiten Fluggesellschaften. Die Klima-Sieger:

- 1 Tunisair Express (Tunesien)
- 2 TUIfly (Deutschland)
- 3 MASwings (Malaysia)
- 4 Monarch Airlines (Großbritannien)
- 5 SunExpress (Türkei)
- 6 Okay Airways (China)
- 7 Air Transat (Kanda)
- 8 TAM Linhas Aereas (Brasilien)
- 9 Air New Zealand Link (Neuseeland)
- 10 Pegasus Airlines (Türkei)

The Bild newspaper, November 2014: The Airline Index made headlines



Dr. D. Brockhagen

Dr. Dietrich Brockhagen, Managing Director of atmosfair



atmosfair project India One: solar thermal power station in Rajasthan (India)

The limits and opportunities of offsetting

Offsetting greenhouse gas emissions will not even save half of the amount of reductions required to prevent reaching a climate tipping point. Although offsetting does dramatically reduce CO₂ output in developing countries, emissions remain high in industrialized countries.

In 2014, atmosfair continued to receive many inquiries from manufacturers about offsetting various products. However, because this is not an automatic solution to climate protection, atmosfair participated in expert group discussions, such as at the German Federal Environment Agency (UBA). This is because climate protection involves every individual. "We must question our lifestyles because all people have the same right to equal living conditions," explained Klaus Mischen, Head of the Climate Protection and Energy Unit at UBA, at a conference on voluntary offsetting in November 2014. In order to practice effective climate protection in everyday life, the phrase "avoid, reduce, and only then offset" applies, Frank Wolke also stressed at the German Emissions Trading Authority (DEHSt).

This has always been atmosfair's position on the matter. Offsetting can only ever be the second-best solution because it is always better to avoid emissions in the first place. When this is not possible, such as for long-distance flights that the passenger has already decided to do, offsetting becomes the best remaining solution. In this case, flying without offsetting emissions is like riding public transportation with a ticket for the climate.

According to DEHSt representative Wolke, offsetting service providers are therefore responsible for educating consumers about offsetting and must make clear that offsetting must be

accompanied by a low-emissions lifestyle above everything else.

All countries must reduce CO₂ emissions

Das Ausgangsproblem ist klar: Die globale Konzentration von greenhouse gases can only increase a little. The Intergovernmental Panel on Climate Change's (IPCC) current report specifies that the CO₂ concentration in the atmosphere rose by 2.2 percent every year between 2000 and 2010. The report maintains that sea level is rising far faster and more strongly than has been assumed until now. A volume synthesizing the reports that was completed in November 2014 concludes that the consequences of climate change could be very costly to the global economy.

For this reason, there are plans for a new global climate treaty to be concluded that would oblige all states to save greenhouse gases for the first time. Many experts from politics and science see the meeting in Paris as the last chance for all parties in the UN Framework Convention on Climate Change to commit to binding goals and still be able to avoid reaching the climate tipping point.

In order to achieve this, global CO₂ emissions need to decrease by 80 percent as compared to 1990 by the year 2050. By 2100 at the latest, we may not emit any more CO₂ at all.

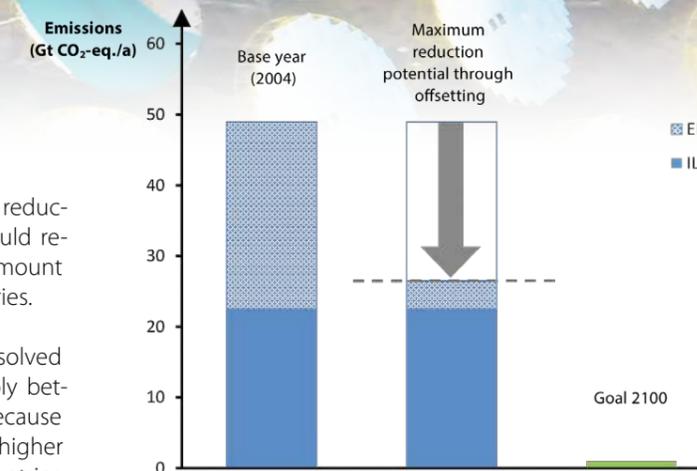
Offsetting is not enough

However, offsetting cannot achieve even half of the reductions required. This is because although offsetting would reduce CO₂ output in developing countries, the same amount or even more would be emitted in industrialized countries.

The graphic shows why the climate problem cannot be solved with CO₂ offsetting. CO₂ offsetting only works sensibly between industrialized and developing countries. This is because today, the industrialized countries already have much higher avoidance costs per ton of CO₂ than developing countries. In addition, developing countries need technologies that are supported by CO₂ offsetting to gain a foothold. However, in order to achieve the 2° goal, all countries must reduce their CO₂ output dramatically. Even if all of the industrialized countries' CO₂ emissions were hypothetically completely offset and the developing countries were transformed into zero-emissions countries, the remaining emissions from industrialized countries would be too numerous to reach the two-degree goal. The climate is up against the wall. For this simple reason, it is easy to see that offsetting cannot replace reduction measures at the source, but that it can supplement these when reduction is not possible.

"Rebound effects" can stimulate consumption

Added to this are side effects of offsetting that have not previously been considered such as the "rebound effect," Frank Wol-



The maximum global potential for reduction through offsetting. If all industrialized countries' emissions were offset through a corresponding reduction in developing countries, global emissions could not be reduced in the amount required (THG emissions 2004; IPCC 2007b).

ke of German Emissions Trading Authority also posits. Instead of consuming less, offsetting can cause a rise in demand for certain products. In other words, there is an increase in consumption and with it, emissions. Nevertheless, offsetting can contribute to educating users. In particular, the climate as a resource loses its status "as a freely available common good," as Wolke puts it, through the price of offsetting.

This is why at atmosfair we say: first think and then go climate conscious. ➤

Forest projects – yes please, but no “climate forest”

When people think about CO₂ offsetting, often planting trees is the first thing that comes to mind. However, atmosfair still does not support any reforestation projects. We explain why below.

First: atmosfair absolutely supports forest protection projects: all projects in which we support households with efficient stoves or biogas systems lead to a reduction in firewood usage. As a result, less wood is felled from. In this way, atmosfair projects save over 100,000 tons of wood in total and the corresponding number of trees. However, switching to renewable energies is of paramount importance to these projects.

atmosfair will continue to avoid this type of reforestation project for the following reasons:

- **The benefit to climate protection is uncertain:** If an afforested forest is destroyed, the carbon stored in the trees returns suddenly into the atmosphere. This can happen through fires, but also if a country votes for a government that decides that forested areas should be used in the future for an industrial park or for traffic routes. There is usually a lot of pressure on forests, especially in the developing countries where most CO₂ offsetting reforestation projects take place, and we are not entitled to pass judgment on the decision that the country's inhabitants make.
- **Therefore:** ensuring CO₂ savings only works by avoiding emissions in the present, such as through renewable energies or energy efficiency.
- **An energy revolution is more important:** In order to achieve a green future and end the age of fossil energies, it is essential to redesign energy supply systems because this is where by far the most CO₂ is created. At best, forest protection and reforestation can help climate protection. However, they cannot help us to reach the two-degree goal, which will only be achieved with a global energy revolution. Climate protection projects can best contribute to this end when they support the right technologies. It's especially important to set upon the right course in rapidly growing emerging and developing countries.
- **Unreliable monitoring systems:** Trees do not store CO₂ right away; it takes time. However, forest projects' funding requirements are especially high at the beginning. This problem is usually addressed by distributing CO₂ certificates in advance for the expected CO₂ offsetting. This is even true in the Swiss Gold Standard Foundation's new forest standard. However, the sustainability of the projects cannot be guaranteed. In

other words, there is no requirement that a forest must exist for 50 years before being felled in order to have helped the climate in a meaningful way on balance. This is because there is a danger that in the decades after planting, neither the project operator nor the certificate buyers have sufficient interest in maintaining the forest – at the least when problems can be foreseen. After all, they already received their certificates for the CO₂ offsetting in advance and should hardly have to give them back if the forest does not exist anymore in 20 years.

We think that reforestation and especially forest conservation can make an important contribution to climate protection, but should not be financed through CO₂ offsetting. This is espe-



There is also reforestation in the Honduras hydropower project, but atmosfair does not account for these CO₂ savings.

cially true in projects in which certificates are distributed for forests that are not felled, or so-called avoided deforestation. A big market has arisen around such UN forest projects (REDD - Reducing Emissions from Deforestation and Degradation). However, it is usually difficult to demonstrate a connection between CO₂ financing and forest protection. In fact, incentives against stronger laws can develop because certificates are not generated for forests that are protected by law. atmosfair therefore continues to back technology projects that always have additional benefit for the local people. ➤

Interview

„Hey man, what are you doing?“

Guido Buchwald (54), one of the most famous German soccer players, played for the World Cup champion team in 1990. He shaped the German national soccer league as a player and a coach as well as soccer in Japan. Today, Buchwald is an honorary team captain for VfB Stuttgart and a member of the Board of Trustees of the German Youth Football Foundation.

➤ **Mr. Buchwald, you lived and worked in Japan for many years, in the 1990s as a player and after 2000 as a coach. How often would you fly to Germany and back in a year?**
I had to fly back and forth three or four times per year. I had already tried to minimize it, but to manage such a long route in the age of globalization, it's really only possible by plane.

➤ **Aside from the time that you that you spent traveling there, had you already thought about the fact that flying is one of the ways of getting around that is most harmful to the climate?**

Yes, I was indeed aware of this. However, especially back in the 1990s, people didn't think about it too much and simply viewed it as a necessity. The problem only became clear to me later, especially through all of the publications about the climate, climate change, and its causes. Since then, I have approached the topic in a much more conscious way.

➤ **How did you come across atmosfair and the idea that you could offset your flights?**

I was approached by atmosfair and met with a representative of the Climate Protection Portal – appropriately – at the Stuttgart Airport. This made me realize that people can reduce a little of the damage that they cause through financial compensation – that people can somewhat offset those things they have to do that still endanger the environment.

➤ **Is it more a matter of personal concern, or do you take climate aspects, e.g., when organizing conferences or business travel, into account in the corporate policy of your two companies?**

I offset my own flights with atmosfair. This is important for me personally. For work activities of my two companies, it plays less of a role.

➤ **The public hardly hears that successful professional soccer players such as you have an ecological streak. What is the source of your motivation?**

It was always important to me to preserve the environment and resources. It's something that interested me early on. I dealt with it in a conscious way and tried to optimize many things to reduce the damage to the environment. It's really the simple things that make me angry. Someone or other is quick to think of himself as a big environmental protector, yet throws a cigarette butt out the window. Even early on, I approached

people about it: “Hey man, what are you doing? A cigarette butt isn't biodegradable. It harms the environment, and somebody has to clean it up.” They just stared at me dumbly – I was pretty young at the time. What I'm trying to say is that people should start with themselves, even if it's avoiding using the standby setting when you're using electricity, for example. Those are just a lot of small things that nonetheless sum up on a large scale. Everyone should be aware of this, young and old. Small things like this can hardly be called constraints, but people can still achieve a lot with them.

➤ **So you have a Swabian thoroughness when it comes to environmental issues?**

Yes. By the way, I have a brother who attaches great importance to ecological behavior. We exchange ideas about it time and again. If I'm being honest, I actually wasn't someone who followed environmental issues so intensively. Thus, I can also thank my close family for the fact that I am environmentally conscious. My brother also offsets his flights, by the way.

➤ **The soccer industry is also trying to be on the ball about the climate issue: Hamburger SV, for example, offsets its flight emissions. Mainz 05 even thinks that it is the first climate-neutral team in the German national league. The German Football Association launched the program “green goal” at the Women's World Cup. What do you think about this?**

This is not just a passing phase. These actions are very important in order to raise awareness about the issue. A lot can be achieved by making these issues public. Soccer players, who play on green grass and are often in nature, are actually very receptive to this way of thinking.

➤ **You are a member of the Board of Trustees of the German Youth Football Foundation. People who are young today will probably be affected by the consequences of climate change to a far greater extent than the older generation. Do young soccer players talk about topics like environmental protection or even climate change?**

I think that young people's interest has remained rather the same. If you talk to them about it, they listen and are aware that we have a duty to minimize environmental damage for the future and the next generations. However, if you don't constantly bring up the topic, I have to say that their interest drops off and people fall into their daily routine. For this reason, it is important to make young people sensitized to this issue through small references and comments so that they behave in a more environmentally conscious way.



How atmosfair works

How does atmosfair find its projects?

At the beginning of every new atmosfair project, there is always an idea. Often there is not just one, but a dozen suggestions on where and how we could improve people's living conditions and make them more climate-friendly. Our first contact with potential project partners always happens in a different way, and every project has its own story. In the early years, the atmosfair team still actively searched for projects through project proposals, contacts to development aid organizations, technology providers, or the Swiss Gold Standard Foundation. Today, there is less need for new projects because now the majority of voluntary climate protection contributions are used in order to expand existing atmosfair projects. In addition, we have built up a dense network of contacts to possible project partners in the meantime. For this reason, there are lots of suggestions, and we do not have to search much anymore.

Suggestions for projects range from rough ideas to fully developed concepts that are in need of financing. Thematically speaking, we support different project types from household technologies to power plants that are operated by small NGOs, cooperatives, or companies. We do not have a strict application procedure, but rather a flexible project assessment that is more like getting mutually acquainted, while minimum requirements must be met. We pay attention to the following criteria in this process:

- Technology and project size, the chance to expand in the future
- Possible CO₂ savings
- Funding requirements and additionality (are atmosfair funds really needed?)
- Country and general context
- Does the project partner have local roots? Does it share

atmosfair's goals, and can it be trusted to implement the project based on its previous experience?

If the result of this first assessment is positive, we meet with the potential partner about project planning. At this point, any remaining questions are clarified. At the same time, both parties get an impression of how the collaboration is working. It is important to atmosfair that the communication runs smoothly. In addition, the partner must be ready to perform the complex process of monitoring the project's success in the long term.

Finally, there is usually a small pilot project. In the case of the efficient stoves in India, the local project partner systematically evaluated the experiences of a few dozen households after two months. If all runs according to plan, atmosfair concludes a grant agreement with the partner.

In contrast to many other projects in developing countries, collaboration with atmosfair does not entail creating a detailed budget for individual project expenses. Generally, the grant agreement plans for payments that are dependent on measurable project successes, e.g., the number of successfully built small biogas systems. However, since we pay the money in advance, small partners can also receive support, though atmosfair can end the agreement if the partner does not reach the agreed-upon milestones.

To atmosfair, success means saving greenhouse gases. In this, the project partner is flexible, but also has a high level of personal responsibility. This is important because stable structures are most likely to form if the local partner sets the details of the concrete implementation according to sound business criteria. This is because atmosfair's financial support will decrease in the long term. Thus, it is our goal for the operator to be financially independent, allowing atmosfair to use its funds to support new projects ➤

Typical progression of a CDM Gold Standard project

Your climate protection contributions are at the start of every atmosfair project. At the end is the corresponding amount of CO₂ emissions. In between, there is a rigorous certification process because we want our projects to be certified strictly. Thus, we follow the UN standard Clean Development Mechanism (CDM) as well as the Gold Standard, which was developed by environmental NGOs. This graphic shows what that means concretely.

PHASE I: Planning (3 months)



- 1 atmosfair tests the project idea according to demanding criteria
- 2 atmosfair concludes a project agreement with the project partner
- 3 atmosfair produces a project plan (PDD) and consults with the local population as well as other parties concerned (stakeholder consultation)

PHASE II: Approval (9 months)



- 4 The host country approves the project
- 5 The auditor tests the project plan and provides comments (validation)
- 6 atmosfair releases the agreed funds; the project partner begins to implement the project.
- 7 atmosfair integrates the auditor's comments and those of the other parties concerned into the project plan
- 8 The auditor produces a validation report on the project
- 9 atmosfair submits an application for approval to the UN
- 10 The UN reviews the application and approves the project (UN registration)
- 11 atmosfair submits an application for approval to the Gold Standard Foundation
- 12 The Gold Standard reviews and approves the project (Gold Standard registration)

PHASE III: Operation



- 13 The project partner fully implements the project together with atmosfair; atmosfair documents and monitors the emissions savings produced
- ... The auditor checks the actual emissions savings and produces a report on this (verification)
- 24 The UN checks this report and issues CO₂ certificates to atmosfair
- ... atmosfair decommissions these CO₂ certificates permanently with the German Emissions Trading Authority (DEHST)

Work performed by atmosfair/project partner

Work performed by auditor

Obligations fulfilled

Since 2005, atmosfair operates and finances climate protection projects worldwide with voluntary climate protection contributions. First, we conclude a grant agreement with the project operator. In this, how much CO₂ the project should save each year and how it will be supported by atmosfair is laid out in contractually binding form. From the time that the donation is made to the actual CO₂ savings, up to two years can pass. This is time that we need for the project planning and development. Approved UN assessors confirm the CO₂ savings accounted for. To this day, atmosfair has always fulfilled its obligations and produced the agreed-upon CO₂ savings for all donations received.

Climate gas reductions, achieved or contractually bound^{1,2}

| Efficient stoves | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Total until 2016 | Planned for 2017-2020 ⁴ |
|----------------------------|------|------|------|------|------|------|------|------|------|------|-------|------------------|------------------------------------|
| Nigeria: Efficient stoves | | | | 0.4 | 4.7 | 9.3 | 15.8 | 22.8 | 28.9 | 31.3 | 29.4 | 142.5 | 82.5 |
| India: Efficient stoves | | | | | | | 0.3 | 3.4 | 17.8 | 28.0 | 68.0 | 117.6 | 352.0 |
| Cameroon: Efficient stoves | | | | | | | 3.2 | 9.3 | 10.0 | 10.0 | 10.0 | 42.5 | 19.9 |
| Lesotho: Efficient stoves | | | | | | | 3.1 | 18.8 | 25.4 | 25.8 | 25.6 | 98.6 | 101.0 |
| Rwanda: Efficient stoves | | | | | | | 0.4 | 3.8 | 12.0 | 90.0 | 140.0 | 246.1 | 535.0 |

| Biogas and biomass | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Total until 2016 | Planned for 2017-2020 ⁴ |
|--|------|------|------|------|------|------|------|------|------|-------|-------|------------------|------------------------------------|
| India: Electricity production from crop residues | | | | 11.4 | 43.9 | 28.2 | 36.3 | 55.7 | 59.7 | 37.1 | 28.4 | 300.6 | 0.0 |
| India: Biogas systems for households | | 5.0 | 12.0 | 11.4 | 10.5 | 10.0 | 9.2 | 6.2 | | | | 64.4 | 0.0 |
| Kenya: Small biogas systems for dairy farmers | | | | | | | | 1.1 | 1.4 | 2.3 | 4.0 | 8.9 | 21.6 |
| Thailand: Biogas from sewage | | | | 5.5 | 8.2 | 17.7 | 18.6 | | | | | 50.0 | 0.0 |
| Nepal: Biogas | | | | | | | | | | 176.9 | 176.9 | 353.8 | 169.1 |

| Wind, water, sun | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | Total until 2016 | Planned for 2017-2020 ⁴ |
|---|------|------|------|------|------|------|------|------|------|------|------|------------------|------------------------------------|
| Honduras: Small hydropower plant | 6.0 | 12.7 | 20.7 | 9.7 | 34.4 | 31.7 | 23.2 | 31.7 | 20.3 | 29.6 | 29.6 | 249.6 | 5.0 |
| Nicaragua: Wind power | | | | 63.4 | 56.9 | 20.0 | 20.0 | 20.0 | 20.0 | | | 200.3 | 0.0 |
| Ethiopia: Solar Home Systems | | | | | | | | | | 0.1 | 0.5 | 0.6 | 2.0 |
| South Africa: Solar thermal power in households | | | | | | | | | 10.0 | | | 10.0 | 0.0 |

| Environmental education | - atmosfair does not credit itself with these CO ₂ savings | | | | | | | | | | | | |
|---|---|------|------|-------|-------|-------|-------|-------|-------|---------|---------|---------|---------|
| Total | 6.0 | 17.7 | 44.1 | 128.7 | 140.2 | 115.5 | 148.5 | 195.3 | 182.8 | 422.4 | 484.0 | 1,885.4 | 1,288.0 |
| Reductions pledged for climate protection contributions received ³ | 0 | 9.5 | 9.5 | 63.5 | 88.6 | 92.2 | 93.6 | 82.6 | 92.0 | 96.8 | 106.9 | | |
| Reductions pledged for climate protection projects on behalf of customers | | | | 3.5 | 15.0 | 63.8 | 40.3 | 66.4 | 80.3 | 34.3 | 0.0 | | |
| Accumulated climate gas reduction pledges | 0.0 | 9.5 | 19.0 | 86.0 | 189.6 | 345.6 | 479.5 | 628.5 | 800.8 | 932.0 | 1,038.9 | | |
| Accumulated climate gas reductions achieved or contractually bound | 6.0 | 23.7 | 67.9 | 196.6 | 336.8 | 452.3 | 600.7 | 796.1 | 978.9 | 1,401.3 | 1,885.4 | | |

| Pledges met (comparison between reductions and reduction pledges, accumulated) | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--|------|------|------|------|------|------|------|------|------|------|------|
| | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

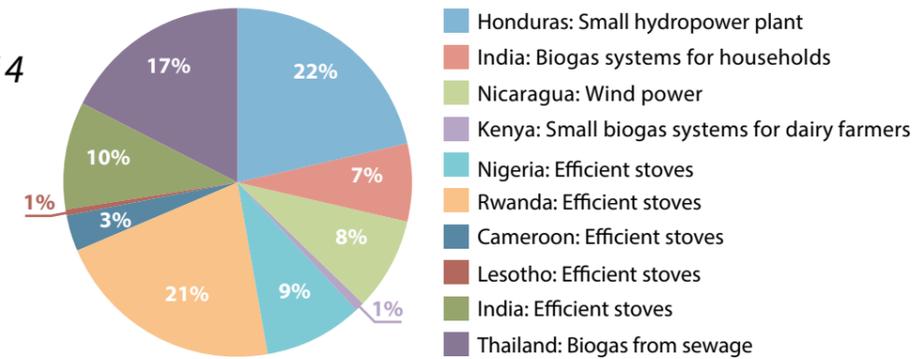
¹ In the table, the allocations of climate gas reductions from monitoring periods across multiple years were standardized to calendar years. Through this, there are deviations for individual years in comparison to previous annual reports.
² The actual climate gas reductions can only be ascertained after the projects are externally audited. Two to three years can elapse between the reduction and the audit. The data on achieved reductions can therefore change in comparison with the previous annual reports, even for years that have already passed.
³ Up to two years can elapse between the receipt of a donation and its use in a climate project. For this reason, the revenues from the reporting year 2013 are displayed here as reduction pledges to be rendered for the year 2015.
⁴ The planning is taking place due to the projected revenues in the future and will be adjusted up or down accordingly each year.



Our projects

Expenditures for climate protection projects in 2014

In 2014, around 2.4 million euros went to atmosfair climate protection projects. You can see how this was allocated to individual projects in this graphic.



Efficient stoves

atmosfair subsidises energy-efficient stoves in Africa and Asia. The small stoves are popular because people immediately realize that they require less firewood and save money as a result.

Biogas and biomass

atmosfair partners build small biogas systems that convert cow or pig manure into cooking gas and valuable fertilizer. Besides this, atmosfair supports the production of electricity from crop residue and composting organic waste.

Wind, water, sun

Wind, water, and sun are the pillars of renewable energy supply. atmosfair supports projects that not only help the environment, but also help the local economy.

Environmental education

Climate protection begins in our own backyard. For this reason, atmosfair supports educational project at German schools as an investment in the future. atmosfair does not credit itself with the CO₂ savings.

Over 18,000 highly efficient stoves sold worldwide – Stove users protect the climate



In 2014, atmosfair partners sold a total of over 18,000 new efficient stoves at subsidized prices to households in five countries. During the validation process, external auditors estimated CO₂ savings amounting to over 35,000 tons. Stove owners in India, Cameroon, Lesotho, Nigeria, and Rwanda play a central role in reducing greenhouse gases and protecting forests. The stove projects in India and Rwanda in particular were developed further. Besides saving CO₂ and reducing household expenditures for firewood and harmful smoke, atmosfair projects also create long-term jobs. In 2014, a total of 45 full-time employees in five countries were responsible for assembling, selling, and documenting new efficient stoves as well as monitoring their usage and efficiency.

Household with stove in India



Charcoal transport vehicles in the Ganges Delta

150 tons of charcoal every month

6,000 new charcoal stoves in the Ganges Delta

In the Ganges Delta, over 6,000 households are already using innovative charcoal stoves that are financed by atmosfair. To monitor the project, atmosfair employee Robert Müller visited the project together with TÜV at the end of October last year. The auditor Chetan Sharma from New Delhi was impressed: for thousands of households, cooking and producing charcoal at the same has become commonplace.

tobacco dryers. In this way, the jobs of collecting and selling the charcoal can be passed on to project employees step by step. This will allow them to build a local industry as independent small entrepreneurs. Long-term project success will be evident when outside support is superfluous – of this atmosfair is convinced. ➤

For this, the users first fill the so-called pyrolysis stoves (manufactured by Indian project partner and stove producer Servals Automation) with wood. They then light the stove from above. Through a pyrolysis process low in oxygen, wood gas is produced, which rises and burns cleanly directly under the pot. The smokeless gas flame also allows people to cook without watery eyes. Cooking is also much more comfortable since people no longer have to continually add more wood. At the same time, the wood turns into charcoal and can be sold by the users. Because of this additional income, the stove pays for itself in a few months.

In this way, the climate benefits are twofold: the stoves require less firewood than open hearths previously did, and it no longer takes vast quantities of wood in order to produce charcoal. Now that 6,000 households already use the innovative pyrolysis stoves, we have reached the next formal expansion stage: since the project is growing further, the demands for project documentation and monitoring of CO₂ reductions according to UN rules are growing. The bigger project must be audited again by a UN auditor and then approved. This was also the case for similar atmosfair projects in Rwanda and Nigeria.

However, the responsibilities of project partner Moulindu Banerjee are growing along with the size of the plans. Going forward, the end user price will rise, allowing atmosfair's financial support to decrease by degrees.

The charcoal logistics chain is also becoming more challenging. This is because nowadays, Moulindu collects 150 tons of charcoal from the 6,000 households every month. This is the equivalent of 40 small trucks full of fuel. Soon, these will no longer be packed in Calcutta, but rather sold locally. Local customers have already been found, for example, goldsmiths or



An Indian stove user receives technical instruction

Bon appétit! Global recipes

Have more fun cooking with efficient stoves

Nigeria: Efo Riro (vegetarian meal/soup)
Source left: atmosfair
Source right: tastevillecaterers.com/blog

Origin: Odua Kingdom - Yorubaland

Ingredients:

- Efo (or other green leafy vegetable, such as spinach),
- Onions
- Fresh pepper
- Tomatoes
- Vegetable broth
- Oil
- Salt
- Carob
- Water



Directions:

First, heat oil in a pot for around 1 minute. Add freshly ground pepper, vegetable broth, and carob and cook for about 10 minutes. Add water and bring to a boil (around 5 minutes). Add finely chopped vegetable leaves (make sure they are pre-washed) and cook just 5 minutes longer (in order to keep as many vitamins as possible) or set it in the Wonderbox for 2-3 minutes..

Cameroon: Kwakoko

Ingredients: (makes approx. 40-50 kwakoko packets)

- Approx. 10-15 kg ripe macabo corms (10 kg of corms yields approx. 8 kg paste)
- 3/4-1 liter palm oil
- 1/2 tablespoon salt
- 500 g macabo leaves chopped finely
- 500 g dried fish in small pieces
- 500 g dried shrimp
- 4-5 cubes of bouillon
- A pinch of ground pepper
- Banana leaves as "special packaging"



Macabo corms

The corms are used to prepare kwakoko, which is highly prized in Buea and in southwestern Cameroon



Before and after
How to cook traditionally on the Save80

| Traditional | Save80 |
|---|---|
| <ul style="list-style-type: none"> • Longer cooking time • All ingredients are added onto the fire during cooking | <ul style="list-style-type: none"> • Less time on the fire since it can be cooked faster (stove loses less heat through its efficiency) • The vegetable leaves are added at the end when the pot is put into the wonderbox • Less firewood is required |

Directions:

1. Peel the macabo corm. After peeling, wash one or two times with clean water. Then, cut the corms into small pieces and blend them into a white, slightly sticky paste using a blender.
2. Mix the macabo paste with the other ingredients (palm oil, macabo leaves, smoked or dried fish, shrimp, salt, vegetable bouillon, pepper). Note: do not add water.
3. Mix by hand and whisk carefully. The paste will be yellow.
4. Cook the banana leaves briefly to soften them. Then, cut the banana leaves so that you can fill each one with 200 g of kwakoko. Form kwakoko packets using the cooked banana leaves.
5. Just before cooking the Kwakoko packets: put the pot on the heat source (either on a wood fire or ideally on an efficient stove). Cut small pieces of wood and place these under the pot. Then, fill the pot with approx. 1 liter of water and place the kwakoko packets into the pot. The kwakoko packets should not touch the bottom of the pot to prevent them from burning.
6. Check the amount of water in the pot from time to time and add water when necessary. Leave everything with the pot closed for approx. 1.5 to 2 hours on low heat; here we used an Envirofit cooker
7. The kwakoko packets are finished
8. Enjoy!

How to cook with the "wonderbox" or a blanket?

Directions for energy-efficient cooking



Wonderbag, portable slow cooker | EUR 69,99*

Cooking bag/ Wonderbag | EUR 34,99*

Thermal Cooker | EUR 76,00*

Along with the energy-efficient stoves such as the Save80, there is always a wonderbox included. This is an additional insulated container in which the dishes can be cooked to completion without using additional energy. However, actually anyone who has a blanket or another isolation method on hand can prepare food in this way and save a lot of energy. There are a lot of thermal pots, slow cookers, and wonderbags on the market..

Not only will the electricity or gas bill be lower, but the food will never burn. Former atmosfair intern Leo says: "Since I worked for atmosfair, I only cook my rice using a blanket." In order to use the blanket, place the pot on a dishtowel and wrap the pot and towel firmly in a blanket. If you want to try this principle, here are a few tips:

| Ingredients | Directions | Cooking Time | Time in the wonderbox, wonderbag, or wrapped in a blanket |
|--|---|--|---|
| <ul style="list-style-type: none"> • 2 kg beans (or peas or lentils) • 5 liters water • Some meat | Soak the beans overnight in water if possible | Boil for 20 minutes | 2-3 hours depending on the size of the beans |
| <ul style="list-style-type: none"> • Broccoli | Cut off the florets | Bring water to a boil, then add broccoli florets and bring to a boil | 6-20 minutes (depending on desired texture) |
| <ul style="list-style-type: none"> • Noodles | Bring water to a boil | Add noodles to boiling water and let it simmer for a little while longer | 10-15 minutes |
| <ul style="list-style-type: none"> • 2 kg rice • 4 liters water • A little salt | | Bring water to a boil and add rice. Bring to a boil again, then stick the pot with the lid on into the wonderbox | 20-40 minutes depending on the type of rice |
| <ul style="list-style-type: none"> • Rwandan rice | Heat oil, add grated carrots and rice; continue to "sear" | Fill with water and quickly bring to a boil | 20-40 minutes depending on the type of rice |
| <ul style="list-style-type: none"> • 3 kg potatoes • 3 liters water | Add potatoes to the pot with cold water. The potatoes cook faster if they are cut into small pieces | Bring water with potatoes to a boil and cook for five additional minutes | Put pot with contents in the wonderbox – the potatoes will be cooked in 30 minutes |
| <ul style="list-style-type: none"> • Red meat or chicken • Water • Some vegetables and spices | | Bring the contents of the pot to a boil | Chicken meat will become soft and fall off the bone after 2 hours in the wonderbox; other meat will also be well cooked through |
| <ul style="list-style-type: none"> • 3 fishes (e.g., trout) • 2 liters fish broth | | Bring the fish broth with the spices to a boil, then add the fish and let it cook further for a short time | The fish will be ready in 30 minutes |

Before and after
How to cook traditionally on the Save80

| Traditional | Save80 |
|--|--|
| Everything is cooked continuously on the fire. | When the vegetables are brought to a boil, they are then placed into the wonderbox until they are soft. Then the stove is free to prepare other side dishes (e.g., rice or beans). |

Ruanda: Isombe

Author: Allan Mubiru – Country Manager in Rwanda

Ingredients:

- 500 g cassava leaves
- 6 spring onions
- 2 eggplants
- 500 g spinach
- 2 green bell peppers
- 3 teaspoons oil
- 3 teaspoons peanut butter
- 500 g dried fish (optional)



Directions:

1. Add cassava leaves to salted water and cook until they are soft (refill water if necessary). Add dried fish if desired.
2. Add finely chopped spring onion, eggplant, spinach, and pepper and cook for 10 minutes on medium high.
3. Add oil and peanut butter and stir well in order to create a soft paste.
4. Let simmer again for 10 minutes to thicken, then serve with rice or bread.



Traveling by Jeep and GPS: Local monitoring in Africa

The year 2014 was particularly exciting and labor-intensive for atmosfair since an audit of all five stove projects' emissions savings took place for the first time. We explain the process and background for monitoring on pages 32-36.

While the projects in Nigeria, Cameroon, and Lesotho have already been successfully audited in the last years, it was the first time for our partners in Rwanda and India. Planning and executing the audit in Nigeria was one of the biggest challenges in 2014.

Involvement in Nigeria under difficult conditions

The last years have not been peaceful in northern Nigeria in particular. In the last year, the abduction of young girls as well as several attacks shook the world. The security situation is still tense. In the meantime, the Nigerian government declared a state of emergency in three regions. Naturally, this has not left our project partners and the project unscathed. All aspects of project work have been affected: our partners' security, selling the stoves, the annual survey of stove users, and even the on-site monitoring by a UN auditor.

Due to the higher risk potential, most auditing organizations do not want to travel to Nigeria. The majority of western governments continue to advise against traveling to northern Nigeria. All of this makes the external audit and, associated with this, visiting around 50 households throughout the whole country into a massive undertaking with almost no solution.

For this reason, atmosfair applied for an exemption with the UN Climate Change Secretariat that would reduce the number of households that must be visited and would exclude the dangerous areas. This would allow us to perform the audit in the crisis zones despite the circumstances. After intense discussions with the UN, this exemption was granted. atmosfair was able to find an auditing organization from South Africa that was ready to travel to Nigeria under these modified conditions.

At the end of October 2014 it was time: a UN auditor from South Africa and atmosfair Managing Director Dietrich Brockhagen drove for a week through Nigeria with atmosfair Country Manager Toyin Oshaniwa in order to visit a random sample of

the households that had purchased the Save 80 stove.

In 2014, we used a GPS for the first time that had all of the locations of stoves sold pre-programmed. Thanks to Google Maps, we were able to find the coordinates of the buyers' addresses from the sales receipts. This was a huge relief in a country without street signs. Our driver was quite surprised when we navigated him to the streets where the family with the stove lived. During this process, we went as far as the city of Kano in the North, but not further North because it became dangerous in that region.

The monitoring went successfully. All of the stoves were found and were in use, and the details provided by the women on the daily amount of firewood used matched the user data collected by atmosfair from a survey.

Dietrich Brockhagen describes, "Time and time again, it is moving to come into a house and be greeted by a family. Anubav (the auditor from South Africa) also immediately saw that the project is real and that it works. The poverty here is palpable, but the people are full of energy. The women use their stoves daily and are grateful. This gives us such a great feeling."

In spite of the difficult security situation, atmosfair is convinced that the efficient stoves continue to be desperately needed here because of high levels of poverty and increasing deforestation.

Growing demand and expansion of the stove projects

Similar to Nigeria, the population of northern Cameroon is facing major problems with the continuous population growth, deforestation, and advancing desertification. Following the successful stove project in southern Cameroon, atmosfair initiated a pilot phase to test the Save80 stoves this year with the support of GIZ in Cameroon and the local partner (see page 40). At the same time, the foundations for expanding the project in northern Cameroon were laid. There are also plans to expand the atmosfair project in India. This is thanks to the high demand for stoves as well as our project partner's excellent work. After successfully expanding their approval, we plan to sell efficient stoves throughout the whole country. We are planning a similar expansion of the project in Lesotho.

Wonderbox and efficient stove in Nigeria

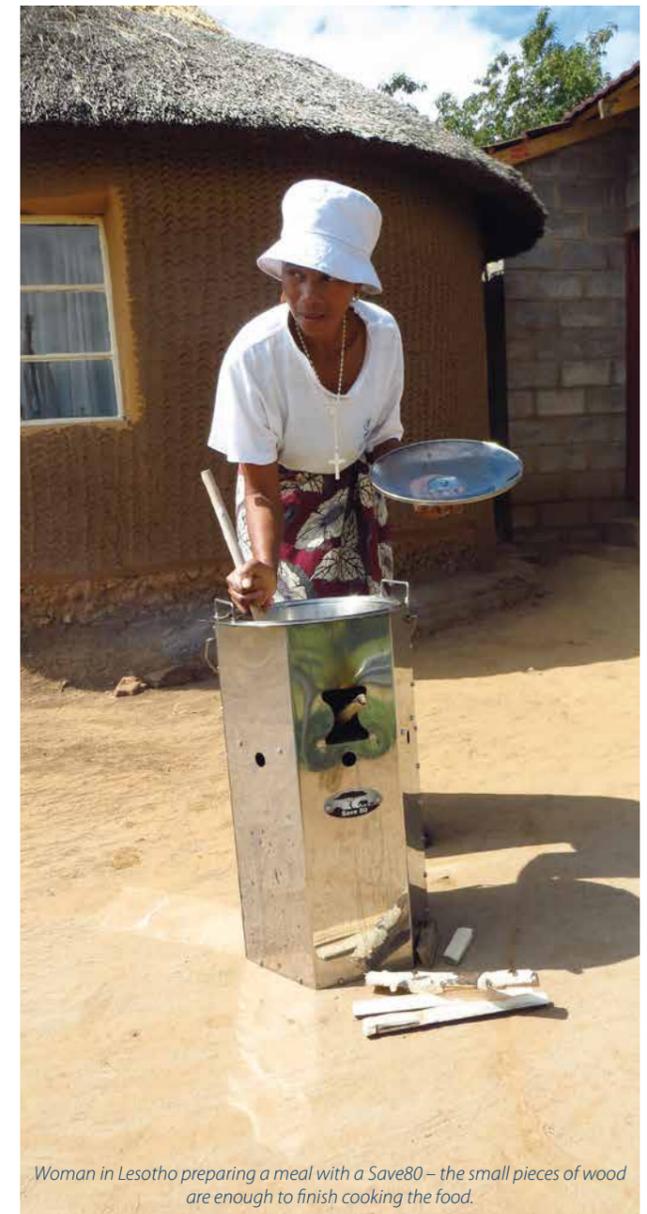
Cameroon: stove users test the Save80

In 2014, atmosfair achieved the highest sales numbers in Rwanda. Many users live in the UNHCR refugee camps and mostly come from the neighboring Congo. They only have a certain amount of wood available, which is often not enough to cook on a traditional hearth. For this reason, the Save80 stove and the wonderbox (an additional insulated container in which the food can continue to cook without any additional energy) are of central importance in these households in particular.

In our project in India, however, we use a pyrolysis stove. This stove not only reduces the amount of firewood required, but also produces charcoal at the same time, which the users can sell (see page 15). A special feature of this stove and the project is that the complete production of the technology takes place in the country by the Indian manufacturer Servals Automation. For atmosfair, the local production of efficient stoves with good durability is an important aspect of the projects' future development. For this reason, we also work closely with our partners in other countries in order to promote the production of high quality local stoves in the long term.

Until now, atmosfair was able to sell over 60,000 efficient stoves to private households in collaboration with local project partners in India, Cameroon, Lesotho, Nigeria, and Rwanda. In 2014, exactly 18,700 new users were happy to receive their own efficient stove. ✓

| Project | Number of stoves sold in 2014 | Total stoves sold by the end of 2014 |
|---------------|-------------------------------|--------------------------------------|
| Cameroon | 1,600 | 7,900 |
| India | 4,000 | 7,000 |
| Rwanda | 9,600 | 11,000 |
| Nigeria | 2,000 | 25,000 |
| Lesotho | 1,500 | 10,000 |
| Total: | 18,700 | 61,000 |



Woman in Lesotho preparing a meal with a Save80 – the small pieces of wood are enough to finish cooking the food.

Overview: Countries, technologies, and stoves sold



Nigeria
Technology: Save80 stoves, Envirofit
Number of total stoves sold: 25,000
Progress in 2014: Project expanded, performed audit of emissions reductions despite difficult security situation
Project partners: DARE, BIA

Cameroon
Technology: Envirofit, Save80 stoves
Number of total stoves sold: 7,900
Progress in 2014: Sold additional stoves, applied for expansion under CDM, began pilot phase with Save80 stoves in the northern part of the country
Project partners: Pro Climate International, GIZ

Rwanda
Technology: Save 80 stoves, Philips wood gasification stoves
Number of total stoves sold: 11,000
Progress in 2014: Sold more stoves, successful first audit of emissions reductions
Project partners: Safer Rwanda, Rwanda Women Network, UNHCR, Inyenyeri

Lesotho
Technology: Save 80 stoves
Number of total stoves sold: 10,000
Progress in 2014: Selected as a pilot project under the Fairtrade Carbon Standard; additional CO₂ savings verified, long-term project expansion throughout the whole country planned
Project partner: Solar Lights

India
Technology: Servalis TLUD wood gasification stove
Number of total stoves sold: 7,000
Progress in 2014: Prepared expansion under CDM, sold additional ovens, established value chain for charcoal
Project partner: Servalis Automation Sapient



Small biogas systems: homemade clean energy

Small biogas systems are a funding priority for atmosfair: adapted to rural needs, our biogas systems replace wood as a fuel for cooking. In our projects, families in Kenya, Nepal, India, and the Philippines are benefitting from this clean fuel, reducing CO₂ emissions, and producing valuable fertilizer for free at the same time. The systems offer a decentralized CO₂-free energy network for individual households around the clock that does not depend on the gas.



Nepal: The biogas combination

Since 2014, atmosfair has had a new project in Nepal, in which biogas systems are combined with waterless toilets for the first time. This kills two birds with one stone: in the Nepalese biogas program, the households benefit not only from saving firewood together with smoke-free, comfortable cooking, but also from the combination of the biogas systems with toilets. This additional advantage is very special because it improves the hygiene conditions for many thousands of households. Insufficient basic sanitation continues to be an everyday problem for a third of the world's population. Not only does quality of life suffer from this, but also often health. For this reason, improved access to sanitary facilities such as toilets is also one of the UN's Millennium Development Goals, which were set 15 years ago.

The small biogas systems are built in households that own at least two cows, buffalos, or similar livestock. This guarantees that there is enough dung to operate the system. The animals' dung is mixed with water and collected in a septic tank. Anaerobic fermentation creates gas that collects in the top part of the system. This is directed to a gas stove in the kitchen through pipes. Through this, families that own a biogas system no longer require any firewood in order to cook.

Nonetheless, it took a lot of persuasive efforts in order to come to an agreement about the combined toilet idea with the local partners. At first, most users spoke out because cooking using a "toilet product" conflicted with their religious convictions. Since then, however, already over three-quarters of the households have opted for the combined toilet.

Before the contract was concluded, atmosfair Managing Director Dietrich was able to get a picture of the project onsite in May 2014. He was impressed by the size of the project: since 2007, around 80,000 of small biogas systems like this had been built and continuously maintained. The atmosfair partner AEPC, a Nepalese government institution for alternative energy, grants the households a subsidy to build the biogas systems and at the same time allows for microcredit financing. Several hundred small biogas system farmers and microfinance institutions throughout the whole country are orga-

nized in one large network. Anyone who would like to build a system must apply for approval with the biogas program. This is to ensure that important quality standards are met. Thus, the microfinance institutions that provide financing for the systems in advance can expect high customer satisfaction, which guarantees high repayment rates. Since the terms are very favorable for all participants, everyone has a high interest in fulfilling their obligations.

atmosfair steps in for missing project financing

The biogas program wins people over through its comprehensive social and ecological aspects. However, the financing was built on sand: international CO₂ trade was supposed to generate revenues for the project. Because the trade system crashed in 2013, project funds were suddenly missing for the program's expansion to tens of thousands of families throughout the country. atmosfair stepped in to solve this difficult financing situation and closed the gap in order cover the program's costs. The government and buyers will cover the remaining costs.

The biogas program will now also be approved by the Gold Standard. For this reason, there was a local hearing for the local inhabitants and other involved parties in August 2014. The participants in the assembly confirmed the systems' benefits as well as their wish for increased expansion of the project.

In order to ensure even closer contact with the households in the future, the government institution AEPC has now introduced a nationwide toll-free hotline. If the users should ever have a problem with their systems, they can now immediately get in touch with AEPC so that the biogas company responsible can find a solution. This is the type of customer service that one would not necessarily expect even in Germany. ➤



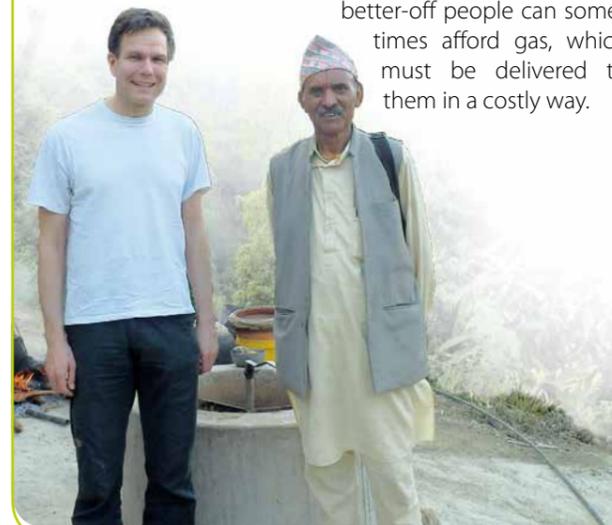
"In the country, there is hardly an energy supply"

➤ Mr. Brockhagen, you visited Nepalese households in 2014. What problems do people in the country face?

Nepal is one of the poorest countries in the world. Except for in the capital Kathmandu, people live in very impoverished conditions. Subsistence farming is their whole livelihood. Many can barely make ends meet with what they can sell in local markets. Technology is not a priority here: I didn't see radios or televisions in the villages. Time seems to have stood still: many generations live together in a tight space under one roof.

➤ So energy is also not that far along here?

Except for in the capital city, there is seldom electricity. You will often see wood stacked against houses. However, officially, it is illegal to fell any or more than a little wood in many areas, and this is monitored. On the other hand, wood is the number one fuel for the rural population. I have seldom seen a country where the people have so few alternatives in their energy supply. Even in Africa, you can still see gas cartridges sometimes. Only the slightly better-off people can sometimes afford gas, which must be delivered to them in a costly way.



atmosfair Managing Director Dietrich Brockhagen visiting a Nepalese biogas system

How do you install a biogas system like that onsite?

Amazingly, there is already a real industry consisting of around 200 companies that are permitted to build these biogas systems. As a farmer, you can order a biogas system like this and apply for a subsidy at the same time. This is the purpose of the atmosfair funds. It goes into a common pot that is managed by our local partner. The company builds the system all by itself. However, after that, the farmer is trained in how to use the system correctly – this is simply a necessary part of the process.

➤ Were there problems with people warming up to the idea of combining energy production with a toilet?

The families that I visited had absolutely no problem with it. It was completely clear to them that the energy in the kitchen is produced by a sanitary system. There was no false modesty there. On the contrary, they are very happy about it.

➤ How do the biogas systems make families' everyday life easier?

Besides the farms, I also visited trekking routes along which many tourists pass. There are a number of kitchens and small hostels there that cook for the hikers. For them, the benefits of the biogas systems are naturally tremendous. Without biogas, they simply could not serve their guests. Instead, they were busy searching for wood and keeping the fire burning. In these kitchens, they are cooking the whole time since there are many guests here. For the farmers beyond the trekking routes, the systems mean fewer health risks than an open hearth and less need for scarce wood. The one disadvantage is that the fermentation process takes longer at higher altitudes. Above 4,000 meters, the systems only work in the summer.

Pig manure serves as "fodder" for the biogas system

The Philippines: small biogas systems Sustainable pig farming in the backyard

In our pilot project, which atmosfair started in 2013 in collaboration with Food From Thin Air (FFTA) in the Philippines, we have seen initial successes. 20 biogas systems were already in operation after just a few months. This is also thanks to the help of our energetic employee Masami Fukuda, who has helped us with optimizing the system technology since the beginning of September as an onsite engineer. In the village of Cabugao Oeste on the island of Panay, the first families can now cook with self-made biogas. Because of the warm climate, which promotes the fermentation process, the systems are producing biogas much more quickly than was initially expected. However, the special focus of this project was not only on reducing CO₂, but also developing a sustainable source of income for the families. A survey of the population performed by the Red Cross revealed that most people want pigs if they are asked what would best help them to fight poverty. The organization FFTA trains families in sustainable pig rearing. The goal is that families can soon live off raising pigs in their backyard. However, they need to learn that pigs cannot be sold immediately, but rather that they

must first raise the piglets. In this way, they build up a sustainable income in order to feed their families. This training has started to bear fruit: several families have celebrated the successful rearing of healthy piglets. From the families' perspective, the biogas system is also an important component of the new income system. The pig manure that is created in the process is converted into biogas and valuable fertilizer in the biogas systems. Using biogas to cook protects adjoining mangrove forests and saves CO₂ emissions and money that would formerly be spent on obtaining firewood. The fertilizer produced in this way increases the fields' productivity and makes purchasing mineral fertilizers unnecessary. According to the head of FFTA Maria Banico, it is only this comprehensive approach, i.e., the installation of biogas systems combined with pig rearing and training families, that has allowed for successful pig distribution programs in the Philippines to be sustainable and therefore succeed for the first time. •

Overview of atmosfair projects with small biogas systems

| Name | Philippine Backyard Piggeries Biogas Programm | Nairobi River Basin Biogas Project | Bagepalli Coolie Sangha Project | Nepal Biogas Support Program-PoA |
|--------------------------|---|---|---|---|
| Where | The Philippines | Kenya | India | Nepal |
| What | Pilot project: 50 small biogas systems | 358 small biogas systems | 5,500 small biogas systems | 80,000 small biogas systems |
| Technology | Biogas systems made of used barrels | underground walled biogas systems | underground walled biogas systems | underground walled biogas systems |
| Progress 2014 | Conclusion of Phase 1 of the pilot project: 25 systems in operation | 115 new systems put into operation | The project development has been completed, systems in operation | Expansion of the existing project. 34,000 systems have been built |
| Status | Implementation of the pilot project | Phase III: project in operation | Phase III: Project in operation | Phase III: Project in operation |
| CO ₂ -Savings | In development | 15,000 tons of CO ₂ per year | 20,000 tons of CO ₂ per year | 100,000 tons of CO ₂ per year |
| Local environment | Protection of the mangrove forests | Protection of regional forests | Protection of regional forests | Protection of regional forests |
| Additional benefits | Fewer costs for wood for the families, no harmful smoke produced by cooking, production of fertilizer, local jobs from building the systems | | | |
| Projektpartner | FOOD FROM THIN AIR | Sustainable Energy Strategies (SES), Action for Food Production (AFPRO) | Women for Sustainable Development, Agricultural Development and Training Society (ADATS), VELCAN Energy | Alternative Energy Promotion Centre (AEPC) |



Kenya: Biogas users form an energy cooperative

Kenyan mason build a biogas system

In Kenya, local masons are constructing small Deenbandhu2000 biogas systems. The technology was developed in the northern India in the 1960s following a famine in order to improve the energy supply, but also to produce fertilizer. In 2014, atmosfair supported the training of masons in Kenya by Indian specialists. Since then, approx. 50 masons have been working and have built almost 400 systems.

A distinctive feature of the program in Kenya is that system users have formed an energy cooperative in order to guarantee simpler financing for additional systems. This will allow lower-income households to afford a system as well. atmosfair supports the biogas energy cooperative. In the last year, atmosfair tested the usage of biogas systems in its own study together with local partners. The rate of usage was over 97 percent. The conditions for using the systems in Kenya are good thanks to the high temperatures, which promotes fermentation, as well as by the many cows that dairy farmers often have here. The project was also supported by the "Grüner Strom Label" Association and the Christmas calendar "24 Good Deeds." Thanks to this support, atmosfair was able to use the survey to find out how to reach even more users.

| | |
|--------------------------|--|
| Name | Kenia: Biogas from cow dung |
| Where | Kiambu County, northwest of Nairobi, Kenya |
| What | Construction of small biogas systems by local masons |
| CO ₂ -savings | Approx. 3.4 tons of CO ₂ per system per year |
| Technology | Robust, walled Deenbandhu2000 biogas systems that produce approx. 3 m ³ of biogas per day for cooking. Each requires 2 cows |
| Local environment | Using the waste water from the biogas system as fertilizer and to support composting |
| Additional benefits | Health and financial benefits for the users, makes planting organic fruits and vegetables possible, e.g., strawberries |
| Project partners | Sustainable Energy Strategies, David Karanja |



India: Pioneer project for locally built household biogas systems

India: Cow dung into biogas

For many years already, atmosfair has supported the biogas systems built with clay and other local materials in the state of Karnataka in India. This means that the project is one of the first climate protection projects operated following UN standards in the world and is a pioneer project for many further biogas projects in India. The small two cubic meter systems produce biogas from cow dung that is used by households to cook. The cow dung is collected in containers made of clay bricks lying directly below the ground. There, the dung ferments into an odorless gas that is directed right to the household's kitchen for cooking. This saves up to three tons of wood per year per family, or 8 kg per day since without the biogas system, people have to cook on an open hearth.

One reason to use these biogas systems in Kenya as well is that they can be operated simply. At atmosfair's invitation, technicians from India came to train Kenyan masons to use locally available construction materials. Since then, the biogas systems have been built in Kenya following the same principle – a successful South-South collaboration.

Status: Phase III: Project in operation

| | |
|--------------------------|---|
| Name | Bagepalli CDM Biogas Program |
| Where | India |
| What | 5,500 biogas systems in Indian households in the state of Karnataka |
| CO ₂ -savings | 20,000 tons per year |
| Certification | CDM and Gold Standard |
| Technology | 2m ³ biogas systems made of clay bricks |
| Local environment | No negative effects, helps to avoid deforestation |
| Additional benefits | Fertilizer production as a byproduct of biogas production |
| Project partners | Women for Sustainable Development, Agricultural Development and Trading Society (ADATS) |

India: green electricity from biomass - building materials instead of air pollution

Crop residues are transformed into building materials in Tonk, India

In April 2014, atmosfair employee Hinrich Bornebusch visited the biomass plant in Tonk, India as well as its sister project in neighboring Ganganagar. The small farmers use their crop residues in order to create electricity from them. Since 2007, they deliver the plants with the residues from the mustard harvest and sell their previously worthless waste to the plant operator. atmosfair employee Bornebusch supported the project operator on the ground with the project monitoring by the UN auditor and used the opportunity to have a thorough look around onsite. The use of filtered ash to build houses is especially exciting: when mustard residues are burned in order to produce electricity, a lot of fly ash is produced that can be regained with modern air purification filters. This non-poisonous material is pressed into high-quality bricks, from which houses can be built in turn. With this, the crop residues even have a double benefit. The auditors could ascertain total savings of 75,000 tons of CO₂ in the last year. To do this, they tested the power input into the Indian network and the biomass used along with its caloric value. Then, the compared these values with those of the network operator and the mandatory operational and measurement protocols. They interviewed the engineers, inspected the plant, and questioned the supplying farmers. In the end, all of the values must match. Only then can the CO₂ reductions be accounted for and atmosfair attest to it.

| | |
|-------------------------------|---|
| Where | India, Rajasthan, Tonk and Ganganagar |
| What | Burning of crop residues from the mustard harvest to produce electricity |
| CO₂-savings | 75,000 tons altogether annually |
| Certification | Testing standards: Clean Development Mechanism (UN) as well as the Gold Standard. Auditing: annually onsite by accredited UN auditors |
| Technology | Biomass plant |
| Local environment | Replacement of fossil fuels; not poisonous gases as with a coal power plant |
| Additional benefits | Additional income for small farmers through the sale of biomass; jobs in the region; strengthening of the regional infrastructure |
| Project partners | KPTL, Indian energy company |



Thailand: biogas from wastewater

Starch production in Thailand

Thailand is one of the world's largest starch exporters. atmosfair has been involved in a project in this country focused on a climate-friendly usage of methane, which is released during the production of starch. The starch factory is located in Kalasin Province, a rural region in northeastern Thailand. The starch is extracted from cassava, which grows best in dry and nutrient-poor soil. Until recently, starch producers still had problems with the high demand for fossil fuels that are required in order to operate their plants. Large amounts of electricity are needed for drying cassava starch in particular. Likewise, they must use a lot of fresh water to clean the cassava fruit bodies. In addition, the open filter beds make the region smell bad and release methane as a potent greenhouse gas directly into the atmosphere.

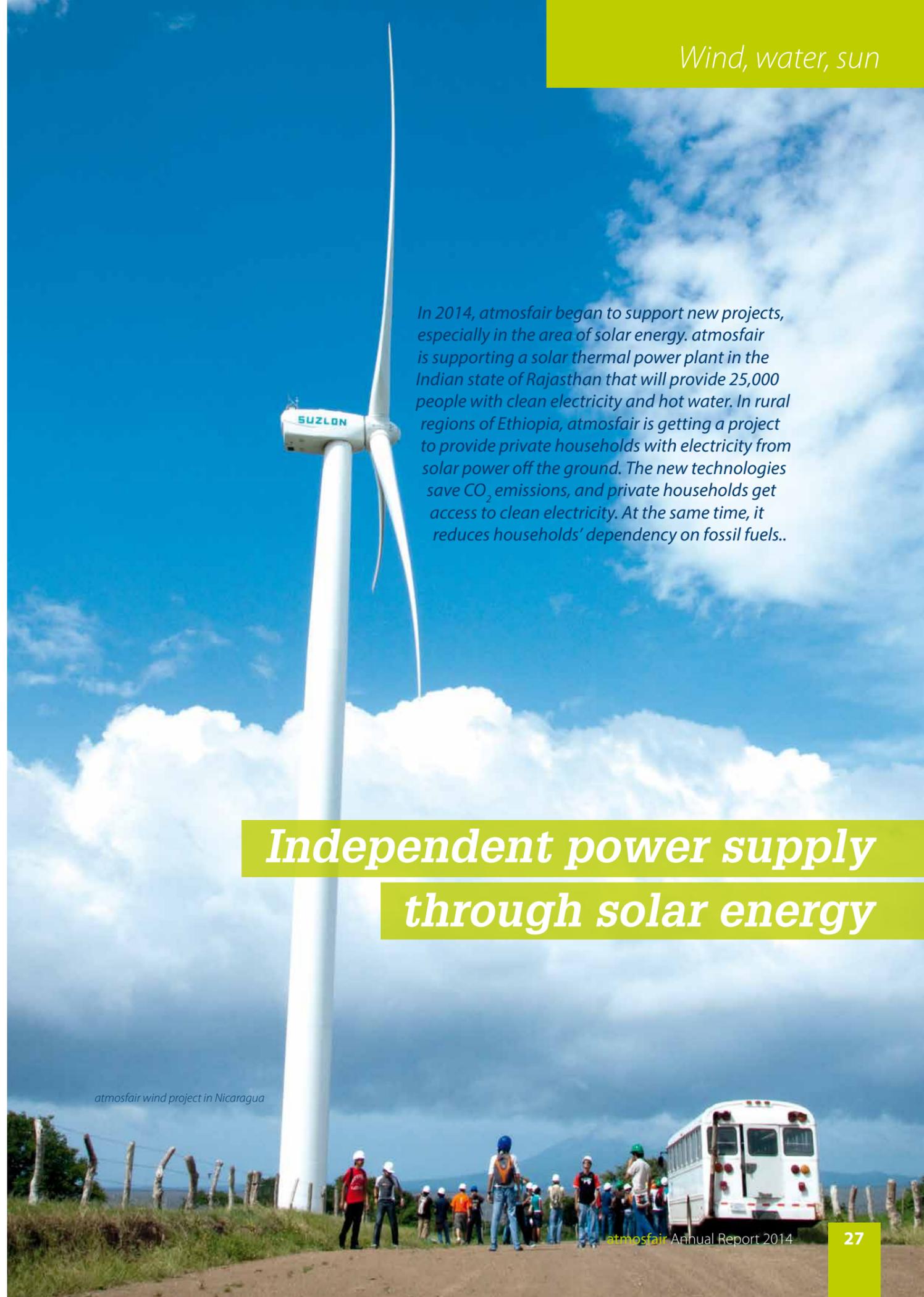
Through the installed "Upflow Anaerobic Sludge Blanket" (UASB) reactor system, the methane will now be captured and transformed into electricity using generators. In the process, the UASB technology forms a permanent layer of sludge in the wastewater tank that rises through the incoming water and ferments anaerobically. The bacteria that do this are on the small sludge particles. This technology also leads to the decomposition of fluid and solid wastewater components at the same time. This is a benefit of starch wastewater. The electricity created is used in turn to dry the fruits. In this way, the high consumption of fossil fuels is replaced by their own biogas energy production and the harmful methane is captured at the same time. The project also has value for the local population. On the one hand, the air quality improves and the acrid smell is diminished. On the other hand, the wastewater can be reused after being purified, whether for cassava starch production or in agriculture.

| | |
|-------------------------------|--|
| Name | Bangna Starch Wastewater Treatment and Biogas Utilization Project |
| Where | Thailand |
| What | Electricity production with biogas from waste water |
| CO₂-savings | 40,000 tons annually |
| Certification | Nach CDM und Gold Standard |
| Technology | Aerobic fermentation of waste water and conversion to electricity by a generator |
| Local environment | No negative effects |
| Additional benefits | Improved air quality, waste water can be used again |
| Project partners | P & Papop Renewable Co., Ltd. |

In 2014, atmosfair began to support new projects, especially in the area of solar energy. atmosfair is supporting a solar thermal power plant in the Indian state of Rajasthan that will provide 25,000 people with clean electricity and hot water. In rural regions of Ethiopia, atmosfair is getting a project to provide private households with electricity from solar power off the ground. The new technologies save CO₂ emissions, and private households get access to clean electricity. At the same time, it reduces households' dependency on fossil fuels..

Independent power supply through solar energy

atmosfair wind project in Nicaragua





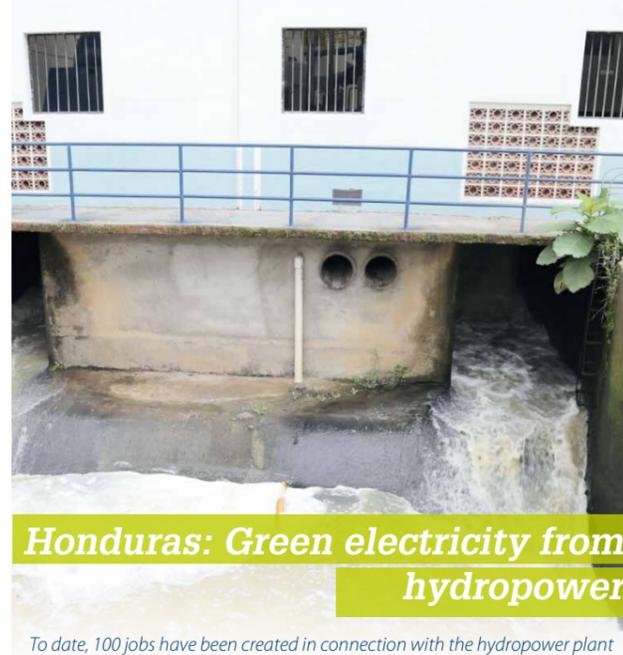
Solar collectors in Georgia

Training for solar technicians in rural Georgia

As important as the technology for renewable energies is, the people who maintain them onsite are just as essential. Our project partner Women in Europe for a Common Future (WECF) and the Greens Movement from Georgia have already trained over 60 local solar technicians. This is because ever more households in rural Georgia are using the sun in order to heat their water. The technicians were trained to build and maintain a high-quality solar collector from locally available materials. This has now provided a good alternative to imported solar collectors that are hardly affordable for rural households and for which replacement parts are hardly available.

In this way, ever more households can secure their hot water supply cheaply and in a climate-friendly way through a network of local partners. The great advantage of doing this is that the project is gradually able to run by itself and expand further. Even now, atmosfair's support is mainly of a technical nature, including the monitoring system, among other things. With this detailed information on how the collectors are used, their operation can be tailored even better to the different regional and climatic condition in Georgia.

| | |
|-------------------------------|---|
| Name | Training for solar thermal technicians in rural Georgia |
| Where | Georgia |
| What | Training of local craftsmen in building the thermal solar collectors out of local materials for rural households in Georgia |
| CO₂-savings | 2,000 tons per year from saving firewood |
| Certification | In the approval process as a Gold Standard Microscale project |
| Technology | Solar collector for hot water (normally 130 liter tanks) |
| Local environment | Forest protection by saving firewood, better indoor air quality |
| Additional benefits | Reduced logging, better air in the households, less work time for heating water, creation of jobs and local know-how |
| Project partners | Women in Europe for a Common Future (WECF) and the company Solar Partner Süd GmbH; locally, the Greens Movement of Georgia and local partners |



Honduras: Green electricity from hydropower

To date, 100 jobs have been created in connection with the hydropower plant

Over the past three years, it has been very dry in Central America. The drought could also be felt in the operations of the hydropower plant in La Esperanza in Honduras. The electricity production remained markedly below the expected levels. In order to prevent the small operating company CISA from getting into financial difficulties, atmosfair agreed once again to grant it advanced payment for future CO₂ reductions. This has put CISA in a position to continue work on a second hydropower plant.

In addition, there continues to be close collaboration among the surrounding villages. In this way, the local inhabitants not only benefited from over 100 jobs that were created in connection with the hydropower plant. At the same time, newly reforested woodlands are emerging, previously isolated villages are gaining access to the local electricity network, and children in schools and kindergartens are engaging in environmental education programs for a clean environment, for example through waste avoidance and sorting of trash.

| | |
|-------------------------------|---|
| Name | Hydropower plant La Esperanza |
| Where | Honduras |
| What | Hydropower plant with 14.6-megawatt capacity |
| CO₂-savings | 30,000 tons per year |
| Certification | UN CDM and Gold Standard |
| Technology | Hydroelectric power plant |
| Local environment | Reforestation programs and waste sorting programs |
| Additional benefits | Jobs and electrification of surrounding villages |
| Project partners | Consorcio de Inversiones S.A. (CISA) |



High-tech-pioneers in India: a self-made solar thermal power plant

Parabolic mirror of the solar thermal power plant India One

From far away, you can already see that something special is being built on Mount Abu in the Indian state of Rajasthan: atmosfair partners World Renewal Spiritual Trust (WRST) and Brahma Kumaris are building a power plant here that is unique in the world. Over 750 enormous 60 m² parabolic mirrors are focusing the sun's rays in order to heat cast steel blocks. With the stored heat, steam is produced directly that operates a turbine and produces 1 MW of renewable electricity for 24 hours. The crucial difference to conventional, photovoltaic power plants is that because the heat can be saved, the power plant can also deliver electricity during the night.

There is no company behind the power plant construction, but rather a community: over one thousand people live in the spiritual center of Brahma Kumaris in Shantivan, Abu Road, on a permanent basis, though up to 25,000 people come together regularly for various events. The members' inclination for innovative engineering ingenuity is not new: for 18 years already, they have cooked with steam in the large kitchens, which is what the parabolic mirrors also produce. By saving the steam, using solar energy after sunset is also possible here. The members of Brahma Kumaris had already then successfully solved the challenge of having the parabolic mirror follow the exact position of the sun.

The German carpenter Joachim Pilz, who has lived in India for many years, had a significant share in the developments. He has already been involved in the development of solar energy with Brahma Kumaris since 1995. In 2007, he became acquainted with atmosfair. We were skeptical at first when he told us about the ambitious plans. The fact is, though, that the Fraunhofer Institute and the Association of German Engineers were also full of praise and convinced us that an unusual project was being implemented here by people who knew exactly what they were doing. The project is also supported financially in a significant way by the German Federal Ministry for the

Environment (BMUB) through the GIZ and the Indian Ministry of New and Renewable Energy (MNRE).

Joachim Pilz explains, "Originally, we had mostly followed the model of the few existing solar thermal power plants. We considered using, say, reflectors in the form of channels. In the end, however, we discovered that our tested parabolic mirror based on the Scheffler Design was best suited, although in a significantly larger form. This is unique in the world. Our most important innovation, though, is probably the direct production of steam and the heat storage in steel blocks. This has big advantages compared to the problematic thermal conduction oils or salt tanks that other power plants use."

This is how a high-tech power plant is created in the middle of India, even though it engages simple, locally available, and inexpensive components to a large extent. That is exactly what countries like India need for green electricity supply. ➤

| | |
|-------------------------------|---|
| Name | India One solar thermal power plant |
| Where | Rajasthan, India |
| What | Solar thermal power plant 1MW |
| CO₂-savings | 5,000 tons per year |
| Certification | Gold Standard Microscale |
| Technology | Concentrated Solar Power (CSP) |
| Local environment | Unproblematic, direct steam generation, non-poisonous accumulator |
| Additional benefits | Jobs, pioneering work for similar power plants |
| Projektpartner | Brahma Kumaris, WRST, BMUB & GIZ, MNRE, Fraunhofer Institut |



Solar thermal systems from Ethiopia for Ethiopia

Assembly of systems

Ethiopia is one of the poorest countries on earth and at the same time, measured by its population, the largest landlocked country in the world. The rural regions are often especially densely populated. However, the necessities are lacking, including a comprehensive energy supply. At present, many Ethiopians still use kerosene lamps for light, that are conceivably inefficient, expensive, and harmful to the climate.

What Ethiopia has in excess, though, is sun. Solar thermal systems for individual households in the country are already partially available. However, these are mostly cheap Chinese products that often do not work anymore after a few months and thus damage trust in solar energy.

The young company Fosera, which distributes high quality, but affordable solar thermal systems for households in the global South, is working to change this. In contrast to many mobile solar lamps, Fosera will produce permanently installed systems. Currently, Fosera is developing the local production of solar modules in Bahirdar on the Tana Lake in northern Ethiopia. Thomas Köpke, who has lived in Ethiopia with his family for many years and founded the Ethiopian branch of Fosera, has devoted himself to this task. In November 2013, atmosfair employees Katrin Wolf and Robert Müller were in Bahirdar because the World Food Programme's stove project supported by atmosfair is also started there. atmosfair and Fosera had already made contact in Germany, but the meeting in person onsite set an important milestone for their collaboration.

In Bahirdar, Thomas Köpke was able to convince atmosfair that there is a market for the Solar Home Systems and that Fosera in Ethiopia is positioned well enough to invest atmosfair's support in a sensible way. Financing often presents a particular hurdle for ventures in developing countries because conventional banks are not typically available, and the interest rates of 10 percent per month are extremely high.

atmosfair will now provide the project with financial resources, which Fosera will only need to pay back in part. Already for 2015, it plans to manufacture 1,000 systems.

Soon, many families in Ethiopia will be pleased to come home in the evening and be able to press a light switch. Naturally, they will also have the opportunity to charge their mobile phones.

In order to guarantee the long-term success of the project, atmosfair and partner Fosera have chosen a demanding review process. In this way, we can ensure that the systems are actually working over many years in order to differentiate them from the competition of cheap products.

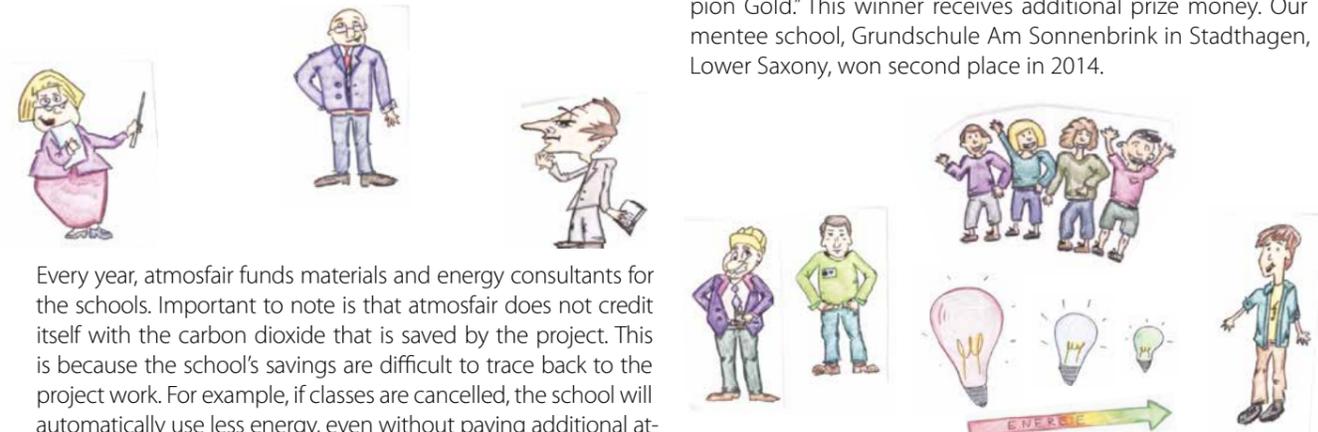
atmosfair also supports the plans to expand its collaboration with Fosera to additional African countries. In the opinion of atmosfair, the necessary electrification of poor rural regions should definitely happen using climate-friendly renewable energies – for both social and ecological reasons. ➤

Education is also climate protection

You can't protect the environment if you don't know how. For this reason, we are involved in educating school students in Germany together with the Independent Institute for Environmental Issues (UfU) and the non-profit consulting firm Co2online. The collaboration includes two projects: project fifty/fifty with UfU and "Energy-saving champion" with Co2online.

With the project fifty/fifty, schools can protect the climate, earn money, and provide a practical introduction to the topics of energy efficiency and energy saving all at the same time. In the process, they are equipped with energy consultants at their side who measure the school's energy needs together with the students and reduce it with new technologies and tips. In order to provide students and teachers with an incentive to be active in the project, fifty/fifty also offers a financial advantage: beforehand, there is a contractual agreement with the school authorities to give half of the energy costs saved directly to the school, with the school authority keeping the other half itself – in other words, fifty/fifty. UfU takes care of communication between the school and the school authority.

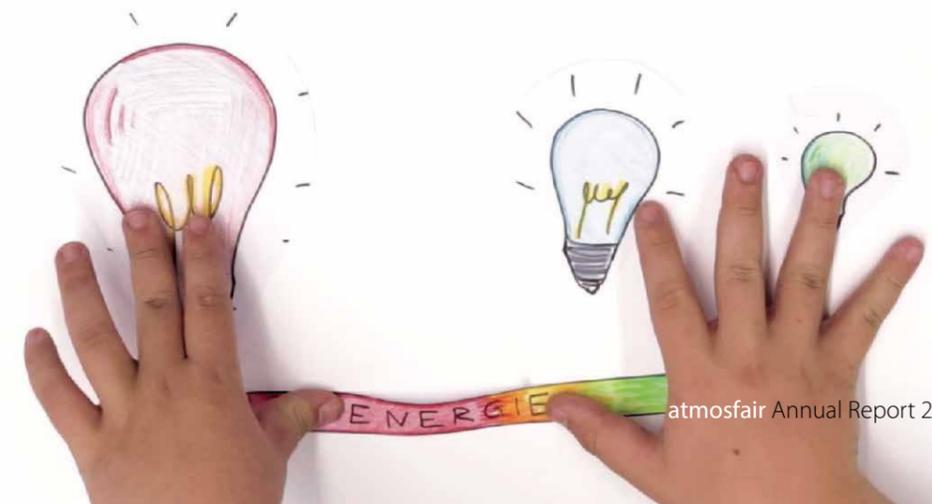
"Energy-saving champion" – valuing engagement
Nationwide, students and teachers are advocating for a good climate and are setting up energy-saving projects together. Each year, the campaign "Climate Seeks Protection" (Klima sucht Schutz, sponsored by the German Federal Ministry for the Environment) distinguishes the best project from each state within the competition "Energy-saving Champion." We support the competition financially as a patron and make it known in our networks. In 2014, a total of 240 schools from all over Germany competed – in other words, 35,000 engaged students. This is not a frivolous decision: the jury met for several hours in order to determine the 16 winning projects. In a final online vote, in which everyone can participate, the pan-German master is selected for the "Energy-saving Champion Gold." This winner receives additional prize money. Our mentee school, Grundschule Am Sonnenbrink in Stadthagen, Lower Saxony, won second place in 2014.



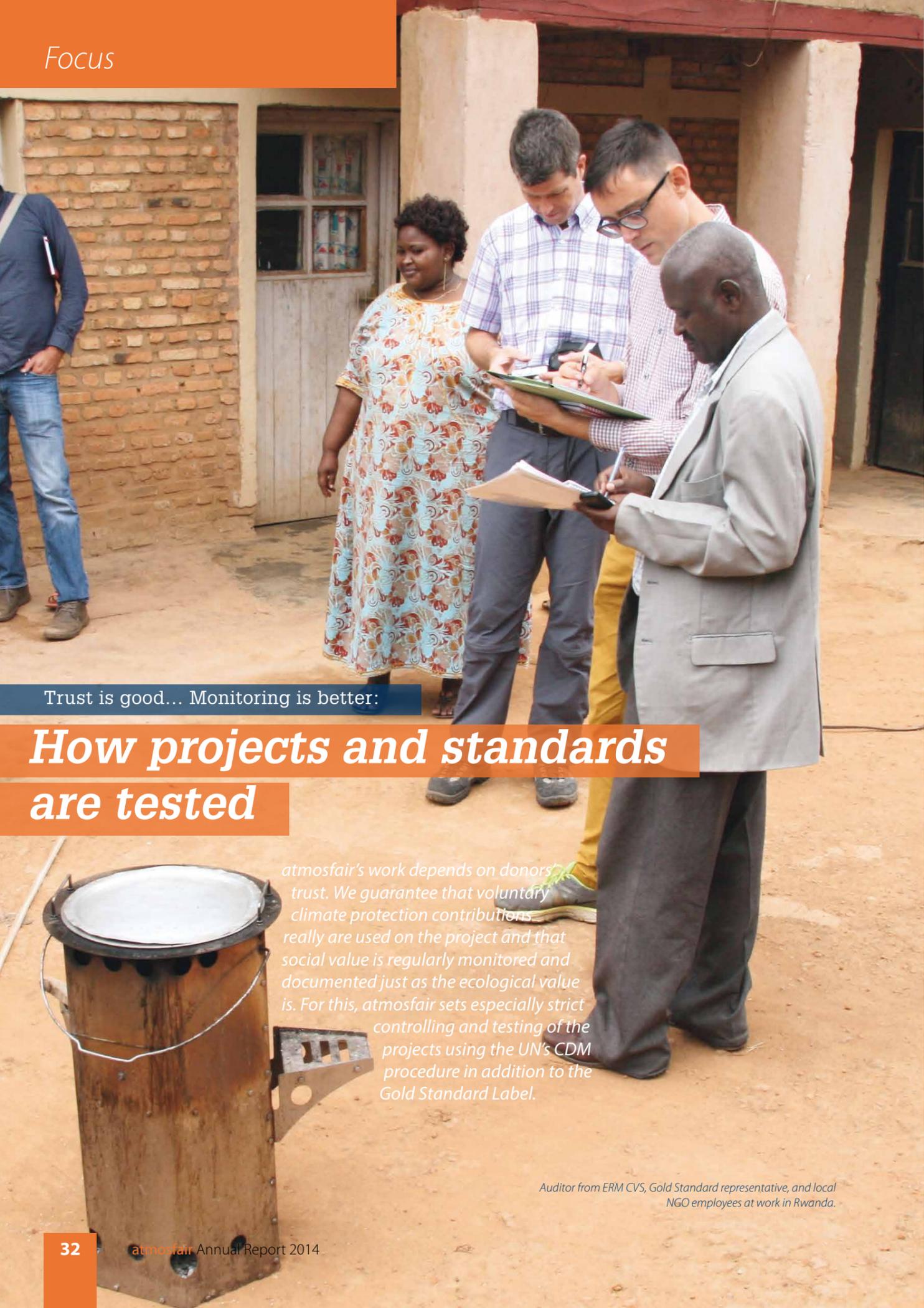
Every year, atmosfair funds materials and energy consultants for the schools. Important to note is that atmosfair does not credit itself with the carbon dioxide that is saved by the project. This is because the school's savings are difficult to trace back to the project work. For example, if classes are cancelled, the school will automatically use less energy, even without paying additional attention to energy efficiency. Besides this, the savings are already included in the federal government's statistics. Thus, the same savings would be counted twice if we would also attribute them to ourselves.

The participating schools can become a model for other schools in the area. Together with UfU, we supported one of the fifty/fifty schools and director Johanna Ickert on a film project in 2014. The resulting short film shows how fifty/fifty can be initiated in every school.

The school has been involved in climate protection since 1996: as an "energy detective," the students check the school's electricity and water usage, plant trees, collect donations for solar lamps for their partner school in Ghana, plant regional vegetables, and inform the public at the public square. At the moment, the elementary school students are rewriting a children's book on environmental footprints as a play, in which they can integrate their own climate protection activities. They will perform their play in neighboring elementary schools. ➤



Source: Fifty/Fifty



Trust is good... Monitoring is better:

How projects and standards are tested

atmosfair's work depends on donors' trust. We guarantee that voluntary climate protection contributions really are used on the project and that social value is regularly monitored and documented just as the ecological value is. For this, atmosfair sets especially strict controlling and testing of the projects using the UN's CDM procedure in addition to the Gold Standard Label.

Auditor from ERM CVS, Gold Standard representative, and local NGO employees at work in Rwanda.

Interview

UN-Climate System:

"The states have learned a lot"

Source: Öko-Institut

Martin Cames of Öko-Institut was a member of the UN Clean Development Mechanism (CDM) Council from 2012 to 2013. The council has 10 members from developing and industrialized countries. atmosfair asked him about his experiences developing the CDM standards and their implementation in practice.

➤ **Projects to reduce CO₂ in developing countries that are sponsored by industrialized countries are strictly regulated by the CDM standards. How do the states control such projects?**

At the beginning of each project, there are always two actors involved: a developing country and an industrialized country. Both countries check whether the idea corresponds with the definition of sustainability and their national priorities. The Designated National Authorities (DNA) are responsible for this work; in Germany, this is the German Emissions Trading Authority (DEHSt). The reports from this national body must be presented to the CDM Council. In the end, the Council decides on the approval of each individual project.

➤ **Who verifies where and whether a project is really saving CO₂ emissions in a sustainable way?**

The project operators – that could be companies or project developers – are responsible for hiring a CDM Council-accredited auditing company to do this. This company reviews the project operators' plans and the way that they involve global and local parties. The CDM Council then receives the project and performs a completeness check. After that, there are two possibilities: either it is registered right away or there is a follow-up check that can also end up in a rejection.

➤ **How does the Council ensure that the auditors are independent and abide by the strict criteria?**

Unfortunately, there were cases in the past in which the auditing companies did not work according to the criteria. Thus, a few large auditing companies lost their accreditation temporarily. However, the auditor's inspections have improved dramatically in the last years. We're talking about companies that carry out certifications in other areas. In Germany, that would be the TÜV organizations, for example. When auditors are suspended, it can be due to lacking qualifications. If there is a project on manufacturing concrete, you have to have a concrete expert, not a wind expert. In addition, there are so-called "spot-checks," with which we test if all procedures are being upheld.

➤ **What happens to projects that fail the test? And how many of these are there?**

Roughly estimated, around five to ten percent fail the test. However, the regulations have changed a lot, and some of the projects that were approved earlier would probably fail according to today's criteria. We have also learned a lot.

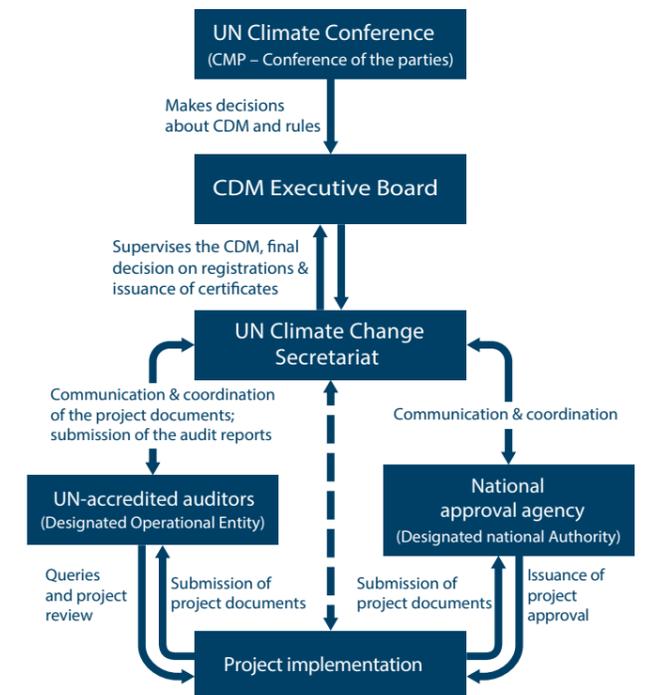
➤ **Which testing standard is tougher, the CDM or the Gold**

Standard of the GS Foundation in Switzerland?*

With the Gold Standard, you must explain in more detail that, besides reducing CO₂, you have also made a contribution to sustainable development. However, the opposite can also be true: some reviews can be less ambitious than those of the CDM. For example, sometimes no onsite visits are required by the Gold Standard, whereas these are always required by the CDM. Also, the auditor's liability is only clearly regulated under the CDM. Under the Gold Standard, for example, no auditing company has ever lost its accreditation, and the testing process is accordingly more lax.

**All atmosfair projects are registered under the CDM as well as the GS (with the exception of the very smallest projects)*

UN Clean Development Mechanism (CDM)





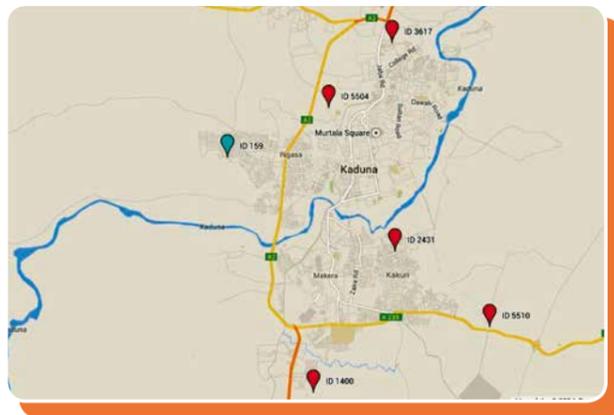
Under adverse conditions: project appraisal in Nigeria

atmosfair Managing Director Dietrich Brockhagen visits Nigeria

The Jeep rumbled over unpaved streets, isolated villages emerged left and right in the light of the dawn, and the sun crept slowly ahead behind the horizon. At six in the morning on the road in northern Nigeria, all of the streets somehow looked equally holey, and all of the villages resembled each other. If you want to find something here, you really have to know your way round. Finding our efficient stoves would have been like trying to find a needle in a haystack if we had not had our new GPS with us. Another 100 meters, 50, 20, and suddenly the car stopped at the edge of the street in front of a hut. A man stepped out smiling and held a stove out to us. "German magic," our driver let out with relief. "We found the stove!" Indeed, it was the first time that we had successfully used the GPS, which had been pre-programmed in Germany with all of the atmosfair stove addresses. Our employee Louisa cross-linked all of the available maps at home and fed them into the device. We were astounded and relieved that the device even recognized streets that were hardly accessible. The "German magic" in the form of an American GPS worked via satellite, and its batteries held for at least three days.

The search for the random sample

Although the search for the efficient stoves in Nigeria is easier than usual this time thanks to the GPS, the political situation make it difficult to complete our regular testing properly. Every year, a UN-accredited auditor tests that the wood-burning stoves are really being accepted and used by the people in Nigeria. For this reason, I sat with auditor Anubhav, the atmosfair Country Manager Toyin, and a local guide in a Jeep, and we tried our best to find all of the stove users from the random sample. Normally, around 100 households with stoves must be visited for



The addresses of stove owners pre-programmed into the GPS

the project review. In light of the Boko Haram sect attacks that have tyrannized the country, though, the normal procedure was not possible. However, at our request, the UN allowed us to perform the testing in an abbreviated form in light of the security situation. Thus, we only needed to find and visit 15 of the 100 stoves and survey their users.

The households we visited were highly satisfied, and the stoves work perfectly. I already knew from previous years, but it is always moving to see how even the five-year-old stoves, encrusted and dented from daily use, work completely and how thankful and open the people are to the foreign white people.

The auditor was also impressed by how much the people like the stoves. "There were no objections; we found that everything corresponded exactly with atmosfair's test reports," reported auditor Anubhav.

Compared to an open hearth, the Save80 stove saves up to 80 percent of the firewood previously required. It does this through an ingenious ventilation system and special burning chamber. This helps to reduce deforestation and helps families in African countries to have a better life. This is because when they use the stoves, they only need to spend about 6 percent of their income on firewood instead of the 30 percent they previously spent on average.

Interest from the Delegation of the German Economy

After the last test location was visited near Kano, the team together with the auditor drove back southward towards the capital city and first stopped safely at nightfall in Abuja. While the area around Kano is rated medium in terms of risk, the southern part of the country has been less affected by the Boko Haram terror.

In the next days, I headed on to the harbor city of Lagos. The Delegation of the German Economy had invited me to a lecture on energy efficiency. At this meeting, the idea to organize a climate protection campaign with celebrities in Nigeria was born. This would make people here also aware of the causes and consequences of climate change.

Following the CDM and the Gold Standard, all relevant project information is displayed in a transparent way on their respective websites. A central criterion of CDM is that all information and project documents must be made available to the public. A search function on the CDM and Gold Standard websites allows any interested party to inform themselves about the approved projects. All project documents, audit reports, and calculations of emissions savings can be downloaded on the individual project websites.

The following screenshot illustrates how a project website is structured as well as the available individual project information and accessible documents using our stove project in Nigeria as an example.

United Nations website: cdm.unfccc.int

| Project 2711 : Efficient Fuel Wood Stoves for Nigeria | |
|---|---|
| Project title | Efficient Fuel Wood Stoves for Nigeria - project design document (1235 KB) (approved - - 08 Nov 2013 - view previous) - registration request form (457 KB) |
| SDC description report | Not Available. Please refer to our Further Information on SD-Tool |
| Host Parties | Nigeria, involved indirectly approval (39 KB) authorization (39 KB) Authorized Participants: Developmental Association for Renewable Energies |
| Other Parties Involved | Germany, involved indirectly approval (201 KB) authorization (201 KB) Authorized Participants: Atmosfair gGmbH; Lernen-Helfen-Leben e.V. |
| Sectoral scopes | 3 : Energy demand |
| Activity Scale | SMALL |
| Methodologies Used | AMS-II.G. - Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass |
| Standardized baselines used | N/A |
| Amount of Reductions | 31,309 metric tonnes CO2 equivalent per annum |
| Fee level | USD 4761.8 |
| Validation Report | Validation report (1097 KB) Public availability information Link to information uploaded for public availability Validation opinion on changes in PDD (221 KB) |
| Modalities of Communication | MoC Annex 1 Modalities of Communication valid as of 18/06/2012 MoC Annex 2 (Change/update authorized signatory, name or contact details) valid as of 12/02/2014 |
| Registration Date | 12 Oct 09 (view history) |
| Creating Period | 12 Oct 09 - 11 Oct 19 (Fixed) |
| Requests for Issuance and related documentation | Monitoring report: 12 Oct 2009 - 30 Jun 2010 (291 KB) Issuance request state: Issued CERs requested up to 31 December 2012: 1867 Serial Range: Block start: NG-5-1-1-0-2711 Block end: NG-5-1867-1-1-0-2711 [Full view and history] |
| | Monitoring report: 01 Jul 2010 - 30 Jun 2012 (387 KB) Issuance request state: Issued CERs requested up to 31 December 2012: 17320 Serial Range: Block start: NG-5-1729210-1-1-0-2711 Block end: NG-5-1746529-1-1-0-2711 [Full view and history] |
| | Monitoring report: 01 Jul 2012 - 30 Jun 2013 (470 KB) Issuance request state: Awaiting issuance request [Full view and history] |

Gold Standard Foundation website

Registry - Project Details

Efficient Fuel Wood Stoves for Nigeria (ID: 10300000002505)

Account Holder: Atmosfair gGmbH

Description: The project disseminates highly efficient fuel wood stoves to households in Nigeria, saving up to 80% of energy. Users are households who previously used inefficient biomass stoves or fossil fuel stoves. Besides saving greenhouse gases, further goals are the reduction of deforestation through reduced fuelwood consumption, and the reduction of indoor pollution through avoidance of the emission of health-damaging products of incomplete combustion (PICs) due to nearly complete combustion in the stove.

Documents:

- (ES) Final Project Design Document (PDD)
- (ES) Monitoring Report
- (ES) Monitoring Report (01-Jul-2010-30-Jun-2012)
- (ES) Monitoring Report (01-Jul-2010-30-Jun-2012)
- (ES) Supporting Stakeholder/Sustainability Documentation
- (ES) Validation Report
- (ES) Validation Report (01-Jul-2010-30-Jun-2012)
- (ES) Validation Report & Statement (01-Jul-2010-30-Jun-2012)

| Category | Standard | Project Type | Additional Certification | Linked |
|----------|---------------|------------------------------|--------------------------|--------|
| Carbon | Gold Standard | Energy Efficiency - Domestic | | No |
| N/A | N/A | N/A | | |

“We go from household to household”

➤ **In August, you appraised the atmosfair stove project in Rwanda. How do you go about this as an auditor representing the UN?**

The verification process stipulates that I first study the entire documentation from the project's formation to its implementation. This lasts around two weeks. We compile questions and create a testing plan. For this, it is about evaluating the amount of emissions saved, the exact number of stoves and their functionality, social factors such as job creation, positive effects on air pollution in and around the households as well as transferring the know-how to the partners.

➤ **What did the monitoring onsite look like?**

During the onsite monitoring, the auditors interview the project organizers and the users. For the stove project in Rwanda, we visited a number of households and asked the users how often they cook with the stove, how much wood they need, and what type of stove they used beforehand.

➤ **How long does it last?**

The onsite audit lasts around three to five days. It can also be longer depending on the project. In this period of time, the auditor must survey a certain number of households in order to test the information from the project operator's survey. I compare atmosfair's values with my own results and screen them for possible deviations.

➤ **With which database do you work?**

Stove projects consist of thousands of small, spread out sources of emissions in the individual households of a region or even in a whole country. This is why a complete review of the stoves is not possible. Thus, I meet with a representative selection. It is normal for there to be small discrepancies in the different testing reports; however, we only accept these to a certain extent. If the results of the operator's survey differ from mine too much, we cannot accept the emissions savings.

➤ **How can you be sure that atmosfair doesn't just show you the best households?**

We pick the households randomly in order to be sure that we don't just visit those chosen by the operator. We also go to families that are not involved in the project in order to compare the results. In addition, we often come spontaneously so that the users are not influenced beforehand. We also interview the stove developers in order to get more information and compare it with the users' experiences.

➤ **How often does a review like this take place?**

Normally, we do a review once per year. However, this depends on atmosfair. It can also happen more often. The monitoring must take place at least once per year in order to collect data for the project's total overall balance.

For ten years, Jonathan Avis has been an auditor for the organization “Certification and Verification Services” (ERM CVS), which audited the legitimacy of CDM and Gold Standard projects. Avis studied geography and environmental sciences at the University of Oxford and has already participated in over 100 project audits.

The UN is serious: temporary withdrawal of accreditation for climate protection project auditors

In the past, The CDM Council has already revoked the accreditation for several auditing organizations. The organizations only received their accreditation again after they had taken the necessary measures and the improvements were confirmed by the CDM Council. The following four cases are known:

- 1. Det Norske Veritas (Norway, November 2008): Insufficient internal testing, missing documentation of decision processes, insufficient assignment of technical expertise for the project evaluation*
- 2. SGS United Kingdom Ltd (September 2009): Insufficient technical testing of the submitted reports created*
- 3. TÜV Süd (Germany, March 2010): Creation of positive approval reports for project in spite of submitted concerns about the project admissibility by project participants*
- 4. Korea Energy Management Corporation (South Korea, March 2010): Doubt on the qualifications of the employees for the project audit*

These cases show an important advantage of the CDM. Here, the UN definitively answers the famous question: “who audits the auditors?” In this case, it is the UN itself that reviews its project auditors and has penalized them. This is an important part in upholding integrity that no other standard for climate protection projects has. For atmosfair, it is one of the reasons that almost all projects are tested by the CDM.

atmosfair consulting for sustainability in business travel

In the competition for customers and qualified employees, ever more companies are trying to differentiate themselves with an ecological and social approach to sustainability. However, the topic of sustainability is often ignored in business travel. The consequences include rising travel-related costs and CO2 emissions, employee exposure to travel stress, and questioning the company's sustainability.

For this reason, atmosfair offers a new approach to business travel to companies on the path towards sustainability. At its core is a comprehensive analysis in which the business profile, reasons for travel, and trips taken within the company are examined in order to identify potentials for more sustainability. For this, atmosfair has expanded analysis methods and data models and developed new IT tools. Following the analysis, we help the companies to create an economically sound master plan and implement it successfully. This allows managers and employees to travel more sustainably, save time, money, and CO2, and even improve work-life balance.

Our atmosfair sustainability and business travel experts explain why sustainable business travel management is important and benefits companies:

Dr. Matthias Kannegiesser



Matthias Kannegiesser has been active on the topic of sustainability and climate protection for many years as a consultant. After working on projects about climate-friendly business travel for companies with international operations, he would like to bring previous approaches to a new level with atmosfair. His goal is to achieve real sustainability – social, environmental, and economic – in business travel.

“The new approach is a milestone: we don't just look at CO2 alone, but rather evaluate sustainability integrated with all conflicting goals. This has shown us that travel leads to productivity losses (time, jetlag) that are often greater than the travel costs alone and that there are new cost potentials there. It also becomes clear which occasions for travel are especially valuable (e.g., for revenues) and which are not. Also, when it comes to CO2, the climate-compatible level of 3 tons per employee is often exceeded. This indicates that companies should really concentrate on trips that add value. I especially want to help those companies that have already started on the path towards sustainability and also want to fulfill their potential for more sustainability when it comes to business travel.”

Jan-Moritz Jericke



Since the beginning of 2012, Jan-Moritz Jericke has been responsible for collaborations with corporate customers at atmosfair. His tasks above all include developing suitable climate protection solutions for large companies. He takes care to imbed business travel management in the over-

all climate protection concept. Jan-Moritz Jericke is the first point of contact at atmosfair for all questions about consulting.

“Together with the companies, we reveal new savings potential for CO2 costs and travel time. Especially when combined with CO2 offsetting, we create a future-oriented climate protection concept in the area of business travel with which a company can engage effectively in climate protection. At the same time, the companies demonstrate a long-term orientation and sustainability for the future and in this way, become attractive for employees, customers, and investors.”

Bernd Becker



Bernd Becker has worked for atmosfair since 2012 and has a background in the consulting and accounting industry. He advised customers for PricewaterhouseCoopers in Germany and Australia in the area of “Climate Change & Sustainability Services,” among others, and brings broad industry experience to business travel management.

In addition, he is also responsible for the quality of the CO2 reporting tool at atmosfair. We make this available to our partners and corporate customers in order to record emissions from business travel. It was developed especially to process large amounts of data.

“Climate protection should not be a cost driver. We show our clients a clear business case for the proposed climate measures. My goal is to reconcile ecology and economy for companies.”

Andrea Zimmermann



Andrea Zimmermann is the proprietress of the consulting firm btm4u in Darmstadt. btm4u specializes in travel, mobility, and event management and supports companies in development, restructuring, and other topics. She also does on-the-job training, coaching, and moderation. External moderation stands the test, especially for cross-functional activities, in companies with company-wide events and projects, or in stalling projects. With 25 years of experience, Andrea Zimmermann supports atmosfair in identifying, evaluating, and implementing practical measures in order to achieve sustainable business travel management within companies.

“New systems offer wonderful opportunities to design mobility and events in an efficient and environmentally friendly way. Besides the environment, the focus is on the travelers, particularly on their health satisfaction. By implementing the identified potentials in the real world, we are able to bring life to the term sustainability and establish it within the company.”

More efficiency, but also more CO₂

atmosfair Airline Index 2014

The atmosfair Airline Index (AAI) newly published in mid-November 2014 announced good news: the large airlines were finally able to reduce their CO₂ emissions, namely by about one percent, with regard to CO₂ per passenger and kilometer.

The 2014 AAI is based on the most recently available data from the aviation industry from 2012 and compares the CO₂ emissions of the 193 largest airlines worldwide. In all, the AAI covers around 31.2 million flights around the globe, or around 92 percent of civil aviation.

The comparison to 2011 reveals the reasons for the increasing CO₂ efficiency. For the most part, older models were replaced like the Boeing 747 by the Boeing 777 or the Airbus 330. Added to this, there was an increased usage of the modern Boeing 787. Retrofitting the planes with aerodynamic winglets and slight higher utilization rates also had a positive effect.

Thus, it is not a coincidence that Okay Airways from China is at the top of the AAI ranking of the largest airlines. The relatively young company founded in 2004 makes use of a modern fleet and high utilization rate. In this category, the Chinese have placed higher than Canadian Air Transat as well as TAM Linhas Aéreas from Brazil.

In Europe, Meridiana from Italy is the leader in this category, with Dutch KLM and Air Berlin following.

"Climate efficiency is not a question of country of origin," atmosfair Managing Director Dr. Dietrich Brockhagen comments on the results of the AAI. "Anyone who can adapt a modern fleet well to the flight schedule and ideally combine engineering with operations can receive good values, regardless if it's in Europe, Asia, or South America." As the data show, the differences among airlines can be significant. The fuel usage per passenger and kilometer on a given route can be twice as high for one airline as for another.

However, the 2014 AAI also shows that the possibilities for airlines to improve their efficiency are getting more limited with time. Much more efficient airliners than the Airbus 380 or the Boeing 787 will not be built in the foreseeable future. Besides this, it seems to be difficult for the large airlines to increase their average utilization rate to over 70 percent, even with the best planning.

In all, 15 of the total 193 airlines tested by atmosfair flew Efficiency Class B in 2012. That is just one more airline than in the previous year. There is still no airline that achieved Efficiency Class A. Once again, the current AAI makes clear that efficiency improvements are lagging significantly behind the still growing number of passengers and cannot offset it. For this reason, the total emissions in the aviation industry rose by

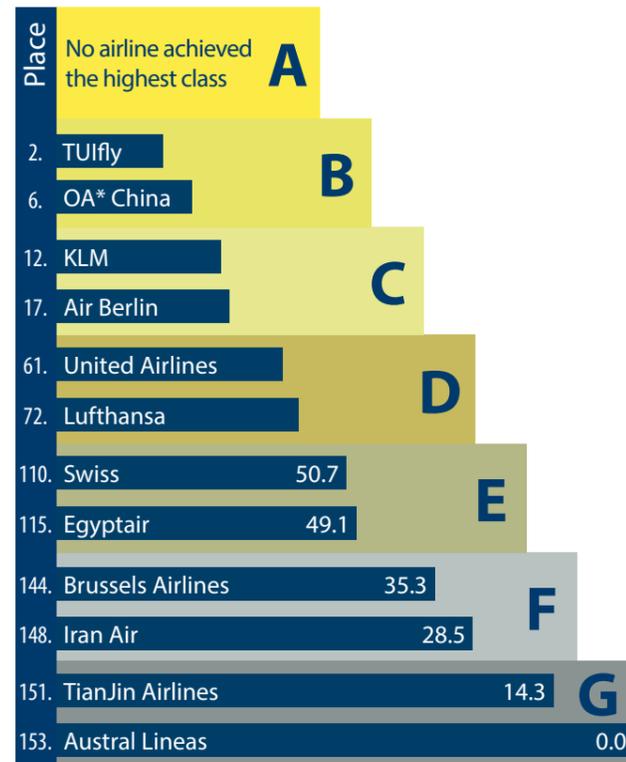
about three percent from 2011 to 2012.

This is the less good news from the new AAI: civil aviation is continuing to keep pace in the unbroken trend of worldwide CO₂ growth rates of around 3 percent annually. This is far removed from a path of development that could keep global warming to a maximum of 2 degree Celsius.

From atmosfair's perspective, the field of aviation must increase its climate protection efforts significantly for this reason. It is only in this way that the climate protection program for worldwide aviation for upcoming in 2020 be successfully launched. In Montreal in 2013, the International Civil Aviation Organization (ICAO) decided to prospectively vote in 2016 in Paris to free the CO₂ emissions of the aviation industry at the level reached in 2020. There is a need for more decisiveness so that the ICAO process does not come to a halt. Otherwise, we fear that the overall CO₂ output will also increase in the next decades despite continually improving efficiency

atmosfair Airline Index 2014

In each class, two airlines are listed as examples, which make up the rows.



*Okay Airways China



National forest program: collaboration with GIZ in Cameroon

Cooking with an efficient stove in Cameroon

Since 2011, the Deutsche Gesellschaft für Internationale Zusammenarbeit (German Society for International Cooperation, or GIZ) has executed the "Supporting the implementation of the National Forestry and Environmental Programme" (ProPSFE) with the Cameroonian Ministry of Forestry as well as the Ministry of Environment and Nature protection. A goal of

the program is to improve the sustainable supply of firewood in the northern part of the country. Reducing firewood consumption with efficient stoves is a part of the solution. As in many African countries, biomass is one of the most important sources of energy for private households. In the high country in northern Cameroon, over 90 percent of the population uses wood. According to stu-

dies, the forest growing naturally in the region only covers 70 percent of the regional firewood demand at the moment; the other 30 percent results in a net-loss of forest. The rapidly growing population will intensify the negative balance of wood in the coming years and intensify the pressure on the ecologically fragile region and forest land. Our atmosfair project partner in Cameroon up until now, Jean Claude Tsafack of Pro Climate International, put atmosfair and GIZ in touch. Our discussions together led to the planning of a first pilot phase. The goal is to first sell 300 efficient stoves in the region and test users' satisfaction. In addition, we will investigate the problems and opportunities of locally producing the stoves in Cameroon. For this, GIZ will take on the majority of the project financing, and their regional program employees in Maroua will follow the work in a supporting role. Because of GIZ's and ProPSF's support, atmosfair's originally planned pilot phase was able to be expanded, and the number of efficient stoves was considerably increased. The pilot phase will be completed by the end of 2015.

The World Food Programme (WFP) is the most important UN institution in the fight against global hunger. In 2012, the WFP decided to execute one of its projects under the rules of the Clean Development Mechanism (CDM) for the first time. The WFP country office in Ethiopia developed a highly promising project proposal in which locally produced stoves adapted to local cooking habits would be distributed to the people. Although the WFP has vast expertise in fighting hunger, the CDM was new territory for the institution, so the WFP made a public call for tenders for an experienced partner that could take on the project approval process. atmosfair successfully applied for this consulting job. The task for this project is to create the necessary project documents as well as ensure that all UN requirements are upheld in the planning and implementation processes. Being involved with the WFP was something special for atmosfair because although atmosfair receives a number of such consulting requests, it only takes on a few. atmosfair chose this project because important requirements were met: firstly, there was



Ethiopia: consulting for the World Food Programme (WFP)

atmosfair employee Katrin Wolf together with colleagues from the WFP in Ethiopia

a reliable and competent local partner that had a broad network and the full support of the country government. In addition, there were already concrete and realistic ideas about the project's financing, implementation timeframe, and organizational structures. Associated with the project, there was also a lot of added value for the families, and with

its household-based approach, it matches other atmosfair projects well.

Fairtrade International is planning a new standard for climate protection projects

The Fairtrade organization ensures that fair trade conditions are upheld and that the farmers in the country of origin receive fair payment for their products independent of the world market prices for certified products such as coffee, sugar, and bananas.

Now, Fairtrade is developing a new standard for CO₂ offsetting – the “Fairtrade Carbon Standard.” Many criteria within the new standard, including the involvement of the partners, the advance financing of the projects as well as a fair price for the CO₂ saved are already a reality in the projects supported by atmosfair.

atmosfair is providing support for Fairtrade in the development of the standard in a pilot project in order to find out how to evaluate the new standard and whether it would make sense to certify atmosfair’s projects according to the new standard. ➤



Hamburg donates compost for Tanzania

Representatives from atmosfair and the city of Hamburg in Tanzania

Since 2012, atmosfair has supported the city of Hamburg in developing its own climate protection project. The Hansa city resolved to offset the CO₂ emissions from the business trips of all of its administrative employees. The



Support for the UN Refugee Agency in Rwanda

In the past year, the UN Refugee Agency (UNHCR) has already distributed 4,000 efficient stoves in the refugee camp Kigime in Rwanda. atmosfair is now starting the first audit. Monitoring has already revealed that the stoves could be used even more if the training and distribution within the camp were organized better.

2,000 additional stoves will be given out in the newly set up refugee camp Mugombwa. 20,000 refugees from the Congo live here. Each family is supposed to receive an efficient stove. We are now helping the UNHCR to distribute the stoves and are turning our attention to building a training system. Each family that receives a stove should be informed about the benefits and proper usage. For this, atmosfair Country Manager for Rwanda Allan Mubiru is onsite at the refugee camp for several weeks in order to coordinate the work. The refugee camps Kiziba and Gihembe, in which another 5,000 families will receive a stove, will be next to follow. ➤

money will be invested in the city’s own climate protection project in the partner city of Dar es Salaam in Tanzania. Firstly, atmosfair examined the potential for a climate protection project in Dar es Salaam for the city of Hamburg. In a second step, it developed a comprehensive concept for a composting facility. The idea is to recycle market waste in a new composting facility that would otherwise land in a city landfill and decay under the creation of harmful methane. The composting would also provide valuable compost that is needed urgently in agriculture as fertilizer.

There is a close collaboration with the local authorities in Dar es Salaam. Thus, the city administration there agreed to make a piece of land at the city limits available for the composting facility. This has cleared an obstacle, and the project can now be implemented.

Even the German Federal Ministry for Economic Cooperation and Development (BMZ) wants to support the plans and the composting project with almost half a million euros. ➤



DHL employees visit in Lesotho

Logistics collaboration for climate protection

Successful climate protection project with Deutsche Post DHL

With the sales of the first stove in June 2011, the climate protection project in Lesotho began and with it, the collaboration between atmosfair and Deutsche Post DHL. Selling all of the stoves is not just a reason to be joyful for the local project partner Solar Lights, but also for atmosfair and Deutsche Post DHL.

The project was successful especially because of Deutsche Post DHL’s sustainable involvement. The post company took on the complete project financing, from the development of the structures onsite to procuring the components for the highly efficient stoves sets to the annual testing of the actual CO₂ savings. With this, the globally active company chose to commit financially long-term with a 10-year project duration and took on all the risk. In return, the logistics company can use the CO₂ reductions in its “GoGreen” program for climate-friendly shipping. Together with local partner Solar Lights, atmosfair took on the complete project implementation as well as the approval process with the UN. The Lesotho project is a model project on the African continent because of the close collaboration between the project investor, project developer, and local partner organization. “Our climate protection project in Lesotho is persuasive because it uses a simple technology that benefits the local people and environment. We use the CO₂ savings from the project for our customers that use the climate-neutral GoGreen services,” confirms Daniela Spießmann, senior expert for GoGreen at Deutsche Post DHL.

Detailed planning was the key to success

The detailed planning was especially important to the project’s success. The discussions between Deutsche Post DHL and atmosfair already began in 2009. Deutsche Post DHL chose the project in Lesotho because of its social and ecological added value to the local population as well as the expertise of our project partner. atmosfair and Deutsche Post DHL employees were then able to form their own picture on a project trip to Lesotho.

Maren Kügler, former employee at Deutsche Post DHL and participant in the trip, remembers: “The most impressive thing was

the first time that the stove was tested for cooking in a village. After initial hesitation, the inhabitants welcomed us very warmly, and everyone was enthusiastic. I am very happy that buying a GoGreen package or letter today can make a contribution that protects the forest in Lesotho, benefits rural households through an energy-efficient technology, and saves CO₂ at the same time. That is really a wonderful business model!”

Over five years have passed since our first project trip to Lesotho together. Today, over 10,000 households in Lesotho have benefited from the efficient stoves. The UN has already confirmed over 20,000 tons of CO₂ savings. The project and CO₂ savings it generates will continue to be monitored in the future until the year 2022.

Based on this success, we are continuing our collaboration and exchange with Deutsche Post. atmosfair hopes that additional companies will follow its example in the future and engage in the long-term financing and design of their own climate projects. ➤



Transport of the efficient stoves from the GoGreen campaign in Lesotho



Source: AIDA

Climate-friendly cruises?

Many donors may ask themselves whether atmosfair should offset luxury goods such as cruises. Shouldn't these actually be avoided in the first place?

atmosfair does not offer CO₂ offsetting for driving cars or fossil fuel use, but does for flights (even to exotic destinations) and cruises. Behind this are the following atmosfair guiding principles:

1. *No value judgments: atmosfair does not question a customer's desire for a particular product that creates CO₂. It is not atmosfair's place to judge whether a cruise may be more important to a person than a holiday in the Black Forest or the new iPhone.*
2. *Avoid – reduce – offset: As a climate protection organization, we are interested in a product's or activity's CO₂ emissions. True to our guiding principle (first avoid – then reduce – and only then offset), with this, we are asking the question whether the CO₂ can be avoided or reduced through the purchase of alternative products. From a climate perspective, we must ensure that this potential is tapped before CO₂ offsetting is involved because otherwise, offsetting can become counterproductive for climate protection. In concrete terms, this means that our partners commit themselves to appropriate efforts towards direct CO₂ reductions that are technically possible for their products in addition to offsetting. Some examples of this are:*

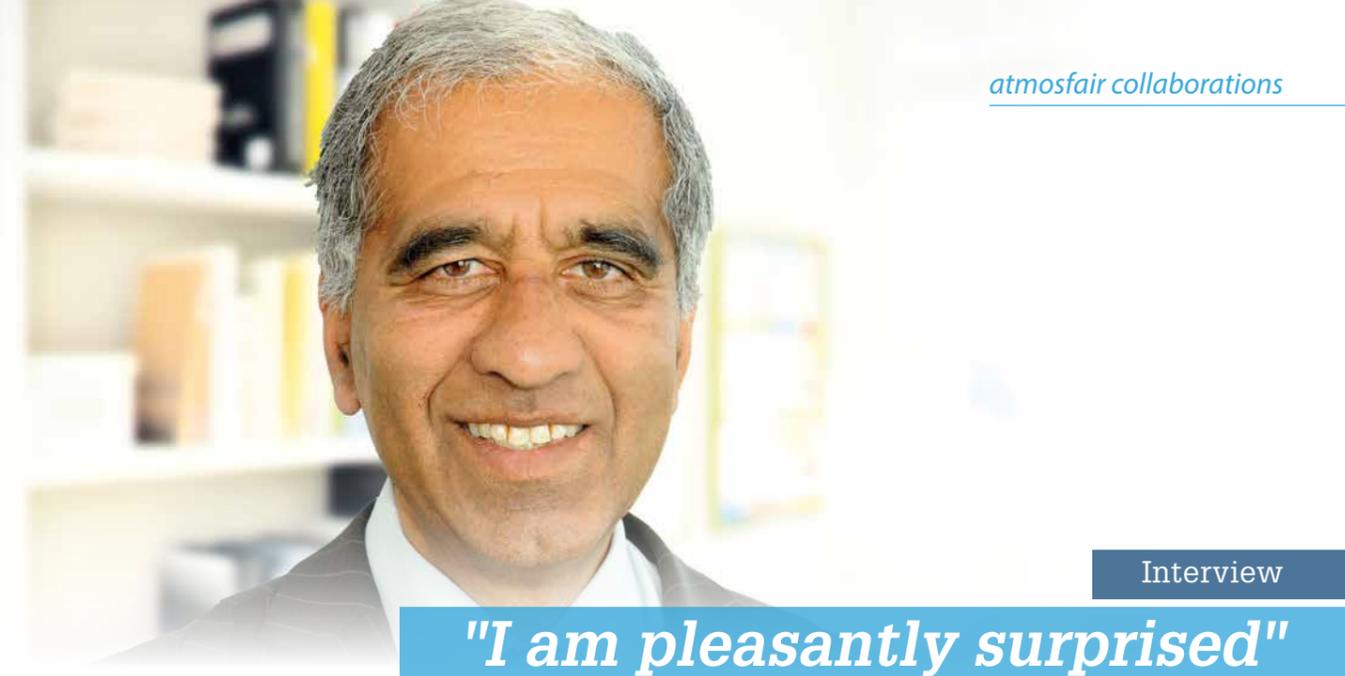
✔ We do not offset CO₂ from electricity created using fossil fuels because with green electricity, there is a CO₂-free alternative that can already be purchased.

✔ We offset cruises if the partner company takes measures

that, alongside CO₂ offsetting, also reduce the CO₂ production of the cruise itself. For this, there are technological possibilities that we are carrying forward, e.g., with our partner AIDA. As long as CO₂ remains, it is sensible from a climate protection perspective for atmosfair to offset the rest of the CO₂ during a bridging stage. For this, it is important that there be a future prospect of a CO₂-free cruise and that the partners are actively pursuing it. This applies equally for airlines, even if the bridging phase will still last many more decades

✔ For car driving, there are already climate-friendly alternatives, e.g., electric cars with green electricity. As long as these are still expensive, it is nevertheless better for climate protection if the customer's money is used to increase demand for these available alternatives in order to lower their price in the long run. This is advantageous for climate protection long-term; in contrast, CO₂ offsetting leads away from the direct path to the climate goal in this case.

3. Private customers vs. companies: We always respect private customers' desire to offset. Unlike companies' production, private customers make personal, short-term individual decisions and can only decide themselves what the above-mentioned relationship of CO₂ avoidance or reduction to offsetting is. For this reason, we also offset the amount of CO₂ desired by the customer; however, we do not issue a certificate for, e.g., "climate-neutral car driving," because for this, there are normally CO₂-free alternatives.



Interview

"I am pleasantly surprised"

Prof. Mojib Latif, atmosfair patron and Head of the Research Division Ocean Circulation and Climate Dynamics at the Helmholtz Centre for Ocean Research Kiel on the newly started collaboration between the cruise operator AIDA and atmosfair.

✔ **Professor Latif, you are committed to climate protection and a patron of atmosfair. Were you surprised by the collaboration between atmosfair and AIDA?**

Prof. Mojib Latif: Indeed, I did not expect it, and I was pleasantly surprised! The cruise industry has a bad reputation, not least because it uses heavy crude oil that is very harmful to the environment and the climate; the industry must also do its share for climate protection! If there are pioneers in the industry, others will follow.

✔ **You are head of the Research Division Ocean Circulation and Climate Dynamics at the Helmholtz Centre for Ocean Research Kiel. Cruises pollute both oceans and the climate. What will improve with this collaboration?**

Two things: first, AIDA can offset. This means that it can finance sustainability projects. This is exactly what atmosfair does with its funds. Second, there is the real hope that the cruise industry will become significantly cleaner. This ranges from the fuels and motors used to the laytimes in ports. Here, the onboard power supply can be supplied using hydrogen, for example, instead of harmful diesel. The long-term goal must be that one day, the cruise industry will not emit any more carbon dioxide that damages the climate at all!

✔ **It's not every day that a large international company collaborates with a small NGO. How credible is the program?**

The program must prove itself in the real world. Both atmosfair and AIDA are breaking new ground with this particular collaboration and have opened the floodgates. I hope that the high expectations will be fulfilled step by step.

✔ **Have you ever been on a cruise?**

Yes, I went as a lecturer. I informed the passengers about the risks to the environment, among other things. I tried to make it clear to the guests how unique Earth is, that we must live differently on our planet, and how we can handle our limited

resources more intelligently.

✔ **What was your personal opinion of the cruise?**

Very interesting! You travel to places that you would otherwise never be able to access. For example, I was on Spitsbergen. We traveled to 80 degrees North, which goes along the western side because the currents of the Gulf Stream keep the Arctic Ocean almost completely free of ice even at this latitude. We saw amazing, unspoiled nature, which of course presents a bit of a conflict: on the one hand, we want to protect nature, but on the other hand we influence it by intruding on it ever further.

✔ **What does your personal climate footprint look like?**

Terrible. I admit this openly. I have to travel very often and also very often travel intercontinentally. However, at home, I try to do what I wish everyone else would do, e.g., ride my bike a lot, save energy, and setting myself a personal speed limit of 100 km/h on the motorway. We need a bottom-up movement – everyone can do something. Politics will then follow – a virtuous circle.

✔ **You are both a scientist and someone who advocates for NGOs like atmosfair. Don't your colleagues make allegations about your lack of scientific neutrality?**

Yes, there are such accusations, but I think that they are unfounded. It's about showing that climate protection is not a utopian idea and that we can win in many ways with it. And one can also do this by supporting trustworthy NGOs. An organization like atmosfair tries to disseminate the concept of sustainability to the general public. And personally, I am of the opinion that we will only be able to achieve the necessary changes in values and structures by mobilizing the civil society.

Our partnership with AIDA

As with other partners, atmosfair enters into a collaboration with a company when it is part of a transformative process towards an economy that is low in CO₂. This means that the partner takes steps that go beyond offsetting with atmosfair to reduce CO₂ using its own funds. AIDA itself fully finances measures to filter exhaust and to reduce CO₂ on ships. The only thing that passengers pay for themselves is for voluntary offsetting of cruises through atmosfair.:

The climate protection concept agreed upon with AIDA encompasses the following components:

1. Outfitting the fleet with filters

The effects of climate change can already be clearly seen in the melting of the Arctic ice. This phenomenon is accelerated by soot emissions from shipping traffic, among other things. The soot particles can be deposited on the Arctic ice. There, they trap more sunlight and thereby heat, which leads to accelerated melting of the Arctic.

With the coming generation of ships that will be brought into service in 2015 and 2016, the AIDA ships will receive a comprehensive filter system to reduce soot particles, nitrogen oxides, and sulfur oxides. At the same time, AIDA is gradually retrofitting its existing fleet with filter systems.

2. Further reduction of exhaust emissions through the use of liquefied natural gas (LNG)

In addition to the new filter technology, AIDA will use liquefied natural gas (LNG) in order to further reduce the exhaust emissions. Liquefied natural gas is one of the least harmful fuels. Compared with conventional fuels, the emissions from liquefied natural gas are significantly reduced.

AIDA's new generation of ships for 2015/2016 will be outfitted with dual fuel motors that can use both conventional fuels and LNG. As soon as ports offer the infrastructure necessary for supplying the ships with LNG, the ships can use LNG directly during laytimes. Because the port infrastructure does not yet allow for the direct supplying of LNG to the ships at this time, AIDA has commissioned the development of the LNG Hybrid Barge. If all of the tests continue successfully, as of spring 2015, AIDA'sol will be the first cruise ship worldwide to be supplied with energy from LNG during its laytime in the Port of Hamburg.

3. Vision: Use of liquefied natural gas for CO₂-free operation of ships

The next level of environmental and climate protection goes beyond the reduction of exhaust emissions.

LNG can be produced from hydrogen instead of natural gas, which can in turn be produced by hydrolysis from electricity. If wind or solar energy is used for this, then the liquefied natural gas at the end of the chain is CO₂-free. The first so-called power-to-gas systems for this are already running in Germany and feed CO₂-free generated hydrogen from wind energy into the natural gas grid. With this, there is the vision that LNG from power-to-gas could become the fuel with which the ships could travel CO₂-free in the future.

AIDA would like to contribute to approaching this vision in a pilot project. In the next step with atmosfair, AIDA wants to buy and use natural gas produced through power-to-gas (and thus CO₂-free) for the LNG Barge or an AIDA ship as soon as possible. If this is successful, then, besides exhaust emissions reduction, it would be a first step towards a CO₂-free cruise and an important signal for the industry as a whole.

4. CO₂ offsetting for cruises and AIDA business trips

AIDA offsets the CO₂ emissions from business trips made by AIDA employees through its own donations to atmosfair.

5. CO₂ offsetting for cruises

As a final component of the climate protection program, AIDA customers can offset the CO₂ emissions from their cruise. AIDA and atmosfair have set themselves the goal that by 2020, 20% of all passengers will offset their trips. This is a big step compared with the rate of less than 1% for air travel. This will be achieved through targeted public relations work and information for customers. Only in this final component of the collaboration are donor funds used; AIDA is paying for all of the other components with its own funds."



Ride the bus and protect the climate

Collaboration between atmosfair and MeinFernbus FlixBus

Torben Grebe of MeinFernbus FlixBus
and atmosfair employee Jan-Moritz Jericke

Since last year, you not only can make your flight more climate-friendly, but also your bus ride. The basis for this is an overall concept for climate-friendly mobility that atmosfair developed with MeinFernbus FlixBus. Passengers can now make a voluntary climate protection contribution directly at the time of booking with MeinFernbus FlixBus. "Environmentally friendly travel is becoming increasingly important. Feedback from numerous customers who would like to "go green" with us has shown us this", says the Managing Director of MeinFernbus FlixBus Torben Grebe. "For this reason, we are very happy to work together with atmosfair as an offsetting partner from now on."

This is how it works for the passengers: the calculation of the CO₂ output follows a kilometer flat rate that atmosfair calculates from data made available by MeinFernbus FlixBus. MeinFernbus FlixBus collects the voluntary climate protection contributions paid and transfers them to atmosfair. The funds collected are then used in our climate protection project in developing countries, but also in selected projects in Germany.

Green electric cars for Germany

This is because there is an additional contribution for CO₂ avoidance projects in Germany included in the climate protection contribution. It will be used, for example, to finance electric buses for ambulance services for non-profit organizations (e.g., Johanniter, DRK, Malteser). The goal of this is also to support the school buses or bus lines in rural regions that no longer receive public funding. This includes the so-called "citizens' buses" that replace missing local transport. atmosfair and MeinFernbus FlixBus will determine the concrete projects for this during the course of 2015 when it is clear how much money is available.

Why is the collaboration good for the climate?

atmosfair wants to offer offsetting services precisely where unavoidable CO₂ is still being created. "Combining mobility with climate protection is a long-term task. In order to achieve the necessary transformation of Germany into a practically CO₂-free country, the energy transition must also address transport," says Jan-Moritz Jericke of atmosfair. "We are happy to have found innovative approaches together with MeinFernbus FlixBus in order to implement transformative climate protection projects for more sustainable mobility in Germany." Offsetting CO₂ with climate protection projects in developing countries makes sense as a complementary measure as long as buses do not operate CO₂-free. For this reason, the climate protection contribution also supports transformative projects on the topic of CO₂-free transport in Germany and contributes to making comprehensive CO₂-free mobility on the streets possible in the future.

Which is more climate-friendly: bus or train?

The additional projects in Germany are critical to achieving a positive climate effect from our collaboration with MeinFernbus FlixBus. Measured in CO₂ output per person, long-distance buses are currently more climate-friendly than the train. However, the train is better positioned for a possible reduction in the CO₂ output per person-kilometer in the future. Most trains run using electricity. CO₂-free electricity from renewable energies is already available in large quantities. Long-distance buses, in contrast, will be limited to combustion engines for a long time. Supporting long-distance buses in the long term is only sensible if there are parallel efforts to avoid CO₂ in the area of mobility on the street.

Pedro Turbany
Cornelius Meyer
Kristina Lenardic
Johannes Reibland
Carsten Käfer
Corinna Gähler
Dietrich Brockhagen
Moderation: Joachim Tensch, Süddeutsche Zeitung

SICK
West RING
Lufthansa City Center
Forum Anders Reisen
Tolly
Umweltbundesamt
atmosfair
Moderation: Joachim Tensch, Süddeutsche Zeitung

Pedro Turbany
Cornelius Meyer
Kristina Lenardic
Johannes Reibland
Carsten Käfer
Corinna Gähler
Dietrich Brockhagen
Moderation: Joachim Tensch, Süddeutsche Zeitung



atmosfair podium discussion "Climate Protection in Travel Marketing" at the ITB 2014

ITB 2014: From information to active consulting

With the project "Green Counter," atmosfair, which is supported by the Federal Environment Agency, worked on the foundations and tools for climate-friendly travel agencies already in 2012 and 2013. atmosfair presented the concept for this at the ITB in spring 2014 in a podium discussion on the topic "Climate Protection in Travel Marketing" and used this opportunity to

speak with high-ranking representatives from the travel industry. In addition, atmosfair surveyed over 50 travel agencies and tour operators in 2014 in order to create a well-founded and practical basis to develop a training concept. The implementation can begin in 2015..

New collaboration partner:

Hofer Reisen and ALDI SUISSE TOURS

As of January 2015, customers can offset their flights directly when making a booking with the two large travel operators Hofer Reisen and ALDI SUISSE TOURS. During the payment process, the customer can choose to make a climate protection contribution in any amount. The two travel operators are targeting classi-



cal package tourism customers. "Sustainability and climate protection can't remain in an ecological niche," employee Lina Tabea Maguhn, who manages the partnership for atmosfair, commented joyfully..

Travel agencies: Climate protection in travel marketing

In 2014, atmosfair collaborated with the Institute for Sustainable Tourism (Inatour) developed a concept for training travel agencies. The idea is to help travel agencies to become specialized in climate-friendly travel, similar to other types of specializations, e.g., focusing on South America or golf tourism. The key for the travel agencies in this is that they not only help the climate by selling high-quality, but shorter trips, but also have more revenues for themselves and that the customers get to have a special trip that they would not have thought of on their own.

The new concept trains travel agency employees in criteria and products for sustainable travel and makes them fit for the sales pitch in practice. With this, they can offer the customers high-quality advice and set themselves apart with this service from merely making a book online. In this way, the climate, the customer, and the travel agency win: a true win-win-win situation.



Climate protection in sustainability management:

Baden-Württemberg Environmental Prize for SICK AG

The project in Nigeria supported by SICK AG

Ever more companies are opting for sustainable management. One example is the sensor manufacturer SICK AG, which was even distinguished with the Umweltpreis (Environmental Prize) from the state of Baden-Württemberg for their efforts. SICK offsets its business travel and heat generation for its domestic sites using atmosfair. In 2013 and 2014, SICK supported our stove project in Nigeria. For 2015 and 2016, the company supported the atmosfair projects in Rwanda (stoves) and Ethiopia (Solar Home Systems).

A truly climate conscious partner

It is not a coincidence that SICK received the coveted Umweltpreis (Environmental Prize) from the state of Baden-Württemberg: just like we do, the company understands that offsetting is only the second-best solution. For this, avoiding and reducing CO₂ in the long term using green electricity, electric automobiles, and green energy management are paramount.

Besides offsetting, SICK encourages employee's involvement. For example, they offer a carpool exchange, preferential parking spaces for carpools, and bicycle inspections free of charge. Through their partnership with us, SICK has chosen the very good, but more cost-intensive atmosfair projects. This attitude is brought into the company by the shareholders; SICK is a family-owned company. ➤

SICK makes advance payments

The collaboration model with SICK is different from "normal" offsetting in that SICK finances the climate protection technology in advance. The company pays in advance for the year that it wishes to offset through a climate protection contribution to atmosfair. The amount of the payment is chosen so that we can finance as many systems (stoves, Solar Home Systems) that these then save the amount of CO₂ that SICK needs to offset in three years. This model of advance payment corresponds exactly to our ideal concept of offsetting. With "normal" offsetting, if a company wants to use the CO₂ savings for itself immediately, then atmosfair must do preliminary work. In contrast, SICK finances in advance and must then "wait" for three years until the offsetting has been implemented. Furthermore, advance financing makes the project's additionality comprehensible in a transparent way since the CO₂ offsetting is not already coming from projects that have already been implemented.



Green meetings: first conference package successfully introduced

Interview

The first Steigenberger hotels have introduced the first green meeting conference package, which always includes CO₂ offsetting with atmosfair as an integral component. We interviewed Britta Viktoria Opatz (Regional Director MICE Sales) and Maren Schellenberg (Director of Convention Sales) from the Steigenberger Hotel am Kanzleramt in Berlin.

➤ Why does a successful company like Steigenberger support sustainability, and what goals have you set for yourselves?

Britta Viktoria Opatz: We want to be role models and initiate behavioral changes when it comes to the topic of sustainability. In addition, we are facing strong competition. If you want to distinguish yourselves from competitors, it always helps to have a distinguishing feature. This not only can achieve – in contrast to what people normally think – more economic efficiency, but also social added value. In this process, it's not about green-washing, but rather following words with deeds and upholding our function as role models.

➤ What does this look like in a hotel's routine?

Britta Viktoria Opatz: By using LED lights, we can save a huge amount of energy. Beyond this, we sort all of the building's waste carefully. This allows and our partner to reach a recycling quota of over 96 percent. In addition, we try to generate as little packaging as possible from the get-go. Investment costs are amortized by the energy savings, e.g., by using an intelligent, laser-guided range hood in the hotel kitchen that can turn itself on and off.

➤ How does your "green meeting" model distinguish itself from other conference concepts?

Maren Schellenberg: Firstly, our building is certified according to environmental management system ISO 14:001. Secondly, we work together with atmosfair on CO₂ offsetting. We offset the CO₂ using atmosfair: we have flat rates for all conferences and through this, support social and ecological projects in developing countries. We complement this with catering seasonal products, regional suppliers, and locally filtered water, for example. Some of our conference documents are also made of recycled materials.



Maren Schellenberg



Britta Viktoria Opatz

➤ Do customers notice that they are in a green meeting?

Maren Schellenberg: For us, it is important above all that the customers notice the advantages that come from living and working sustainably. It begins with serving them our homemade honey made by bee colonies on our roof. During the breaks, we can also announce that the event is climate-friendly and certified by atmosfair if desired. In the best-case scenario, our guests already travel with the event ticket, i.e., by train, which already dramatically reduces their CO₂ emissions. In this way, the whole stay becomes a "green experience."

➤ What feedback have you received from your customers?

Maren Schellenberg: Customers who did not know much about sustainability beforehand are able to have their first experience with it. I do think that a comprehensive package like this changes people's consciousness. We have noticed, for example, that many of our guests react very positively and are interested and amazed about everything that is possible without sacrificing comfort or investing money. We have a sense of achievement when we hear from customers that when they book with us, they have the feeling that they are doing something good at the same time.

➤ What is the future of green meetings in the event industry?

Britta Viktoria Opatz: Since opening in May, we have sold around 15,000 conference packages. Our concept makes people curious, and not just within the industry. In each of our chain's hotels, there is a CR representative whose job it is to implement the certified environmental management system ISO 14.001, which activates a continual improvement process. This helps our contribution to sustainability to grow continuously.

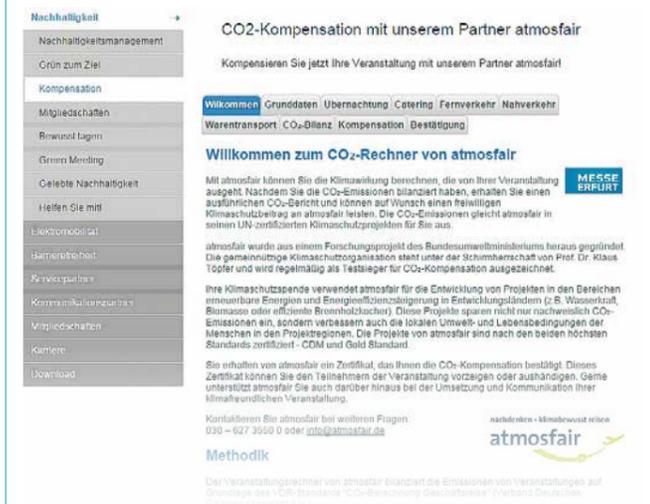


As the second-largest exhibition site in the new German states, Erfurt is increasingly becoming a popular place for conferences and congresses that must present itself as future-oriented and international. Messe Erfurt has realized this and integrated environmental and climate protection aspect into their sustainable corporate strategy. The exhibition hall's main objective is "to radically reduce our CO₂ impact on the environment." This will be achieved by using green energy, intelligently automating the building, and making a green roof on the building's roof in order to improve the air conditioning. Since around 70 percent of the CO₂ emissions from an event are caused by transportation, Messe Erfurt collaborates with Deutsche Bahn and Erfurt's public transport service Erfurter Verkehrsbetriebe in order to offer event participants an environmentally friendly journey to the venue. Besides this, a public electric filling station will be opened on the exhibition grounds, and an electric vehicle will be added to the transport fleet. Another special feature is that there are several bee colonies on the roof that provide the exhibition hall with its own honey.

In order to offset the unavoidable event CO₂ emissions, Messe Erfurt has collaborated with atmosfair since the summer of 2014. Now, exhibition visitors can have the CO₂ impact of their events calculated and offset them through atmosfair climate protection projects. atmosfair calculated the CO₂ emissions of the exhibition hall beforehand and broke them down by room. Messe Erfurt itself has offset all of its own employee business travel with the help of atmosfair since 2015, which rounds off its sustainable business strategy. ➤



The Day of German Unity is one of the biggest days of celebration in Germany. Every year, it is held in a different state capital. The environmental and climate impact of such an event is enormous. Thus, host state of 2014, Lower Saxony, gave thought to how to run the festivities surrounding the Day of German Unity in a more climate friendly way. The result: the event agency Compact Team from Berlin as well as the responsible parties from the state government got together with atmosfair and explored some possible ways to avoid and reduce CO₂. Using green energy was especially important to atmosfair. Besides a comprehensive waste management system, the team paid special attention to serving regional catering at the official ceremony and to using as many hybrid public buses as possible to transport the guests within Hannover. atmosfair calculated the unavoidable CO₂ emissions and afterwards, the state of Lower Saxony offset these emissions through the atmosfair climate protection project in Rwanda.



At the celebrations at the Maschsee in Hannover, atmosfair was also there with a stand and used the chance to inform people about its work. Visitors could guess the CO₂ emissions of three different trips for fun. As a reward, the participants received one of atmosfair's travel journals with climate-friendly travel tips. For the youngest visitors, there was a drawing competition on the topic "My family and I in nature." The industrious young artists showered the stand with a beautiful, colorful picture wall.

The organizers, visitors, and atmosfair hope that this will not be the last climate-friendly Day of German Unity. ➤

Financial Report

At over 4.5 million euros, atmosfair's revenues in 2014 rose significantly compared with the previous year. atmosfair did not receive any public subsidies. No single offsetting customer contributed over 10% of total profits; thus, the non-profit limited liability company atmosfair remained financially independent. Since 2007, revenues from economic business operations have been added on top of the contributions. The profits generated from this pay for part of the costs of the non-profit part of atmosfair. In this way, the proportion of donation revenues spent on administration and fundraising could be kept at 10%. From the remaining surpluses from economic business operations, atmosfair created reserves for climate protection projects. Thus, out of 100 euros of donation revenues, 90 euros went to financing climate protection projects such as efficient stoves or supporting projects on renewable electricity production as well as to the planners and operators of the projects; atmosfair used just 10 euros for its own personnel for donor support as well as for other costs such as IT, bookkeeping, public relations work, rent, and credit card fees.

Organization

Stiftung Zukunftsfähigkeit based in Bonn continues to be atmosfair gGmbH's sole shareholder. The four-person advisory board, consisting of two representatives of the German Federal Ministry for the Environment and two representatives from environmental organizations, approved the climate protection projects contracted in 2014. None of the persons in these bodies received compensation or reimbursement for this. The fiscal authority certified the non-profit limited liability company's tax exemption for 2014. For the climate protection contributions received in 2014, the non-profit GmbH issued the donation certificates in due form.

Financially independent

atmosfair financed itself in 2014 through donations and revenues from economic business operations. The latter is allowed to a limited extent within a non-profit organization. atmosfair did not receive any public subsidies and is thus financially independent. The sole shareholder Stiftung Zukunftsfähigkeit did not pay any money to atmosfair in 2014, and neither did atmosfair pay any money to the foundation.

Profits and expenses

In 2014, atmosfair achieved a total of around 4.5 million euros in revenues. The largest expenses were the payments to climate protection projects. These included costs for the purchase of technologies (e.g., efficient stoves), project set-up and operation, including the TÜV audit and other UN-approved auditors as well as the personnel abroad for the projects. In total, atmosfair spent around 2.4 million euros and also liquidated reserves from previous years. atmosfair also created new reserves for the new climate protection projects, particularly for the big project in Nepal. atmosfair keeps further reserves to initiate pilot projects. On top of the expenditures for CO₂ offsetting projects came the costs for personnel for project planning and supervision, which amounted to nearly 250,000 euros in 2014.

Since it was founded, atmosfair has supported climate protection projects with over 11 million euros in total. In addition, atmosfair has contractually promised project operators another approx. 10 million euros in funds until 2020.

Salaries in line with the TVL rate

Besides the climate protection projects, personnel expenses were the second largest cost factor. atmosfair employees earn salaries in line with the public service sector rate of the states (TVL), whereby project managers are currently paid at level 11 and team leaders at level 13.

The total general administrative costs for telephone, postage, insurance, and office supplies amounted to about 46,000 euros. 36,000 euros went to the rent. Further, atmosfair must pay the costs for credit card fees and payment services. These are necessary in order to account for the incoming online payments and transfer them to the atmosfair account.

Own total costs just 10% of donations

One of the atmosfair standards requires the efficient use of contributions. Thus, only a small percentage of contributions are used for atmosfair's own costs, i.e., those funds that are not used for climate protection projects, but rather by atmosfair for its own administrative and fundraising work. In 2014, around 490,000 euros in total were spent for this purpose and were used for personnel costs as well as for the costs of materials for public relations work as well as IT, accounting, credit card fees, travel costs, etc. (see table in parts b) and c) under Expenses).

Cost reduction through atmosfair's own profits

In 2014, atmosfair earned surpluses in commercial revenues in the amount of 303,000 euros after taxes; these were earned through the operation of climate protection projects on customers' behalf, the sale of the CO₂ accounting software, and consulting services (climate service for companies). Of this, 31,000 euros were used as cross-subsidies in order to keep atmosfair's own costs down to 10 percent (see the table on page 52, Expenses part e) Use of surpluses). The remaining surpluses from economic business operations (around 270,000 euros) will be kept for future climate protection projects as well as for expected increases for the cost of IT and rent in 2015. In other words, of 100 euros in contributions, 90 euros went to the planners, technology providers as well as to the project operators in the developing countries; atmosfair used just around 10 euros for the remaining personnel and administrative costs.

The low costs are also made possible because atmosfair continued to forgo all forms of paid advertisement such as ads, commercials, or promotion teams in 2014. Partners financed the advertising campaign at airports, and the participating celebrities made their contribution free of charge.

Balance sheet of atmosfair gGmbH

| Assets | Euro | Liabilities | Euro |
|--|---------------------|--|---------------------|
| A Fixed assets | 12,640.00 | A Owner's equity | 4,096,029.41 |
| I. Intangible assets | 497.00 | I. Subscribed capital | 25,000.00 |
| II. Tangible assets | 12,143.00 | II. Reserves for statutory purposes | 4,071,029.41 |
| | | - Short-term climate project reserves | 2,862,033.11 |
| | | - Free reserves (i.a., for climate projects) | 1,208,996.30 |
| B Current assets | 7,758,962.78 | B Provisions | 3,527,476.84 |
| I. Inventory | 2,808.75 | Provisions for taxes | 169,904.00 |
| II. Accounts receivable and other assets | | Provisions for climate protection projects | 3,338,800.50 |
| - Trade accounts receivable | 291,695.74 | Other provisions | 18,772.34 |
| - Other assets | 72,514.03 | | |
| III. Cash and cash equivalents | 7,391,944.26 | | |
| C Accruals | 494.87 | C Accounts payable | 147,131.40 |
| | | - Trade accounts payable | 62,452.60 |
| | | - Other accounts payable | 84,678.80 |
| | | D Accruals | 1,460.00 |
| Total | 7,772,097.65 | Total | 7,766,945.65 |

Income Statement 2014

| | 2014 | 2014 | 2013 |
|---|-------------------|---------------|-------------------|
| | € | % | € |
| Revenues | | | |
| Voluntary climate protection contributions for climate protection projects | 3,657,294 | 79.6 | 2,297,204 |
| Climate protection projects on behalf of customers and funds towards the purchase of technologies, before taxes | 699,663 | 15.2 | 1,412,529 |
| <i>Subtotal for climate protection project</i> | <i>4,356,957</i> | <i>94.9</i> | <i>3,709,733</i> |
| Support from Federal Environment Agency, Project Climate Protection in Travel Agencies | 0 | 0 | 29,750 |
| CO ₂ reporting software, consulting, etc., before taxes | 194,407 | 4.2 | 173,449 |
| Other revenues (interest, etc.) | 41,587 | 0.9 | 25,398 |
| Total | 4,592,951 | 100.0 | 3,938,330 |
| Expenses | | | |
| a) Climate protection projects for CO₂ offsetting, private and corporate customers | | | |
| - Direct expenses (planning, setup, operation, technology purchase, audit, and personnel in developing countries) | -2,412,396 | -52.5 | -3,494,035 |
| - Creation of reserves for climate protection projects, intangible arena | -1,454,915 | -31.7 | 762,000 |
| <i>Balance for climate protection projects CO₂ offsetting with the use of earlier provisions</i> | <i>-3,867,310</i> | <i>-84.2</i> | <i>-2,732,035</i> |
| - Personnel: project planning and support from atmosfair in Germany | -249,526 | -5.4 | -143,754 |
| b) Administrative costs: Support for donors and partners, fundraising, public relations work | | | |
| - Personnel costs | -157,057 | -3.4 | -125,785 |
| - Editing for Public relations work | -24,866 | -0.5 | -22,904 |
| <i>Total for donor and partner support, public relations work</i> | <i>-181,923</i> | <i>-4.0</i> | <i>-148,689</i> |
| c) Other administrative costs | | | |
| Administration (telecommunications, postage, office supplies, insurance, membership fees, depreciation) | -46,420 | -1.0 | -39,088 |
| Rent and maintenance | -35,785 | -0.8 | -32,983 |
| Credit card fees, payment services, account fees, exchange rate differences | -6,547 | -0.1 | -11,113 |
| IT (fees, maintenance costs, server costs) | -88,289 | -1.9 | -83,681 |
| Bookkeeping, tax advisory services and financial statements, financial auditor | -33,301 | -0.7 | -30,843 |
| Printing costs for publications | -18,684 | -0.4 | -6,308 |
| Work contracts | -68,169 | -1.5 | -121,915 |
| Business travel | -11,208 | -0.2 | -5,835 |
| Advertisements (ads, commercials, promotion teams) | 0 | 0.0 | 0 |
| <i>Total for other administrative costs</i> | <i>-308,403</i> | <i>-6.7</i> | <i>-331,766</i> |
| d) Business operations: climate service for companies | | | |
| - CO ₂ accounting software | -44,145 | -1.0 | -44,598 |
| - Personnel: climate service for companies | -112,184 | -2.4 | -89,846 |
| - Taxes on revenues from climate service and climate protection projects for corporate customers | -132,435 | -2.9 | -107,418 |
| <i>Total for climate service for companies</i> | <i>-288,764</i> | <i>-6.3</i> | <i>-241,862</i> |
| e) Use of surpluses from business operations | | | |
| For informational purposes: surpluses from business operations, after taxes | 302,976 | 6.6 | 340,225 |
| Use of surpluses: amount covering reduction of remaining administrative costs to 10% of revenues | 31,032 | 0.7 | -85,000.0 |
| Use of surpluses: reserves for rising administrative costs (rent, IT, personnel, etc.) | 145,000 | 3.2 | 0.0 |
| Use of surpluses: reserves for climate protection projects | 126,944 | 2.8 | -255,224 |
| Total | -4,592,951 | -100.0 | -3,938,330 |
| Result after accumulation of reserves for climate protection projects/use of surpluses | 0 | | 0 |

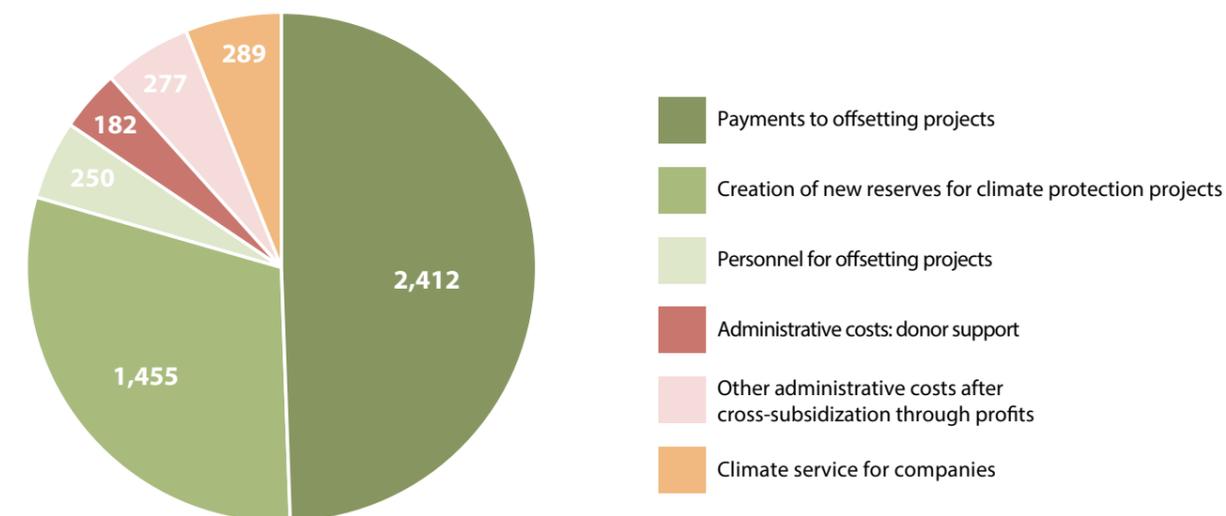
Achievement of objectives

The climate protection projects that have already been signed off on were able to cover already existing reduction obligations (see Overview, table on page 12). atmosfair has thus far always reduced more greenhouse gases than were required by the contributions.

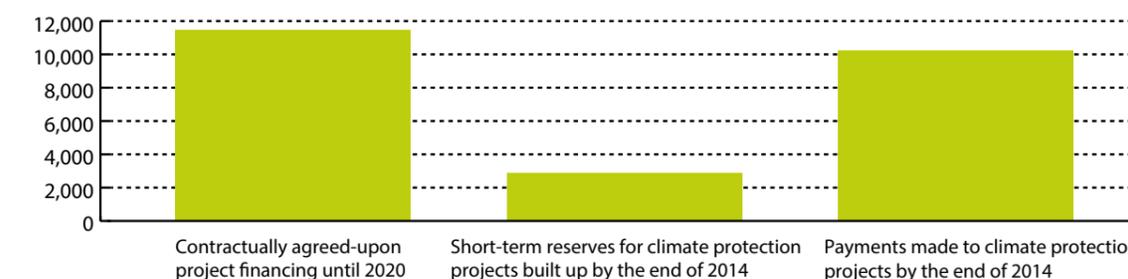
Managing director's review and discharge

The Managing Director of the gGmbH drew up the financial statements on December 31st, 2014. The partner's meeting determined the proper completion of the annual report on April 2nd, 2015 and discharged the managing director. A financial auditor was commissioned to audit the annual financial statements; the results are expected by the end of Q2 2015. ✓

atmosfair gGmbH expenses 2014 [1000 euros]



Project financing as of 2014 [1000 euros]



17.02.2014 online

STUTTGARTER NACHRICHTEN
 "The former director of the Max Planck Institute for Meteorology in Hamburg has now brought the Stuttgart Airport (FSG) into the fairport council of 2014. Already in the 1980s and then in the 1990s, Graßl warned about the consequences of people interfering with the climate and demonstrated scenarios as hardly any other person has. Besides him, the FSG has recently appointed additional scientists, including the physicist and environmental economist Dietrich Brockhagen, Managing Director of the non-profit limited liability company atmosfair, which wants to promote climate-conscious flying through voluntary environmental donations, in addition to the business professor Hans-Dietrich Haasis from the University of Bremen."

11.06.2014 online

STUTTGARTER ZEITUNG
 atmosfair "fulfills the highest quality standards."

02.07.2014 print

SCHROT & KORN
 "The climate protection organization [atmosfair] offers voluntary greenhouse gas offsetting and with it, supports the development of renewable energies in developing countries."

18.07.2014 online

greenpeace magazin
 "Offsetting flight miles the way atmosfair does will definitely become more popular [in the travel industry] going forward."

01.09.2014 online

WELT KOMPAKT
 "Besides the type of project, it is important whether it was developed by several investors or if a provider covers all the costs itself, as atmosfair.de did. For example with the nut energy, for determining the price, it costs 23 euros to offset one ton of CO2 with this non-profit organization."

09.11.2014 online

Frankfurter Rundschau
 "Airplanes require ever less kerosene. However, the airlines are no climate heroes because of this: namely, the greenhouse gas output of the aviation industry has once again increased overall as compared with last year by three percent. This is shown by the current 'Airline Index' (AAI) presented by the company atmosfair.
 Three liters for 100 kilometers – with so little fuel, you can be on your way by plane if it is a modern jet with a high utilization rate. According to the index, the world's large airlines have reduced their CO2 output by around one percent within a year if you calculate it per passenger and kilometer.
 However, this improvement did not come through because the volume of passengers grew worldwide one again by around four percent. Particularly in Asia, the number of flight passengers is growing, while the growth curves have flattened out in Europe and North America," said atmosfair Managing Director Dietrich Brockhagen in an interview with FR."

SPiegel ONLINE

"The German airline Tuifly is once again the most environmentally friendly in the country and almost in the world. Every year, the climate protection organization atmosfair compares the 190 largest airlines on their climate efficiency."

"With around 31.2 million flights in total, the Atmosfair Airline Index (AAI) represents about 92 percent of air travel worldwide."

"According to atmosfair, the goal of the rankings is to make climate protection into a competitive factor among the airlines with the Airline Index."

"It can only help climate protection when CO2 performance is made public."

10.11.2014 online

taz
 "More passengers, more carbon dioxide: although airlines became more efficient, the airline industry's emissions increased in 2012 as compared to the year before. This has been shown by this year's Airline Index, which the non-profit organization atmosfair presented on Monday."

10.11.2014 online

ZEITUNG ONLINE
 "Aviation across the world is still far from sustainably reducing greenhouse gases. An evaluation by the organization atmosfair, which presented its climate index for 2014, has shown this. According to atmosfair, airlines worldwide have reduced their CO2 emissions per passenger and kilometer by 1.3 percent."

10.11.2014 print

DER SPIEGEL
 "Although the number of air travel passengers has increased worldwide by 4.7 percent, the carbon dioxide output has only grown by 3 percent. This was shown by climate protection organization atmosfair's annual calculations. [...] 'The possibilities for improving the fleet further are becoming more limited for many airlines,' fears atmosfair Managing Director Dietrich Brockhagen. 'Much more efficient airliners than the Airbus 380 or the Boeing 787 will not be built in the foreseeable future,' he says."

10.11.2014

heute.de
 "According to climate protectors, aviation worldwide is far from sustainably reducing greenhouse gases. This was shown by the organization atmosfair's Climate Index for 2014."

10.11.2014 online

Handelsblatt
 "We fear that emissions will continue to grow as before in the coming decades as well," admonishes atmosfair Managing Director Dietrich Brockhagen. Stronger involvement of all parties is needed for the upcoming climate conference in Peru. It is only in this way that the climate protection program for worldwide aviation coming up in 2020 will be successfully launched. Brockhagen: 'The climate conference in Peru needs more decisiveness.'"

10.11.14 online

Bild.de
 "People who do not wish to switch to the bus or train can at least pay attention to emissions values when they choose their airline. The annual 'atmosfair Airline Index,' which evaluates the most climate-friendly airlines worldwide, helps with this. To achieve this, CO2 emissions per passenger and flight kilometer were compared. It is possible to achieve up to 100 efficiency points. In this year, 193 airlines were evaluated."

14.11.2014 online

Süddeutsche.de
 "According to it, the airlines worldwide have reduced their CO2 emissions per passenger and kilometer by 1.3 percent. However, since the industry grew by 4.8 percent during the same time period, emissions have increased by 3.5 percent. According to atmosfair, reducing emissions per kilometer is mainly attributable to replacing older models, retrofitting the airplanes with aerodynamic winglets, and better utilization."

"We fear that emissions will continue to grow as before in the coming decades as well," admonishes atmosfair Managing Director Dietrich Brockhagen. Stronger involvement of all parties is needed for the upcoming climate conference in Peru. It is only in this way that the climate protection program for worldwide aviation coming up in 2020 will be successfully launched. Brockhagen: 'The climate conference in Peru needs more decisiveness.'"

25.11.2014 online

ONLINE FOCUS
 "If you want to fly in the most environmentally friendly way possible, you should pay attention to different airlines' emissions. The organization atmosfair evaluated the emissions values of the various airlines in a Climate Index for 2014. The index is based on an airline's CO2 output per kilometer and passenger on a given flight route."

27.11.2014 online

TV-Interview greenMAG

8:44 Thomas Sauermann: On the one hand, CO2 is now produced or emitted; on the other hand it is offset. Does that mean for me, as a flight passenger, that it's as though I had never stepped foot in the plane, or is that a naive assumption?

8:54 Dietrich Brockhagen: Yes and no. In the moment that you were flying, it is the best thing that you could have done since the atmosphere absorbed those four tons of CO2. In that case, it is only right (and inexpensive) for you to take care that the four tons can be saved somewhere else. For the earth's atmosphere, it does not matter where the CO2 is emitted and where it is saved. The CO2 stays in the atmosphere for around 100 years. It gets mixed in across the globe so that the calculation is merged. From the amount of CO2 alone, it is true that if you offset, your flight will be CO2-neutral. The catch is that the offsetting does not lead to the climate protection goal that is actually necessary. The emissions need to be reduced at the source. We need to fly in a way that produces less CO2. When we continue to fly the way we did before and save

the emissions in developing countries, we are still putting the climate up against a wall because the airplanes still emit too much CO2. We would still be doing that even if we got the developing countries down to zero emissions. At atmosfair, we have an approach that we work to achieve with our corporate customers and travel agencies as well: first avoid, then reduce, and only then offset the rest. In this sense, offsetting only makes sense as a contribution to climate protection if you have first avoided and then reduced. 10:24

01.12.2014 online

Wirtschafts Woche
 "Once a year, the environmental organization atmosfair evaluates the environmental friendliness of the largest airlines. For this, the CO2 output and the airplanes used were recorded. Neither Air Berlin nor Lufthansa performed particularly well."

10.11.2014 print

DER SPIEGEL
 Aviation
 Modern jets fly more cleanly

"Although the number of air travel passengers has increased worldwide by 4.7 percent, the carbon dioxide output has only grown by 3 percent. This was shown by climate protection organization atmosfair's annual calculations. Reasons for this are the use of more modern jets and better utilization rates. The possibilities for improving the fleet further are becoming more limited for many airlines," fears atmosfair Managing Director Dietrich Brockhagen. 'Much more efficient airliners than the Airbus 380 or the Boeing 787 will not be built in the foreseeable future,' he says. In the atmosfair ranking, the German airline Tuifly was ranked particularly well at 2nd place out of 125 evaluated companies behind the Tunisian Tunisair Express. Air Berlin (17) and Condor (22) followed. Lufthansa was also able to improve its efficiency, especially because it modernized its fleet. Compared to the competition, however, the company was ranked slightly lower in the climate ranking at 72nd place.

References (selection)

Companies



NGOs, political organizations, and associations



Climate-friendly events



Partners (selection)

Business travel



Tourism



Venues



Climate protection projects



Patrons

| | | |
|---|--|--|
|  Prof. Dr. Klaus Töpfer Former executive director of the United Nations Environment Programme (UNEP) |  Prof. Dr. Mojib Latif Professor at the Leibniz Institute of Marine Sciences at the University of Kiel |  Prof. Dr. Hartmut GraB Former director of the Max Planck Institute for Meteorology in Hamburg |
|---|--|--|

Geschäftsführer

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|  Dr. Dietrich Brockhagen Physicist and economist. Former positions at the German Aerospace Center, the European Commission, and the German Federal Ministry for the Environment |  Steffen Pohlmann Financial accountant. Accounting and controlling |
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Scientific advisory board for atmosfair standards

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|---|--|---|--|
|  Christoph Bals Executive Director for Policy of the North-South organization Germanwatch, has followed Germany's climate policy with a critical eye for over 15 years |  Norbert Gorißen Leader of KI II 7 dept. at Federal Ministry for the Environment; intl. climate protection financing, International Climate Initiative |  Klaus Milke CEO of Stiftung Zukunftsfähigkeit and Germanwatch, brings experience and business contacts to climate protection |  Franzjosef Schafhausen Leader of the subdivision KI I at the German Federal Ministry for the Environment; Climate Protection, Environment, and Energy |
|---|--|---|--|

Employees in CDM project development

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|--|--|--|---|--|
|  Sven Bratschke M.A. Global Change Management. CDM project management |  Andrea Geldner Dipl.-Engineer for landscape planning. Database controlling and quality management |  Xaver Kitzinger Wirtschaftsgeograf. Teamleiter, Betreuung von CDM-Projekten (PoA) |  Maren Kügler Mechanical engineer for energy technology. Project implementation and controlling |  Bhai Raja Maharjan Geographer. Development and supervision of climate protection projects, focus on biomass |
|  Allan Mubiru Economist. Rwanda Country Manager |  Dr. Robert Müller Biologist. Development and supervision of climate protection projects |  Toyin Oshaniwa Environment and Sustainability Management. Nigeria Country Manager |  Dr. Katrin Wolf Geographer. CDM project management | |

Employees in account management and product development

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|---|--|---|---|---|
|  Bernd Becker Graduate in business administration. CO2 reporting and consulting for business trips |  Stephan Bohle Freelance worker in acquisition of corporate customers and additional employees |  Natalie Hallensleben M.A. International Affairs. CO2-Reporting & Green Meetings |  Jan-Moritz Jericke M.A. International Affairs, Environment, and Sustainable Development. Corporate customers, business development |  Matthias Kannegiesser Freelance consultant |
|  Linda Kannenberg M.Sc. Sustainability Management. Events and account management |  Petra Kirberger Freelance worker in PR/ support of collaborations and companies |  Lina Tabea Maguhn B.A. Business Economics/ Environment Management. Social Media and account management |  Jakob Völker Physicist and economist. Team leader, organization and business development | |

Additional employees

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|--|---|--|---|--|
|  Daniel Burgenmeister B.Sc. candidate in Economics. Work-study student, sales assistant |  Jutta Hofmann M.A. candidate in Sustainable Tourism Management. Work-study student, account management and product development |  Maik Höhne Industrial engineer. CO2 accounting for cruises and air travel |  Thorsten Schmid IT manager |  Olaf Schreiber IT coordination and project management |
|--|---|--|---|--|

2013 "Test winner for the holidays" (December 2013) test of charitable organizations

The table shows excerpts from the test results (the selection focuses on environmental organizations). Included here are all six organizations in the best category "transparent and well organized" in the original order.

| Name of the organization | Organization and controlling |
|---|------------------------------|
| Transparent and well organized | |
| atmosfair | high |
| BUND – (Friends of the Earth Germany) | high |
| Deutscher Tierschutzbund | middle |
| Greenpeace | middle |
| ProVieh – Verein gegen tierquälische Massentierhaltung | middle |
| WWF Deutschland | high |
| Moderately transparent or organized | |
| ... | |
| NABU (Nature And Biodiversity Conservation Union) Germany | middle |
| Pro Wildlife | low |
| Deutsche Umwelthilfe | middle |
| Bundesverband Tierschutz | low |
| ... | |
| Inefficient organizations | |
| ... | |
| Heinz Sielmann Stiftung | middle |
| Vier Pfoten – Stiftung für Tierschutz | low |
| ... | |

atmosfair getestet von Stiftung Warentest
Heft „Testieger fürs Fest“ (Test, Ausgabe 12/2013)
Spendenorganisationen im Test

2012 fww – Magazine for Business and Travel, 1st place

Mystery shopper: test of CO2 compensation provider websites

"Short portraits of all the projects can be found on a world map. The explanations of the certifications and standards are crystal clear. (...) I can download the donation receipt (...) and the certificate directly myself. Gladly again!"



2010 Federation of German Consumer Organisations, 1st place

Test of greenhouse gas compensation providers

"The test winner is – as in many other international comparisons – atmosfair, a compensation provider for flights. atmosfair achieved very good, and at least good, ratings for almost all the criteria."



University of Graz, 1st place

Voluntary Carbon Offsets – An evaluation of European greenhouse gas compensation certificate providers
"Highly recommended: atmosfair."



2010 Environmental Data Services:

The ENDS Guide to carbon offset

"atmosfair has one of the best offset portfolios in the entire industry"



Université Libre de Bruxelles, 1st place

Etude comparative des programmes de compensation volontaire de CO2 en Belgique

"This study places atmosfair at the head of compensation providers, an organisation that at present offers the highest quality and remains a model for others."



Climate protection

Fastidious standards for CO₂ offsetting

atmosfair was founded in 2004 in a research project of the German Federal Ministry of the Environment. In this project, fastidious standards for voluntary CO₂ offsetting were developed.



The atmosfair standards serve as a benchmark for the CO₂ offsetting market that has since come into being. atmosfair is the many time test winner of international comparative studies

Approach



Standards

- Offsetting is only the second-best option; direct CO₂ avoidance is more effective
- Climate protection is more important than maximizing donations
- Essential component: raising awareness leads to direct CO₂ avoidance in the longer term

Implementation

- Cooperation with business travel specialists for travel optimization, including videoconferencing
- No cooperation with partners that do not comply with atmosfair standards (e.g., in CO₂ calculation), even if atmosfair would have earned significant revenues
- No offsetting of activities for which there are better and simpler solutions to avoid CO₂ (e.g., private car use or power consumption)
- Presentation of the actual climate burden (see CO₂ calculation), independent of industry

Climate protection projects



- Enduring CO₂ reduction
- Contribution to North-South technology transfer
- Direct help for the local population
- Contribution to local environmental protection

- All projects must fulfill two standards: CDM (UN) and the "Gold Standard" (environmental NGOs), up to 10% of the savings follow the Gold Standard Microscale
- Calculation and monitoring of the CO₂ reduction according to UN standards
- Qualified and UN-approved auditors (e.g., TÜV) who must accept the liability for errors
- Documentation of all auditing reports via the website of the UN Climate Change Secretariat
- No afforestation projects, only renewable energy and energy efficiency
- Implementation together with experienced partners in developing countries



CO₂-calculation



- Complete
- Scientifically based
- Documented
- Reviewed

- Inclusion of all climate impacts of air travel (e.g., contrails, ozone formation, etc.) in accordance with the latest findings of the scientific community (IPCC), resulting in a significantly higher climate impact than with CO₂ alone
- Own emissions calculator tested by the German Federal Environment Agency
- All data sources and methods documented on the atmosfair website



Organization and finances



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

- Low administrative costs: over 90% of revenues from donations are invested in the climate protection projects in developing countries for planning, setup, and operation
- Donations are tax-deductible and monitored by the tax authorities
- Exacting legal form "non-profit company with limited liability" with liability and publication in the German Commercial Register
- Advisory Board composed of high-profile mentors and environmental experts from the Federal Ministry for the Environment, NGOs, and the scientific community, among others

atmosfair wind project in Nicaragua



Source: Ensinger

GUIDO BUCHWALD

Guido Buchwald, one of the most famous German soccer players, played for the World Cup champion team in 1990. He shaped the German national soccer league as a player and a coach as well as soccer in Japan. Today, Buchwald is an honorary team captain for VfB Stuttgart and a member of the Board of Trustees of the German Youth Football Foundation..

“I offset my own flights with atmosfair. This is important for me personally. Through atmosfair, I realized that people can reduce a little of the damage that they cause through financial compensation – that people can somewhat offset those things they have to do that still endanger the environment.”