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atmosfair



Annual Report 2008



atmosfair was created in 2004 in a research project of the Federal Ministry for the Environment. In the framework of this project, principle standards were developed for voluntary CO₂ compensation. The atmosfair standards serve as a yardstick for the CO₂ compensation market which has now emerged. atmosfair has received the highest ratings numerous times in international comparative studies.





Implementation

- Cooperation with business travel specialists for travel optimization, including use of video conferences, support for better aircraft engine technology
- No compensation for activities for which there are better solutions (e.g. automobile driving, power consumption, industrial processes such as printing, or foodstuffs)
- Complete information concerning donors, independence from partners in industry

- 100% CDM + Gold Standard climate protection projects
- Calculation and monitoring of the CO₂ reduction according to UN standards
- Qualified and UN-approved assessors (e.g., TÜV) who must accept liability
- Documentation via Web site of the Climate Change Secretariat of the United Nations, No afforestation projects, only renewable energies and energy efficiency
- Formal approval of the government of the host country

- Inclusion of all climatic effects of air travel (e.g., through vapor trails, ozone formation, etc.) in accordance with the latest findings of the scientific community; this results in a significant increase in the calculated impact on climate
- Emissions calculator checked by Federal Ministry for the Environment
- All data sources and methods documented at atmosfair Web site

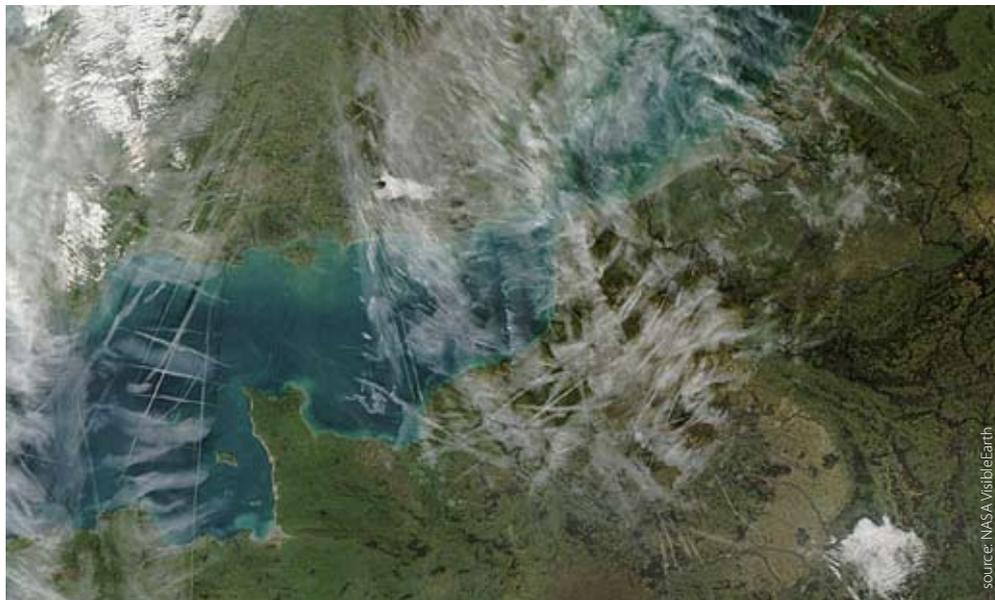
- Low administrative costs: Over 90% of the donated revenues reach the climate protection projects in the developing countries
- Revenues and their use monitored by the tax authorities
- Publication of the annual financial statements via the German Commercial Register
- Advisory board of high-profile environmental experts, from Federal Ministry for the Environment, non-governmental organizations, and scientific community, et al.

Ressources



Ressources





Vapor trails over the English Channel

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Impressum

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Dear Readers,

In the year 2008, atmosfair continued to grow. Donations exceeded the 2-million mark. Once more, new projects were initiated: In India, atmosfair is promoting the spread of solar lamps; in Burkina Faso, a biomass power plant is being built to produce CO₂-free electricity from crop waste; and in another project in India, greenhouse gases will be cut by increasing the efficiency of irrigation pumps. Since the approach of providing more support to projects during their development stage has proven successful, these activities were likewise funded from the early stages on. Increasingly, atmosfair is not only overseeing the entire development of the projects according to CDM and Gold Standard criteria but is also, to some extent, acting as project manager.

Atmosfair has continued to expand its presence in the travel industry. One important step here was the inclusion of atmosfair in all the leading Internet travel-booking systems, the „Internet booking engines“ (IBE). This allows the Internet travel portals that use the IBEs to integrate the voluntary carbon offset contributions into their services in a simple way at no extra expense: All they have to do is inform their system provider, and the latter will enable contributions to atmosfair in the booking routine. Through this solution, more important travel portals have already been brought on board as marketing partners. In the field of business travel, too, the newly launched products and cooperative efforts have led to new business customers and partners. There is keen demand for the fully automatic generation of CO₂ emissions reports. A new partnership with Advito, the consulting branch of the major international business-travel manager BCD Travel, promises to make emissions reporting based on atmosfair methods more widespread. And there is another innovative product on the way: An intelligent analysis and planning tool will support travel management at companies by helping to reduce the costs and greenhouse gas emissions associated with business travel.

The successful sales of CO₂ reporting has led to a further increase in commercial revenues at atmosfair. Since the profits from those sales are used to subsidize non-profit activities, the proportion of donation revenue allocated to administrative expenses was again kept below 10% in 2008. Of every 100 euro donated, 92 euro go directly to the operators and partners of the climate protection projects in the developing

countries, and atmosfair spends only eight euro on its own personnel and other administrative costs, such as IT, rent and credit card fees. Keeping the fraction of donation revenue spent on administration to a minimum is one of the standards to which atmosfair is committed. And atmosfair maintains the highest standards as well in its emissions calculations and its climate protection projects. As a result, atmosfair regularly receives the highest ratings in comparative studies. In 2008, for example, the British environmental journal ENDS assessed over 170 carbon offset providers worldwide and ultimately rated only three as especially worthy of recommendation—among them, atmosfair. ENDS considers the atmosfair project portfolio to be one of the best in the entire international market. This shows that the atmosfair standards have become a yardstick around the world.

The German Government has likewise acknowledged the high standard of quality to which atmosfair voluntarily submits. It has decided to compensate retroactively for unavoidable official trips made after 2007. Part of the CO₂ offset will be achieved through CDM Gold Standard projects. Proposals were requested for implementing this offset, and the job was awarded to atmosfair. Thus, the German Federal Government now flies atmosfair too.

Our warmest thanks to all donors and partners.

Dr. Dietrich Brockhagen,
CEO atmosfair gGmbH



*Dietrich Brockhagen,
Managing Director*



*atmosfair wins top score in ENDS
Report 2008*



Source: Dilight Energy

The project portfolio continued to grow in 2008. Moreover, atmosfair continued to pursue the approach of participating in project planning from the beginning and putting more money into the start-up phase of projects. The effort to disseminate efficient wood stoves, which proved successful in Nigeria, is being extended to other countries in Africa. Furthermore, following its experience with the irrigation project in China, atmosfair is planning another programmatic CDM project in India: It aims to achieve substantial increases in efficiency through extensive retooling of diesel pumps.

There are also new climate protection projects in India and Burkina: In the rural areas of India, atmosfair is promoting solar lamps. The solar lamps replace kerosene lamps; they provide sufficient lighting and help prevent fires and eye diseases. In Burkina Faso, atmosfair is building a biomass power plant to generate electricity from crop waste. In contrast to previous activities, atmosfair is not only assuming sole responsibility for the development of the project according to CDM and Gold Standard criteria but is taking on the role of project manager as well. This project is being implemented on behalf of the Federal Ministry for the Environment (BMU) and is not financed through donations. In all of its projects, atmosfair uses simple, innovative technologies that can easily be integrated into local frameworks.

India: Solar Lamps for Rural Areas

In rural areas of India, there are about 580 million persons who have no stable supply of electricity. Efforts of the Indian government to expand the electrical grid in rural areas are leading to only slow and gradual improvements in the power supply. The expansion of production capacity is not keeping pace with the increasing demand for electricity.

As a result, over 80% of the rural residents in Uttar Pradesh and Bihar, among the poorest states in India, are using kerosene lamps for lighting. This causes huge problems, however: Households must spend up to a third of their monthly income on kerosene merely in order to ensure the minimum of lighting. Because of the poor quality of the light, the children can hardly manage to do their homework for school. Likewise, household chores are only possible to a very limited extent after dark. These lamps commonly cause burns, and the



Homework by kerosene lamp

soot they produce also leads to eye disease. The open flames regularly cause fires to break out. In addition, the system through which kerosene is supplied is inadequate, despite state subsidies. The state distribution system meets only about half of the demand; the rest has to be bought on the black market at high prices.



Thanks to the funding from atmosfair, its project partner D.light Energy can sell solar-powered LED lamps at a price affordable to the poor rural population. By the end of next year, approximately 950,000 lamps will be sold in the states of Uttar Pradesh and Bihar. Production and delivery of the lamps has already begun. The distribution network with wholesalers and intermediate vendors has been set up and is being expanded. In the regions covered by the project, sales of the first lamps have been quite brisk. The expected annual CO₂ reductions amount to about 30,000 tonnes, on average.

The project has already been submitted for registration to the UN Climate Change Secretariat. Soon it will be assessed by an independent auditor in accordance with Gold Standard procedures.



Homework by D.light lamp

At a glance...

Total CO ₂ reduction:	30,000 tonnesCO ₂ /year (0.1 tonne CO ₂ per lamp per year), averaged over the project duration through 2018
Local environment:	Replacement of fossil fuels, less smoke emissions, prevention of fires
Other advantages:	Energy independence, lower household expense
Jobs:	20 in market and product development, more in sales
Project partner:	D.light Energy

... and in detail:

Project information available at <http://www.atmosfair.de/index.php?id=336>

Burkina Faso: Green Electricity from Crop Waste

As in many African countries, the supply of power in Burkina Faso is completely inadequate. Just 15% of all households are connected to the electrical grid; in rural areas only 5% have power. Most of the energy comes from diesel power plants. Further expansion of the power supply on the basis of fossil fuels is not only harmful to the environment, it is also expensive: A landlocked country in the West African Sahel, Burkina Faso lies far away from oil wells and trade routes. Electricity has thus become a luxury that the country cannot afford over the long term.

Renewable energies have so far played only a small role, because the climatic conditions generally do not allow for the generation of power from wind and water. Solar energy is still too expensive. But considering that 80% of the residents live from agriculture, the country does have extensive resources in the form of unused biomass from crop waste.



The project is introduced at a village meeting in Garango

In the community of Pô in the south of Burkina, atmosfair is therefore building a 22 kW biomass power plant. This pilot plant will deliver power to the local hospital. By 2011, atmosfair plans to install a total generative capacity of 1.5 to 2.0 MW by setting up 250 kW units at several locations, which is expected to result in total CO₂ reductions of 5,000 tonnes per year. The plant technology comes from India and has been adapted for use in developing countries.

A thermo-chemical process is used to generate gas from crop waste such as peanut shells, millet stalks, rice husks and cotton stems.



Farmers store their crop residues

The gas is then used to power a gas engine, which is connected to a generator. The electricity generated is distributed to the households via the national power grid. No extra processing of the crop waste is needed prior to gasification. It exits the process in the form of charcoal, which can be used as fertilizer in the fields.

In the case of this project, atmosfair is assuming responsibility for the development of the project according to CDM and Gold Standard criteria and is likewise taking over the greater share of the project planning, management and coordination. The project is being supported financially with funds from the German Federal Ministry for the Environment (BMU). Money from donations will not be used. The resulting emissions reductions credits will be retired on behalf of the BMU.

At a glance...

Total CO₂ reduction:	5,000 tonnes CO ₂ /year, averaged over the project duration through 2020
Local environment:	Replacement of fossil fuels; additional fertilizer
Other advantages:	Value creation in rural area
Jobs:	10 per plant (250 kW)
Project partner:	Pô and Garango communities (Burkina Faso), German Federal Ministry for the Environment (BMU)

... and in detail:

Project information available at <http://www.atmosfair.de/index.php?id=408>

Hydraulic Rams in China and Small Hydropower Plant in Honduras

China: Hydraulic rams

The atmosfair project has allowed small farmers in Zhejiang Province to begin using 65 hydraulic rams to irrigate their fields. Now they can achieve better yields. For example, two rice harvests are possible per year with the new irrigation. The scarce agricultural land is better utilized, and CO₂ emissions are reduced as well. Hydraulic rams pump part of a water flow to a higher elevation using only hydraulic energy and prevent an average of six tonnes of CO₂ emissions per year compared with the diesel pumps traditionally used.

This project is currently in the midst of the CDM approval process. It was one of the first „programmatic CDM projects“ in the world to be announced on the official Internet site of the UN Climate Change Secretariat. In a programmatic CDM project, the project operator can add extra units without limit to extend the project gradually.

Honduras: Small hydropower plant

The small hydropower plant near the small town of La Esperanza produced green power reliably once again in 2008. Over the course of the year, this hydroelectric station, the first in the world to be registered as a CDM Gold Standard project, thus succeeded in preventing approximately 36,000 tonnes of CO₂ emissions from diesel-generated power.

The funding from atmosfair was particularly important in 2008. Since the credit conditions in Honduras had deteriorated dramatically in the course of the financial



Honduras: Neighboring residents at the hydropower plant



China: Newly installed hydraulic ram

crisis, the project encountered financial difficulties.

With a non-scheduled advance payment for carbon offset credits, atmosfair was able to help the small local company that runs the project to maintain operations.

As part of the environmental protection and public services program of the project operator, the swath of land along the pressurized-water line was reforested, and the local school was connected to the power grid.

In addition, the project has trained and employed over 70 local residents in the operation of the facilities and in reforestation activities.

Biogas from Waste Water in Thailand and Power from Biomass in India



Generation of electricity from mustard crop residues

Thailand: Biogas from waste water

The plant for processing waste water left over from the production of vegetable oil has been in operation since mid-2007. Methane, which was previously released into the atmosphere, is now captured with plastic membranes, purified and used to generate process heat. This also reduces CO₂ emissions. The sulfurous gases produced during the processing of the waste water are also collected. By covering the settling tanks, the operator has eliminated the foul odors for the residents and removed a breeding ground for insects and vermin. Methane is 21 times more harmful to the atmosphere than CO₂ and is responsible for a large share of the environmental damage caused by agriculture. The project has been registered with the UN Climate Change Secretariat since February 2009. The Gold Standard validation is completed, and the registration is expected to follow after the 6-week comment period has elapsed. An initial verification report by the German Technical Inspectorate TÜV is currently in preparation.

India: Electricity from Biomass

The 8 MW biomass power plant has been in operation since 2007. This plant feeds environmentally friendly electricity into the national power grid. Residue from the mustard crop that was simply incinerated in the past is now delivered to the many collection centers by thousands of small farmers. The poor rural population acquires additional income from the sale of crop

waste and benefits from the extensive public services program of the project too.

The project has been registered with the UN Climate Change Secretariat since October 2008, and the Gold Standard registration was completed in June 2009. The first verification for the period from October 2008 to February 2009, inclusive, is currently being conducted by TÜV. During this period, approximately 24,000 MWh of power were generated. This exceeds the expected power production by almost 30% and corresponds to a reduction of 19,000 tonnes of CO₂.



Thailand: Waste water treatment plant and basin with plastic membrane

Efficient Irrigation and Solar Thermal Systems for Large-Scale Kitchens in India

India: Efficient irrigation pumps

Many small farmers in India rely on diesel pumps for the irrigation of their fields. There are about six million of these pumps in use throughout the country. They consume a large amount of diesel fuel, resulting in damage to the atmosphere. Rising diesel prices are also jeopardizing food production and the income of the farmers.

The Practica Foundation based in the Netherlands has developed a retrofitting kit with which existing diesel pumps can be inexpensively converted to more efficient models. This lowers diesel consumption by up to 50%. In the case of a conventional 5 horsepower diesel pump, this leads to a reduction of about 500 kilograms of CO₂ per year.

With the support of atmosfair, the Practica Foundation is currently developing a strategy for increasing the efficiency of a large number of the diesel pumps currently in use. The objective is to develop a project that conforms with the rules of a programmatic CDM project and initially allows the conversion of a few thousand pumps per year, with up to 100,000 per year envisaged later on. The biggest challenge here is training mechanics over large sections of rural India and organizing them in networks. This is necessary for a systematic and faultless conversion of the pumps.

India: Solar thermal systems for large kitchens

The solar-energy project registered at the UN Climate Change Secretariat and the Gold Standard Foundation since August 2006 generates hot water for large kitchens. All 18 solar-power systems have been installed and running since the autumn of 2007. The expected CO₂ reductions are being fully achieved.

Unfortunately, the system envisaged in the Project Design Document (PDD) for enabling the individual kitchens to record their operating data has proved to be unworkable. This delayed the verification of the CO₂ reductions by TÜV. At this time, atmosfair is examining the possibility of simplifying the reporting obligations with respect to the UN Climate Change Secretariat by means of a revision to the Project Design Document. This is a time-consuming process, and the pending verification and certification will therefore likely be delayed until mid-2010.



India: Conversion of diesel pumps

Until it is definitively clear whether or not the CO₂ reductions of the project can be certified, atmosfair will replace them with credits from other projects.



India: Solar mirrors for steam generation

Funding Policy Framework and Achievement of Objectives

In the German school project fifty/fifty students learn about energy efficiency and renewable energy.



Since 2007, atmosfair has been allocating more donations to the initial setup phase of climate protection projects, thereby facilitating the required start-up investments, in particular. The objective of this approach is to support projects for which the funding from atmosfair constitutes a significant part of the total financing. In this way, the additionality required in the CDM becomes quite clear. However, funding climate protection projects which are additional also means that atmosfair must accept long-term financial obligations and thus higher risks as well.

In addition to the proof of additionality, CDM projects require that the CO₂ reductions achieved be verified according to UN rules by an assessor who accepts liability. The importance of precisely this liability and the associated examination of the assessor is proven time and again. In the case of VER projects (Verified Emission Reductions), which are frequently used for voluntary CO₂ compensation, the verification does not take place according to universally valid rules, nor do the assessors accept liability for their results. Experience with the CDM to date has shown that the atmosfair principle of funding only CDM Gold Standard projects has proven to be a sound one.

Transparency of the CDM

While the market for voluntary CO₂ compensation is currently expanding rapidly, the climate protection projects being supported are principally those with low standards. Generally, these are „VER“ projects (Verified Emissions Reductions) that do not follow the established Kyoto process.

The Achilles' heel of these projects is often the so-called „additionality.“ There is no clear evidence that the financing provided via the compensation payments was even necessary to launch a project. Often, these projects are already underway when, at some point after the fact, they are declared climate protection projects. In addition, the verification of the greenhouse gas reduction takes place only in accordance with the guidelines of the project operator, and the assessor does not have to be accredited according to international regulations, nor does the assessor accept liability for the results. The environmental benefit of these projects thus depends a great deal on the goodwill of their operator, which gives cause for concern in view of the increasing commercialization of voluntary carbon offsetting.

The approach pursued by atmosfair, according to which only CDM Gold Standard projects are funded,

Name: CDM (J) CC-MEM (T) CDM	
For location: CDM Home > Project Activities > 38 > Electricity generation from mustard crop residues, Tonk, India	
Project 1774 : Electricity generation from mustard crop residues: Tonk, India	
Project title	Electricity generation from mustard crop residues: Tonk, India Project design document (2027 KB) PDD appendices Appendix 1 - Enclosure 1 (32 KB) Appendix 2 - Enclosure 1 (384 KB) Registration request form (249 KB)
Host Parties	India, involved indirectly: Approval (504 KB), Authorization (504 KB) Authorized Participants: Kalpataru Power Transmission Limited
Other Parties Involved	N/A
Sectoral scopes	1 : Energy industries (renewable - / non-renewable sources)
Activity Scale	SMALL
Methodologies Used	AMS-I D, ver 11 - Grid connected renewable electricity generation
Amount of Reductions	29,530 metric tonnes CO2 equivalent per annum
Fee level	USD:4436.0
Validation Report	Validation report (316 KB) Modalities of communication (216 KB) Public availability information Link to information uploaded for public availability
Registration Date	07 Oct 08 (view history)
Crediting Period	07 Oct 09 - 06 Oct 15 (Renewable)
Requests for Issuance and related documentation	Monitoring report: 07 Oct 2008 - 30 Feb 2009 (263 KB) Issuance request status: Awaiting issuance request [Full view and history]

Documentation of the atmosfair project in India on the Web site of the United Nations

Similar names, but different meanings

As evidence of the emissions reduction of a project, atmosfair recognizes only „Certified Emission Reductions“ (CERs). CERs are credits from official UN climate protection projects issued according to the Kyoto Protocol. In order to demonstrate that the project makes a significant contribution to sustainable development (such as through poverty reduction), atmosfair also demands the Gold Standard certification. But the Gold Standard also offers another standard of its own which is independent from the UN system. In the framework of this separate standard, „Verified Emission Reductions“ (VERs) are distributed. At atmosfair, VERs are shunned, because the entity that performs the verification is in this case not required to accept liability for incorrectly approved emissions reductions. There is thus the risk that reductions could be certified even if there is, in fact, no CO₂ reduction. Since this sort of infringement of the rules entails no penalty, there is considerable danger of abuse.

has proven its merit in this connection. This is the only way to achieve transparency, from the beginning, as regards the starting dates of the projects and who will inspect what, and how. For any atmosfair project, anyone can examine the project documentation on the Web site of the UN Climate Change Secretariat (<http://cdm.unfccc.int>)—and do so independently of atmosfair.



Status of the atmosfair Climate Protection Projects

India: Solar thermal system



Operating

- Plant in operation
- First periodic CDM Gold Standard verification in preparation

India: Solar lamps



Approval + Construction

- Contract signed with D.light Energy
- Launch sales underway
- CDM Gold Standard validation completed
- CDM Gold Standard registration underway

Thailand: Biogas from waste water



Operating

- Plant in operation
- First periodic CDM Gold Standard verification in preparation

Burkina Faso: Green electricity from crop waste



Planning + Approval

- Contract signed for delivery of technical systems
- Operator company being established
- Negotiation: Power supply agreement
- Creation of PDD underway

Honduras: Small hydropower plant



Operating

- Plant in operation
- Gold Standard CERs produced and credits provided
- Fourth periodic CDM Gold Standard verification in preparation

India: Efficient irrigation pumps



Planning

- Contract signed with PRACTICA
- Implementation strategy in development

India: Power generation from crop waste



Operating

- Plant in operation
- First periodic CDM Gold Standard verification underway

China: Hydraulic rams



Pilot Operation

- Pilot systems running
- CDM Gold Standard validation in progress

Nigeria: Efficient wood stoves



Pilot Operation

- Sales and use of stoves underway
- CDM Gold Standard validation completed
- CDM Gold Standard registration in progress

Date: September 2009

Planning of Project Portfolio and Comparison with Donations

Greenhouse gas reduction, already achieved or contractually bound

	2006	2007	2008	2009	2010	2011-2020	Total until 2020
India: Solar thermal systems	0,1	0,1	0,3				0,5
Thailand: Biogas from waste water				4,0	15,0	90,0	109,0
Honduras: Small hydropower plant	15,0	13,0	20,0	20,0	29,0	57,0	154,0
India: Power generation from crop waste			11,0	35,0	35,0	70,0	151,0
China: Hydraulic rams					0,5	6,0	6,5
Nigeria: Efficient wood stoves				0,5	19,0	293,5	313,0
Indian: Solar lamps					4,0	16,0	20,0
Total	15,1	13,1	31,3	59,5	102,5	532,5	754,0
Reduction commitment from climate protection payments received*	0,0	9,5	9,5	63,5	88,6		
Cumulative greenhouse gas reduction, already achieved or contractually bound	15,1	28,2	59,5	119,0	221,5	754,0	1508,0
Cumulative reduction commitment from climate protection payments received*	0,0	9,5	19,0	82,5	170,1		
Fulfillment of commitment	✓	✓	✓	✓	✓		

Figures refer to thousands of tonnes of CO₂

The projects currently in the planning stage are not included. The project in Burkina Faso is not included, because the generated credits are immediately retired for the climate protection initiative of the German Federal Ministry for the Environment (BMU).

*There may be an interval of up to two years between receipt of a donation and its use in a climate protection project.

Date: September 2009, subject to modification and amendment

atmosfair project types

Biomass

- Combustion
- Gasification
- Pelletization

Energy efficiency in households

- Cookers
- Lighting
- Insulation

Solar energy

- Solar-thermal energy conversion
- Photovoltaics

Small-scale hydropower

atmosfair Standards

Combination of highest international certification systems

- Clean Development Mechanism (UN)
- Gold Standard (WWF et al.)

No afforestation projects

Tangible, long-term support for local development

Simple, innovative technologies

- Transfer
- Integration into local frameworks
- Dissemination

Commitments Fulfilled

The table shows the greenhouse gas reductions that the individual atmosfair projects have already achieved or are expected to achieve, according to the funding agreement with the project operator. This can be compared with the amount of CO₂ reductions that the projects must achieve for atmosfair to fulfill its commitments to the donors. The table takes into account the fact that up to two years may pass between the time of the donation and the achievement of the CO₂ red-

uction in a climate protection project, because each climate protection project requires a fairly long start-up phase (see page 17). A comparison of the reduction commitments arising from incoming climate protection payments with the greenhouse gas reductions that have already been achieved in the projects or are contractually bound shows that atmosfair has fulfilled all of its commitments ever since its first year of operation, 2005.

Achievement of Objectives

Objectives achieved

The previous two pages show that since 2005, the first year of operations, atmosfair has always offset more greenhouse gas emissions within the two-year period than was mandated by the donations. By the end of 2008, atmosfair had cut CO₂ emissions by a total of 59,000 tonnes. This means that the reduction commitments of 19,000 tonnes of CO₂ from the donations during 2005 and 2006 were satisfied by a large margin.

Long-term portfolio planning

When the project portfolio is planned, special attention must be paid to the long-term character of the climate protection projects. Since the projects require repeated infusions of money over a long period of time, the funding agreements with the project operators in some cases extend through 2020. From the time it began operations through the end of 2008, atmosfair has received over 3.7 million euro in donations. However, the climate protection projects under contract so far have already been promised about 6.6 million euro in funding through 2020. This tension between the donations received and the long-term financial commitments arises of necessity when the additionality required in CDM projects is taken seriously. Such additional projects must be funded from the beginning, but they require a start-up period up to two years before they yield verified CO₂ reductions.



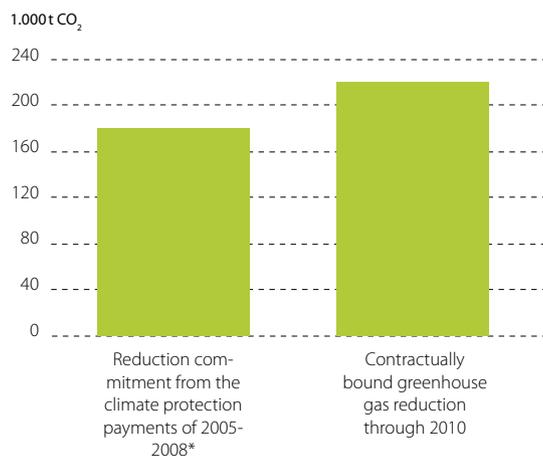
Nigeria: rigorous examination through TÜV Nord.

The donations received in the year 2008 require that atmosfair eliminate approximately 88,600 tonnes of CO₂ by 2010 in order to fulfill its commitments to the donors. But the project contracts entered into as of late 2007 entail annual CO₂ reductions of only about 60,000 tonnes. In the year 2008, therefore, the contracts with the existing projects were extended, and new projects were added.

In its portfolio planning, atmosfair adheres to the following principle: Projects are only put under contract if they can achieve the necessary CO₂ reductions within two years. This allows atmosfair to get new projects started in time to accommodate any increase in donations.

With the new project contracts, atmosfair can fulfill its commitments to the donors up through the year 2010.

Greenhouse gas reduction, as of end of 2008



*There may be an interval of up to two years between the time at which a donation is received and the time at which it is invested in a climate protection project.

Verification and Review in the CDM

Review of assessors

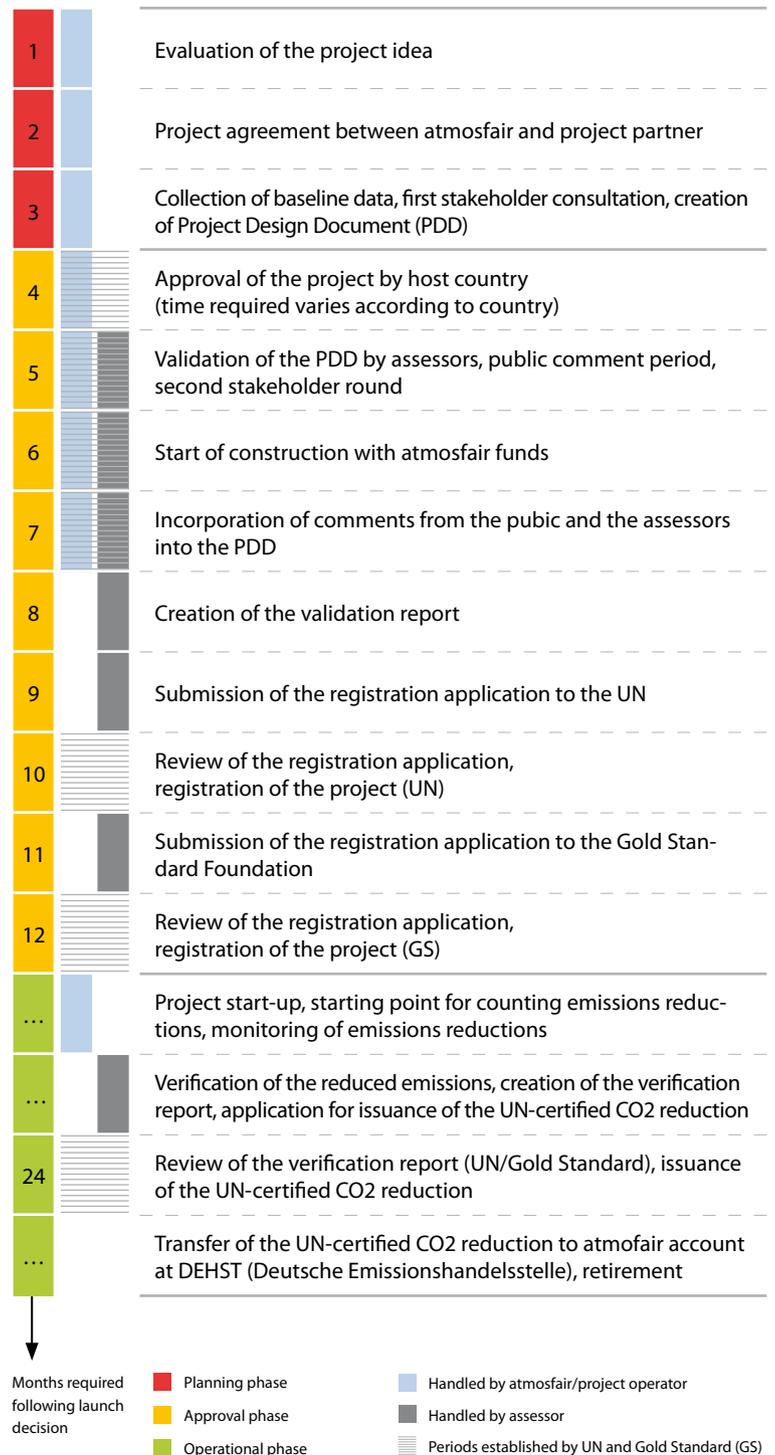
The research and consulting organization Öko-Institut conducted a comparative international study of independent assessors of CDM and Gold Standard projects, otherwise known as the „Designated Operational Entities“. In this study, the assessor that atmosfair prefers to use, TÜV Nord, was ranked 2nd highest. It thus shares the honor of having received the highest rating with the top-ranked assessor in the study, which was TÜV Süd. Among other criteria, the study evaluated what proportion of projects certified by these firms succeeded in completing the final registration by the CDM Executive Board of the UN Climate Change Secretariat. For this criterion, TÜV Nord achieved the top result with 98%. Other assessors were rated much more poorly in the study, such as Det Norske Veritas (DNV), which was even disallowed from validating CDM projects for a time. One out of five DNV projects are rejected—usually because they fail to meet the criteria for additionality. The discussion regarding the quality of the assessors shows that it is only through stringent criteria and reviews that the Kyoto Protocol can preserve its integrity as an environmental protection instrument and actually help to safeguard the climate. In the case of VER projects (Verified Emission Reductions), which are frequently used for voluntary CO₂ compensation, there are no controls of this sort. Ever since it was founded, atmosfair has therefore always held to its principle of accepting only CDM Gold Standard projects but not VER projects.

Experience with the CDM in Nigeria

In the project devoted to disseminating efficient wood stoves in Nigeria, atmosfair itself got a clear reminder of the stringent requirements of the CDM and Gold Standard approval process. TÜV Nord requested that numerous changes be made to the project documentation. After it was presented to TÜV, it still took almost nine months before the project was submitted for registration. At the on-site review in Nigeria, TÜV checked even the smallest details. In the process, there emerged weaknesses of which atmosfair was previously unaware: Some households used not only three-stone stoves but also somewhat more efficient metal cooking stoves. Although the Save80 stove is far better, the increase in efficiency is slightly lower than originally planned. Hence, atmosfair recalculated the emissions reductions and rewrote the Project Design Document. TÜV then examined the project once more and was satisfied. The auditing process was successfully completed.

Typical progression of a CDM Gold Standard project

interactions between atmosfair and partners and public agencies, pre-established time frames





In 2008, atmosfair continued to expand its distribution network. An important milestone was reached in the private travel sector with the integration of compensation services from atmosfair into all the leading Internet travel-booking systems. Since most online travel portals use these systems, the atmosfair climate protection payment can now be integrated into their booking processes without any extra cost or effort. Assuring that these transactions can be processed at no extra expense is an important prerequisite for attracting more distribution partners.

And atmosfair was able to expand its foothold in the business travel segment, too, by gaining new cooperating partners and more corporate customers. The software tools that had been introduced the previous year were expanded, and new solutions were developed. In the future, an intelligent analysis and planning application will support corporate travel management and indicate opportunities to cut costs and greenhouse gas emissions. Services in the field of emissions reporting are provided on a commercial basis. Profits gained from this segment help to cover the personnel and administration costs of atmosfair's not-for-profit activities. This makes it possible to put even more money into the climate protection projects.

Tourism

In the tourism industry, atmosfair continues to gain ground. More and more tour operators and travel portals are offering their customers the opportunity to travel in ways that mitigate the impact on the atmosphere. Climate protection is playing an ever greater role in the planning of vacations. The travel industry has obviously recognized this. In the spirit of making climate protection a natural part of travel, many tour operators are contributing to the climate protection payments of their customers, and a few are even including the full amount in the price of the travel.

Internet sector continues to make up ground

Following the successful partnership with the Verband Internetreisevertrieb (VIR), whose member portals (including Lastminute, Opodo and Expedia, et al.) have been offering their customers the atmosfair service since 2007, operators of Internet travel-booking systems are now coming on board as well. Through the „Internet booking engines“ (IBEs), online travel portals reserve and book flights, hotels or entire travel packages as well as additional services like travel insurance and rental cars.

With the inclusion of atmosfair in the leading IBE providers Traveltainment, Maxviva and Traffics, climate protection becomes quite easy for the travel portals: Without any extra fee or programming expense, they can quickly have their booking system provider enable the atmosfair box (see picture). Then atmosfair becomes activated during the booking routine. During the booking process, travelers can select the option of the voluntary climate protection payment for their flight with a simple click. It is not necessary to enter any data a second time. Furthermore, the customers can change the amount calculated by atmosfair and thus offset either more or less greenhouse gas emissions than are caused by their flight. The climate protection payments go directly to atmosfair, and no commission is deducted. As usual, donors are issued a receipt and a certificate concerning the greenhouse gases to be offset.

The integration of the atmosfair box into the online travel portals Traveltopia and LCC24 has made it possible for more online customers to compensate for the greenhouse gas emissions of their flights.

Now atmosfair has created another way to popularize the climate protection contribution by offering its part-

The atmosfair box



ners the chance to integrate the atmosfair emissions calculator into their Web sites through an „I-Frame.“ The integration of the I-Frame is easy to implement. The users of the partner Web site can immediately calculate the CO₂ emissions of their flight themselves and compensate for them right away. Here as well, the funds go directly to atmosfair.

Cooperation with the ITB

In 2008, the International Tourism Fair (ITB), which is the world's largest trade show for the tourism industry and is hosted each year in Berlin, took an important step toward climate protection. It encouraged participants to minimize adverse impacts on the climate when traveling to the gathering by adopting the motto, „The climate is changing—are you flying atmosfair to the ITB Berlin?“ At the atmosfair booth sponsored by the ITB, trade show visitors can learn about the climatic effect of travel and make their contribution to climate protection. The organizers of the trade show also want to continue working with atmosfair in the future.



Business Travel

Demand for emissions reports

The demand for CO₂ emissions reporting increased substantially in the business travel sector in 2008. Increasingly, companies are wanting to know more about their carbon footprint. Business trips play an important role in this regard. The calculation tools developed for air travel, train trips, rental cars and hotel accommodations were therefore developed further, and the software is now ready for release.

The calculation methods used by atmosfair are derived from those of the IPCC and the Global Reporting Initiative, though the regional and baseline data used are usually more detailed. Using this methodology as a foundation, atmosfair has created a comprehensive application that automatically processes business travel data and generates emissions reports. The resulting reports display the CO₂ emissions of the company at various levels of detail and aggregation.

Now atmosfair has established a new partnership with Advito to offer emissions reporting. Advito, the independent consulting unit of BCD Travel, is offering its

customers extensive consulting services in the field of travel management. Henceforth, these services will include the emissions reports generated by atmosfair.

Furthermore, atmosfair gained new corporate customers in 2008 via its cooperation with Lufthansa subsidiary AirPlus. Hannover Rück is another large customer acquired this way. Since atmosfair is integrated into the existing billing processes for business trips in the AirPlus system, companies can offset their trips without any extra administrative expense.

Top marks for atmosfair

The high quality of the calculation methods and climate protection projects used by atmosfair is regularly acknowledged in independent studies and analyses (see page 5). And this is true in the business travel sector too: In 2008, for example, the National Business Travel Association (NBTA) in the U.S. published a toolkit for sustainable travel management. The NBTA toolkit rates as exemplary the methods and standards of atmosfair in the fields of both emissions calculations and climate protection projects.

New software for intelligent travel

In the area of travel avoidance, the development of the „Intelligent Travel Tool“ (ITT) has generated considerable interest. The software analyzes ways in which intelligent travel management or the use of telecommunications instead of on-site meetings can simultaneously cut costs, save time and prevent greenhouse gases. During the booking process, employees who are planning a trip are shown alternatives that conform with the travel guidelines of the company.



A page from a CO₂ report of the kind generated by atmosfair for business trips in cooperation with travel agencies and credit card companies.

Climate Research and Environmental Integrity

The impact of air-traffic on our climate

Also in 2008 the atmosfair advisory board discussed recent scientific findings in the area of air transport and global warming. The board addresses mainly two issues:

What impacts do the exhausts of aircraft engines have on the atmosphere, and especially in high altitudes?

This question has been well answered by science by now. The greatest contribution to global warming stem from the following emissions and effects: The CO₂ itself, as direct by-product of the combustion, the formation of cirrostratus clouds and / or contrails (linear clouds), the formation of the greenhouse gas ozone in a sensitive atmospheric layer as well as the cooling effect of methane decomposition.

How can these effects be taken into account in the emissions calculation, so that the passenger gets a true impression of the environmental impact of his flight?

While CO₂ is always produced and takes effect globally over a period of many decades, the ozone as well as the cirrostratus clouds and contrails have a lifetime of hours or maximum days and under special conditions: The atmosphere needs to be humid and cold enough to allow contrails to persist for several hours. Nevertheless, contrails drive climate change locally much more than CO₂. Varying life time and different spacial distribution impedes a simple comparison of these diverse effects.

The International Panel on Climate Change - IPCC has established a method for this purpose in 1999: This method concentrates on the atmosphere at a fixed point in time (e.g. 2005) and for this point in time summes up the warming of all known emissions and effects of the entire world air transport since 1950. This means that the average contrails of the year 2005 are taken into account in this calculation, but not those of 2004, which have disappeared in 2005 due to their short life-time. By contrary, CO₂ produced in a flight of the year 1950 is included in this calculation, since some fraction of the 1950 CO₂ is still part of the 2005 atmosphere (and has yet not been taken up by a natural sink). According to this method the effects of CO₂,

Climatic impact of air traffic and RFI, based on IPCC, 2007

Process	Pollutant	Contribution to total anthropogenic greenhouse effect	RFI (Ratio of effect to CO ₂)
CO ₂ direct	CO ₂	+1,6%	1
Ozone formation	NOx (nitrogen oxide)	+1,4%	0,8
Reduction of methane	NOx (nitrogen oxide)	- 0,7%	-0,5
Direct	Water vapor	+0,1 %	+0,05
Cooling through shielding	Sulphate particles	- 0,2%	-0,1
Direct	Soot particles	+0,2%	+ 0,1
Vapor trail	Particles	+0,6%	+0,3
Formation of high-altitude cirrus clouds	Particles	approx. +3,4% (2% – 5%)	0,5 – 3
Total		approx. 7% (5% – 8%)	1.9 – 4.7

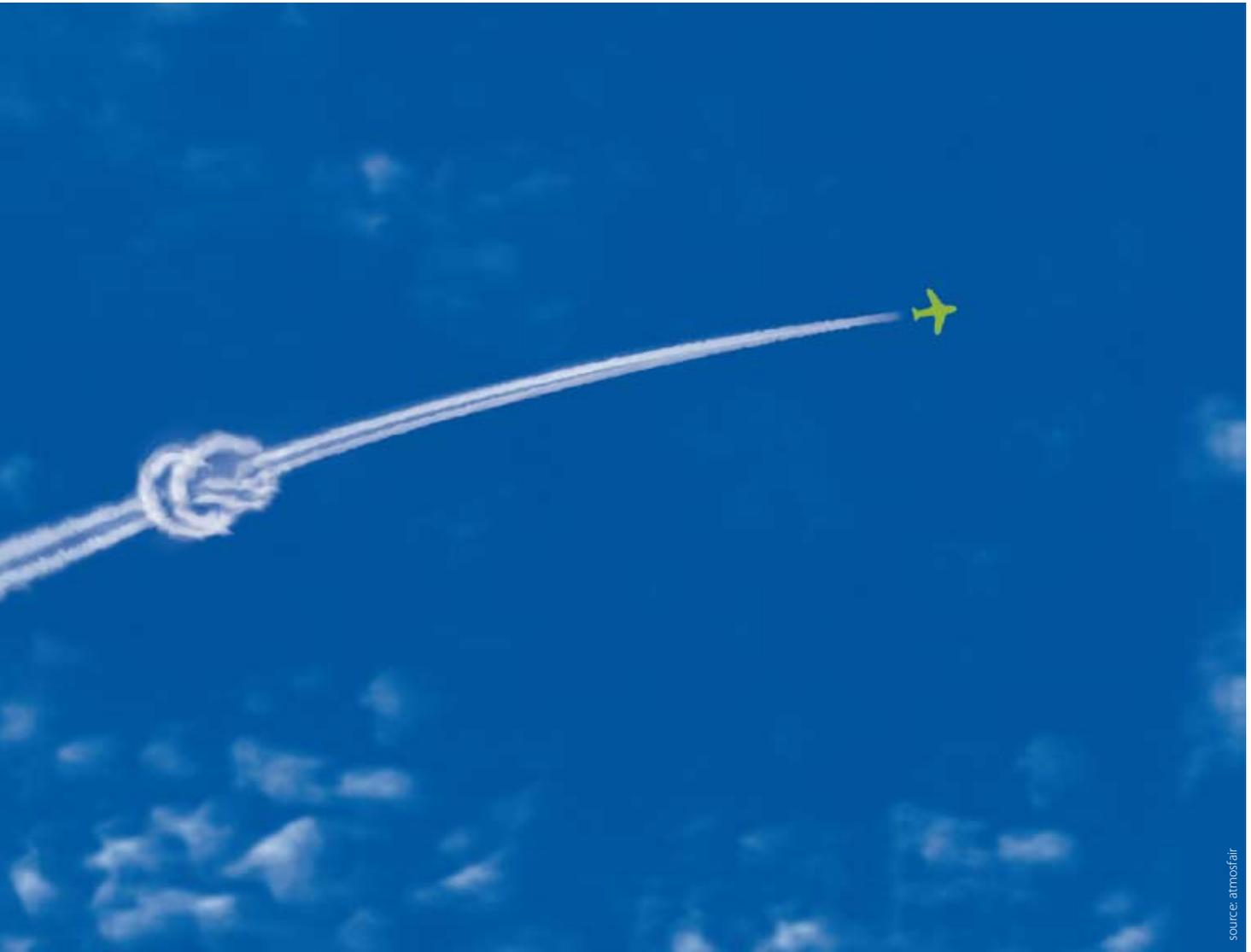
The climatic impact of air traffic in the year 2000, accumulated since the beginning of civil aviation in 1950. The RFI factor (radiative forcing index) is the ratio of the individual, non-CO₂ effects to the effects of the CO₂ of air traffic. Today, air traffic thus warms the climate at a rate approximately two to five times greater than through its CO₂ alone. These results have been confirmed in the latest study of the German Federal Ministry for the Environment.

Source: Grassl & Brockhagen, Climate forcing of aviation emissions in high altitudes and comparison of metrics. Download: www.mpimet.mpg.de/wissenschaft/publikationen.html

contrails, ozone etc. drive global warming two to five times more than the CO₂ alone. These results depend on the length of the time horizon. A time horizon of e.g. 2010 to 2100 leads to different results than a horizon of 1950 to 2005.

In any case, the carbon footprint of air transport is distorted, if only the CO₂ is accounted for. Atmosfair uses a factor of 3 on the CO₂ to consider the other above effects, following a recommendation of the German Federal Environmental Agency published in 2008.

Because the payable amount of the atmosfair climate contributions is voluntary anyway, it is atmosfair's view that the passenger should be informed about the full ecological footprint, based on the current state of science. Only on this basis can the environmental awareness grow, which is needed for tackling climate change.



In the year 2008, atmosfair continued its trend of growth. Donations increased to over two million euro. Moreover, atmosfair again received no public funding, so it remains completely independent financially as a non-profit limited liability company.

Since 2007, the donations have been supplemented by revenues from the commercial operations. The profits from these activities support the non-profit activities of atmosfair. This has made it possible once more to keep the share of donations used to cover administrative costs to under ten percent. Of every 100 euro donated, 92 euro go directly to the operators and partners of the climate protection projects in the developing countries, and atmosfair spends only eight euro on its own personnel and other costs, such as IT, rent and credit card fees.

Organization

The Stiftung Zukunftsfähigkeit (Foundation for Sustainability) remained the sole shareholder of atmosfair in 2008. The four-member atmosfair Advisory Board, consisting of two representatives of the Federal Ministry for the Environment and two from environmental organizations, approved the climate protection projects put under contract in 2008 and the new partners from the private and business travel sectors. The tax exemption for 2007 of the not-for-profit company atmosfair gGmbH was certified by the tax authorities in August 2009. At the beginning of 2009, the not-for-profit company duly issued the donation receipts for the climate protection contributions received in 2008.

Financially independent

In 2008, atmosfair financed solely through donations and revenue from its commercial operations. The latter activity is permitted to a limited extent within a not-profit organization. No public funds were received during the year, and atmosfair therefore remains financially independent. The Stiftung Zukunftsfähigkeit made no payments to atmosfair in 2008 nor, conversely, did atmosfair make any payment to the Stiftung Zukunftsfähigkeit, its sole shareholder.

Revenues and expenditures

In the year 2008, donors deposited a total of over 2 million euro to the donations account of atmosfair. That

represents almost double the amount of the previous year—and this follows enormous growth in 2007. In addition, atmosfair had commercial revenues of approximately 113,000 euro, which came mainly from the sale of the CO₂ reporting software.

Among the expenditures, the largest item comprises the payments and reserves for the climate protection projects. These include costs for the setup and operation of projects, including the assessments by TÜV, and the planning and supervision of projects abroad. In total, approximately 1.9 million euro was spent here. The funds were either transferred directly to the operators of the climate protection projects, or they were set aside in appropriate quantities as reserves for the payments of coming years agreed upon in the project contracts. There were also expenditures for the planning and supervision of projects by atmosfair in Germany; these expenses came to approximately 88,000 EUR for the year. Thus, a total of nearly two million euro was spent on climate protection projects in 2008.

In the year 2008, approximately 679,000 euro went to climate protection projects. Because of the long-term nature of the commitments involved, reserves of slightly less than 1.2 million euro were formed. These reserves will gradually be liquidated in the coming years, as payments from atmosfair to the climate protection projects become due in accordance with the contracts.

Balance sheet of atmosfair

31.12.2008			
Assets	€	Capital, Reserves and Liabilities	€
A. Non-current assets	14.520,00	A. Equity capital	2.399.362,21
I. Intangible Assets	862,00	I. Subscribed capital	25.000,00
II. Tangible Assets	13.658,00	II. Reserves for purposes defined in articles of incorporation	2.374.362,21
		- Reserves for climate protection projects	2.060.962,21
		- Free reserves (also usable for climate protection projects)	313.400,00
B. Current Assets	2.427.937,18	B. Provisions for liabilities and charges	9.966,58
I. Receivables and other assets	87.302,97	- tax accrual	1.489,08
II. Checks, cash-in-hand, bank balances	2.340.634,21	- other accruals	8.477,50
C. Deferred expenses and accrued income	8.987,32	C. Liabilities	42.115,71
		- Trade accounts payable	4.189,68
		- Other liabilities	37.926,03
Total	2.451.444,50	Total	2.451.444,50

Profit and loss statement of atmosfair gGmbH

	2008	2008	2007
Revenues	€	%	€
Donations	2.036.911,80	94,8	1.328.208,42
Commercial revenues after tax* (CO ₂ -Reporting Software, interest)	112.708,96	5,2	46.309,05
Total	2.149.620,76	100,0	1.374.517,47
Expenditures			
a) climate protection projects			
- Payments and short-term reserves	1.876.040,87	87,3	1.241.915,46
- atmosfair's project planning and support in Germany	87.572,93	4,1	29.158,54
Total	1.963.613,80	91,4	1.271.074,00
b) Staff			
- Donator and partner support, public relation	58.381,95	2,7	19.439,02
c) Other expenditures			
- Administration (telecommunication, postal charges, office supplies, assurances, depreciation)	20.318,61	1,0	8.852,09
- Office (Rent etc.)	24.193,60	1,1	7.595,15
- credit card fees, Cash service, account fees	15.589,80	0,7	12.386,86
- IT (charges, maintenance, server rent)	50.511,23	2,3	42.491,00
- Tax accountancy Annual Report	2.000,00	0,1	2.000,00
- Annual Report	10.342,56	0,5	2.921,85
- Business Travel	4.669,21	0,2	7.757,50
- Advertisement (z.B. Anzeigen, Plakate, Spots, Promotionteams)	0,00	0,0	0,00
Total	127.625,01	5,9	84.004,45
Total	2.149.620,76	100,0	1.374.517,47
Result after Reserves for climate protection projects	0,00		0,00

* Reduction in administrative costs through income from sale of CO₂ reporting software by nearly 88%.

At the end of 2008, atmosfair was committed to disbursing a total of over 6.6 million euro to project operators. These financial obligations exceed its reserves, which totaled approximately 2.4 million euro as of the end of 2008. Consequently, it will be necessary to use donations from subsequent years to service the existing contracts (also see pg. 16). Besides reserves for the contractually committed funds, atmosfair also sets aside reserves for venture funding that can be used to get new projects started.

The second largest category of expenses, after the climate protection projects, was staff costs, with over 58,000 euro going to support cooperation with do-

nors and partners, as well as press and communications work. A great deal of this work was also done by persons who had volunteered their time, however. Approximately 51,000 euro in further expenses were incurred for the information technology, which is now quite extensive. That includes fees for programming work as well as costs for maintenance and server leasing.

Higher rental costs were incurred in 2008 because of the necessary move into a larger office. The new premises cost atmosfair over 24,000 euro for the year. Furthermore, atmosfair incurs relatively high costs for credit card fees and payment services every year. These are necessary in order to process the online payments

and deposit them into the atmosfair account. In 2008, about 16,000 euro was spent for this purpose.

Administrative costs 8% of donation revenue

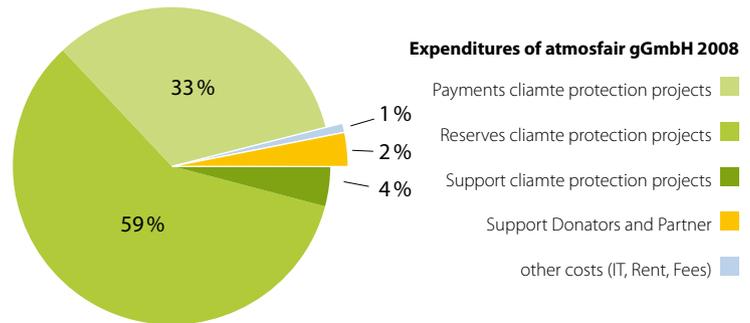
One of the atmosfair standards stipulates that at most 20 percent of the donation revenues may be used to cover any and all administrative costs. The costs referred to here are resources that are not invested directly in the climate protection projects abroad but are instead used by atmosfair itself. This goal has easily been reached in the previous fiscal years. Once more in the year 2008, a total of only eight percent of the donations were used for administration, which is broken down into the following four sections: oversight of climate protection projects (4%), management of relationships with donors and partners, as well as press and communications work (3%), and other costs for IT, rent, credit card fees, etc. (1%). The low costs were also made possible through the use of atmosfair's own software, with which most of the donated funds can be managed at almost no expense. In addition, atmosfair refrained from any and all forms of advertising in 2008, e.g., ads, posters, commercials or promotion teams. In other words, of every 100 euro donated, 92 euro go directly to the operators and partners of the climate protection projects in the developing countries, and atmosfair spends only eight euro on its own staff and other administrative costs.

Achievement of objectives

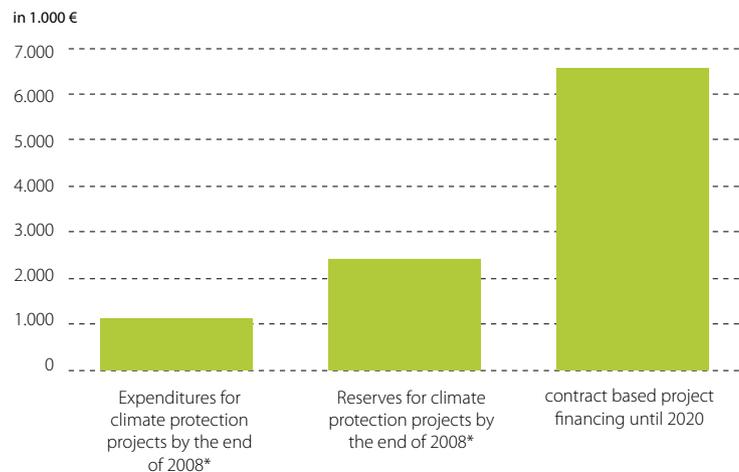
The climate protection projects underway so far should reduce CO₂ emissions by 754,000 tonnes by the year 2020, according to the contracts. This covers the reduction commitments that have been made so far (see overview on page 15). Within the two-year period allowed between receipt of a donation and its allocation to a climate protection project, atmosfair has so far always offset more greenhouse gas emissions that was required by the donations. In response to the tension between the donations being made today and the financial commitments through 2020 to the operators of the climate protection projects, atmosfair has opted for a conservative approach (see page 16).

Statements reviewed and managing director granted approval

The managing director of the non-profit limited liability company (gGmbH) prepared the annual financial statement for December 31, 2008. The shareholders' meeting found the statement to be duly prepared and granted its formal approval to the managing director.



Project finance, Date End 2008



*There may be an interval of up to two years between the time at which a donation is received and the time at which it is invested in a climate protection project.

There followed a resolution concerning the appropriation of the net income with the creation of reserves as indicated.

Outlook

Following the successful year of 2008, atmosfair will continue to promote voluntary contributions to climate protection. With new partners like the business travel consultant Advito, the booking system providers Traveltainment, Maxviva and Traffics, and the on-line travel portals Traveltopia and LCC24, new gateways were opened up for making voluntary carbon offset payments more widespread in the market for private and business travel.

About us

Patrons



Prof. Dr. Klaus Töpfer

Former Executive Director of the United Nations Environment Program (UNEP).



Prof. Dr. Mojib Latif

Leibniz Institute of Marine Sciences, Universität Kiel.



Prof. Dr. Hartmut Graßl

Former Director of the Max Planck Institute for Meteorology in Hamburg.

Staff



Dr. Dietrich Brockhagen

Managing Director, former positions at the German Aerospace Center (DLR), the EU Commission and the German Federal Ministry for the Environment



Katharina Behrendt

Business Economist
Product Development & Key Accounts (Tourism)



Roland Sprenger

Geographer
Product Development & Key Accounts (Corporates)



Stefanie Sommer

Geographer & Business Economist
Product Development & Key Accounts (Corporates)
Media Contact



Philipp Poll

Biologist
Product Development & Key Accounts (Events)
IT



Florian Zerzawy

Geographer
CDM Projects / Biomass



Barbara Wagner

Civil Engineer
CDM Projects (Hydropower) & Emissions Calculation



Jörg Rüdiger

Chemical Engineer
CDM Projects (Biomass)



Robert Müller

Biologist
CDM Projects



Ole Meier-Hahn

Economical Mathematician
CDM Projects



Alain Nana

Engineer
Project Coordinator Burkina Faso



Gregoire Sama

Socioeconomist
Representative Burkina Faso

Advisory Board for atmosfair Standards



Nicole Wilke

Director KI II 1 at the German Federal Ministry for the Environment, responsible for international cooperation, global conventions and global climate protection negotiations.



Christoph Bals

Political Director of the Nord-Süd organization Germanwatch, a critically-minded observer of German environmental policy for over 15 years.



Franzjosef Schafhausen

Director of KI I 6 National Climate Protection at the German Federal Ministry for the Environment, responsible for the German climate protection program and international climate protection projects.



Klaus Milke

Chief Executive Officer of Stiftung Zukunftsfähigkeit and of Germanwatch, brings business experience and contacts to climate protection.

Top rated



We fly atmosfair (selection)



Travel industrie partners



Climate protection project partners

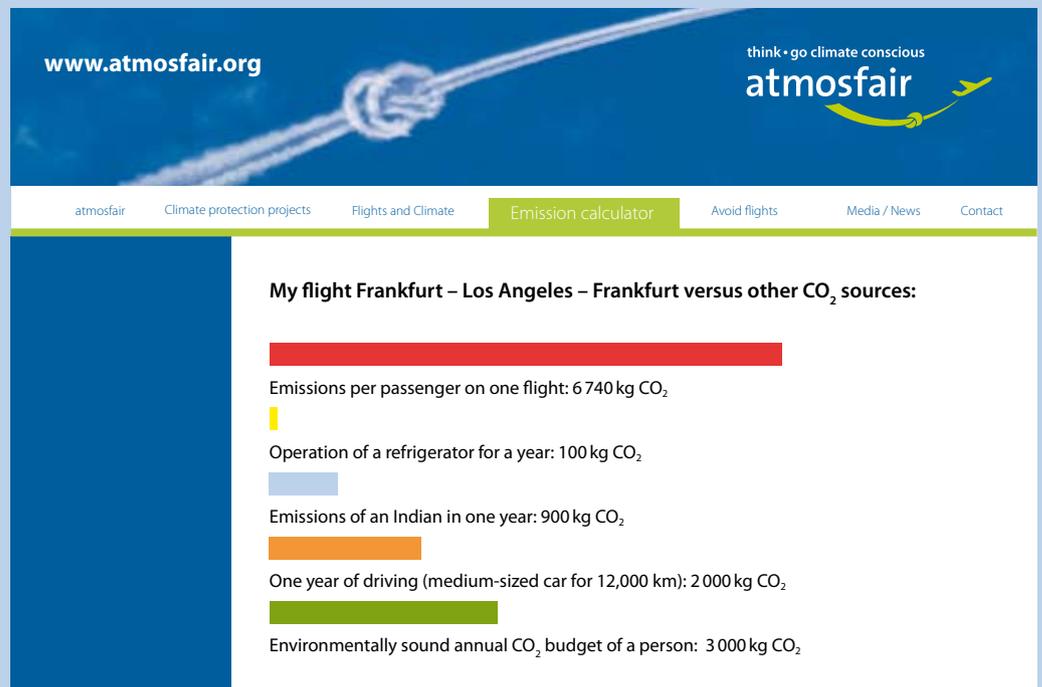


If I fly - I fly atmosfair

atmosfair is a non-profit organization working for climate protection in air travel. At our Web site or one of the cooperating tour operators, donors can calculate the greenhouse gases generated by their flight and make a corresponding climate protection payment.

This money will be invested by atmosfair in climate protection projects in order to prevent emissions of greenhouse gases that would otherwise have a comparable effect on the climate. Donations can be made online via invoice, EC card or credit card, and through the cooperating tour operators and travel agencies. You will be issued a receipt confirming your donation.

www.atmosfair.org



Klaus Töpfer, atmosfair patron