think • go climate conscious

atmosfair

# Annual Report 2007

# Contents


*Vapor trails over Brittany*




**Impressum**

| | |
|---|---|
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# Preface

Dear Readers,

*Dietrich Brockhagen, Managing Director*

The year 2007 was an eventful one for the climate: Following the warm winter of 2006/2007, and with the publication of the fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) and the G8 summit in Heiligendamm, global warming was for many months a leading issue for German and international politics. As a result, there was greater media interest in atmosfair as well, which was reflected in a large number of newspaper articles and considerable airtime on radio and television.

Revenues increased significantly, to over one million euro, and this made it possible to break new ground in the selection and funding for carbon offset projects. One result is the project depicted on the title page: financing for efficient cooking appliances in Nigeria. These use 80 percent less fuel and thereby reduce the adverse impact on the land and climate while also making life easier for their users. What is new here is not just the small-scale of the elements of this project, which extends down to the level of individual families, but also the scope of the financing, which fully covers the costs of the stoves, so that the buyers have to pay only for the distribution. For the first time, atmosfair concluded an agreement directly with the manufacturer in order to continue disseminating this technology together and, if applicable, through additional partners. This project is thus the third in which atmosfair has taken charge of the project development itself in accordance with the CDM Gold Standard, including all the technical documentation for project approval and the formal registration processes. New staff members with engineering backgrounds have made this possible.

Additional partners were gained in the travel industry, both relatively small firms like DAV Summit Club and Demeter Reisen as well as large brands like Thomas Cook and TUI Nordic. That means atmosfair is now represented in the German travel agencies nationwide, raising awareness of climate protection during the process of travel booking. This central objective of atmosfair precluded cooperation with one large airline that wanted to exclude vapor trails and other important effects from the emissions calculation (page 17). For atmosfair, this decision meant giving up a source of new donations. But for effective carbon offsetting, it is especially important for a voluntary mechanism to speak the truth about the environment, because it is not compensation but instead only changed behavior which will protect the climate effectively and over the long term.

Progress was made in the field of business travel also: The partnership with Lufthansa subsidiary AirPlus makes it possible for many companies to simply click a button for a breakdown of the environmental impact of their flights, at which point they can then make the offset payment. Since this award-winning solution from atmosfair rests entirely on the data-processing procedures already in place, it creates no administrative costs within the company. The insurance companies Provinzial and Hannover Rück have become the first large customers to use this convenient process.

In cooperation with the largest corporate travel agency in the world, atmosfair developed software that shows the $CO_2$ emissions for flights, hotels, rental cars and train travel for corporate travel customers worldwide. The revenues from the sale of the software flow into the commercial side of atmosfair, and the profits are used to support the not-for-profit side and thereby lower the administrative expenses of atmosfair to under 10% overall. That means that of the 100 euros of a donation, over 90 euros go to carbon offset projects.

Our warmest thanks to all donors and partners.

Yours sincerely,

Dr. Dietrich Brockhagen

Managing Director, atmosfair gGmbH


*Considerable media interest in 2007: in all, several hours of radio and television airtime with atmosfair*

# Climate Protection atmosfair Projects

*atmosfair project in Nigeria: The felling of ever more timber for daily cooking is leading to the spread of steppe, migration from the countryside to towns and increasing living costs. The efficient stoves help Nigerians save wood and money.*



The large increase in donations in 2007 made it possible for atmosfair to break new ground in its offset projects. It can now help plan projects from the very beginning with financing secured through long-term agreements. In Nigeria, this is allowing the dissemination of modern stoves that use less firewood, in China the installation of „hydraulic rams." In both projects, atmosfair is developing the project plans needed for the registration at the UN and the Gold Standard Foundation all by itself – and is thereby gaining experience and expertise for future projects. Another new project is a power plant in India that generates green electricity from crop waste thereby creating new jobs.

Through new partnerships with important organizations involved in the environmental and development field, such as CARE, DED, GTZ and KfW, atmosfair has also significantly expanded its network for such projects. It is therefore possible to envision future projects that combine carbon offsetting and development in exemplary fashion. With the addition of the new projects in 2007, atmosfair has enough projects to fulfill the commitments made since 2005, which call for reducing $CO_2$ emissions by a total of 82,500 tonnes. But since atmosfair is still on course for growth, there is already an extensive pipeline of possible projects and a constantly expanding network of partners to foster new projects. A detailed comparison of the reduction commitments resulting from previous donations with the projects realized so far can be found on page 13.

# Nigeria: Efficient use of firewood protects the climate, the land and the pocketbook

In the north of Nigeria, the use of firewood for cooking has already caused areas in the sub-Saharan zone to degenerate into steppe. Wood must be brought from the south of the country with trucks and is so expensive that, out of sheer exigency, people are felling woodland newly restocked by the UN and gradually eliminating the basis for agriculture in the process.

Together with the German association Lernen Helfen Leben e. V. and the Nigerian environmental organization DARE, atmosfair is promoting the use of efficient wood stoves that consume about 80 percent less firewood. They function day and night and require no change of cooking habits on the part of the users. The robust technology used in the stoves comes from Germany, including the stainless steel. They are assembled in Nigeria.

One fully-assembled stove costs approximately 100 euro. This money comes entirely from atmosfair. The stoves are nevertheless sold in Nigeria for about 60 euro. The proceeds are used to compensate the vendors and to establish new assembly sites. A second shop is currently being set up and staff hired. In the future, the stoves will then be produced entirely in Nigeria. Even for poor segments of the population, a stove pays for itself after only a short time, because only little firewood must be bought for it. Micro-loans and installment plans help those who lack sufficient resources to pay for a stove in cash.


*Deforestation and climate change promote desertification*

Often, people initially don't believe that they can cook with so little wood. DARE therefore arranges meetings in the marketplaces where the operation of the stove is explained. Meals are prepared with the new stoves and served at these gatherings, since good food is more convincing than all the explanation in the world! One stove eliminates about one tonne of $CO_2$ emissions per year. Overall, the project is therefore expected to reduce $CO_2$ emissions by 20,000 tonnes per year once the rollout is complete.

There has already been an initial and entirely positive „Gold Standard Stakeholder Meeting" with user families, NGOs, local politicians and religious leaders. Currently, atmosfair is developing the official „Project Design Document" (PDD) in order to register the project with the UN Climate Change Secretariat.

**At a glance...**

| | |
|---|---|
| • Total $CO_2$ reduction:: | 20.000 tonnes $CO_2$/year (1 t $CO_2$ per stove per year), averaged over the project duration through 2018 |
| • Local environment: | Less smoke generated, prevention of deforestation |
| • Other benefits: | Lower costs for household energy |
| • Jobs: | Currently 10 in sales |
| • Project partners: | DARE (Development Association for Renewable Energies, Nigeria) LHL (Lernen Helfen Leben e.V., Vechta) |

**... and in detail:**

- Project information available at http://www.atmosfair.de/index.php?id=336&L=3


*The SAVE80 stove requires only a few small pieces of wood*

# India: Electricity from Biomass


*Small farmers during the mustard harvest*

The Indian state of Rajasthan is one of the poorer regions of India. A large percentage of the population lives from agriculture and cattle breeding. Moreover, the small farmers produce hardly more than what is required for survival. Little grows in the arid climate of Rajasthan, but mustard thrives despite these extreme conditions. In the past, what remained of the mustard plant after it was processed for mustard oil was not used and was therefore incinerated.

In Rajasthan, atmosfair is supporting a small biomass power plant (8 MW) that uses the harvest remains to produce environmentally friendly power.

Many thousands of small farmers supply the plant with their crop waste – and sell the previously worthless refuse to the power plant operator. Collection centers have been set up within a radius of 50 kilometers of the plant, the size of the catchment area, so that the farmers, who seldom have their own means of transportation, do not have to travel long distances to bring the fuel to the power plant themselves. At these centers, the delivered sacks of mustard plant remains are weighed, the farmers paid directly, and the fuel then transported to the plant. A large depot at the plant ensures that there is enough material to generate power outside the harvest season and throughout the entire year.


*Turbine and generator*

The power plant has been in operation since 2007. Carbon offsetting has played a major role from the beginning, because without payments from the emissions reductions, operation of the power plant would entail too great a risk for KPTL, the power company running the plant in this project. The project eliminates about 30,000 tonnes of $CO_2$ per year. KPTL will use a portion of the atmosfair funding to support social-welfare projects and activities to fight poverty in Rajasthan.

The project has been submitted to the UN Climate Change Secretariat for registration, which is expected in September 2008. After that, the Gold Standard registration will be carried out.

**At a glance…**

| | |
|---|---|
| • Total $CO_2$ reduction: | 30.000 tonnes $CO_2$/ year, averaged over the project duration through 2014 |
| • Local Environment | Replacement of fossil fuels, less pollutant emission (through controlled incineration)) |
| • Other benefits: | Creation of value in rural area |
| • Jobs: | 10 in plant operation, 150,000 man-days in the supply chain |
| • Project partners: | KPTL, Indian power plant operator |

**… and in detail:**

• Project information available at http://www.atmosfair.de/index.php?id=331&L=3

# Irrigation Project in Rural Southeast China and Small Hydropower Plant in Honduras

**China: Installation of Water Pumps under way**
The atmosfair project partner BORDA from Bremen and the Zhejiang University of Technology in Hangzhou have begun installing 65 hydraulic rams, to which end atmosfair has already transferred 100,000 euro. By the end of the year, an additional 60-100 rams will follow. The locations have already been identified, and the future users are now receiving training in the use and maintenance of the machines. With this new equipment, several hundred families of small farmers will be able to achieve better yields by harvesting rice twice per year, for example.

Presently, atmosfair is having the project validated by the German Technical Inspectorate TÜV according to the „programmatic CDM" process. The project operator can then add an unlimited number of hydraulic rams in the future in a gradual expansion of the project. Hydraulic rams pump part of a water flow to a higher elevation using only hydraulic energy and prevent an average of six tonnes of $CO_2$ emissions per year otherwise produced by diesel pumps.


*Irrigation with hydraulic rams in tea cultivation*

**Small Hydropower Plant in Honduras**
The Gold Standard Foundation has now officially registered the atmosfair project in Honduras as a Gold Standard project following a detailed assessment by the German Technical Inspectorate TÜV. It is the first hydropower plant in the world to receive the CDM Gold Standard certification. The inspectors paid particular attention to environmental aspects and social welfare issues. In this regard, they found the extensive environmental-protection and public-welfare agenda compelling. It includes various environmental projects at the schools and a project to supply electricity to nearby villages for the first time. Part of the assessment also included an additional consultation with the local population, which approved of the Gold Standard registration without reservation.


*Hydropower plant: run-off at the storage reservoir*

The 13 MW hydropower plant reliably supplied the region around the small town of La Esperanza with clean electricity in 2007 also; from 2006 to the end of 2007, it reduced $CO_2$ emissions by 21,000 tonnes for atmosfair.

Following the successful Gold Standard registration, the first verification of emissions reductions according to the Gold Standard requirements is scheduled for the autumn of 2008.

# Progress at Projects in India, Thailand and Germany

**India: Solar Mirrors for Large Kitchens**

The project in India involving the use of solar mirrors to heat water for large kitchens has been registered with the UN Climate Change Secretariat and the Gold Standard Foundation since August 2006 and continues to operate according to schedule. The first of these solar-energy systems began operating in the autumn of 2006, and the remainder of the 18 systems were fully installed by autumn of 2007. A verification of the $CO_2$ reductions by the German Technical Inspectorate TÜV is scheduled for 2008. Since the project is comparatively small, a verification is worthwhile only at relatively large intervals, in order to cut costs. Regardless of that, however, the ongoing monitoring, i.e., the recording of the performance data, is assured. The monitoring data are checked by the German Technical Inspectorate TÜV, and the $CO_2$ reductions then certified.


*India: Solar mirrors for steam generation*


*Thailand: Biogas from waste water*

**Thailand: Heat from Waste Water**

The facility for the treatment of waste water from palm oil production has been in operation since mid-2007. This project prevents methane from being released into the atmosphere. The methane is used for process heat, where it leads to a further reduction in $CO_2$ emissions.

Because of the changes in political conditions in Thailand (coup and subsequent reorganization of the government), approval of the project by the host country was delayed for a long time. Now, however, the letter of approval has been issued, and the project will soon be submitted to the UN and the Gold Standard Foundation for registration. Only from that point on do the $CO_2$ reductions count.

**Germany: Raising Awareness at Schools**

In the German school project Fifty/Fifty, schoolchildren learn about energy efficiency and renewable energies, in the process examining the practical example of their own school building, for instance. These activities have entered into their second year at six schools. The project has also been introduced at three new schools, in Gars am Inn, Halle and Berlin. Since it is being carried out in Germany, the school project is not a CDM project. It is being funded at a flat rate of 1 € per flight. Moreover, atmosfair has stressed that it will not use the tonnes of $CO_2$ emissions prevented as a result of the project to satisfy its emissions reduction commitments.


*Schoolchildren organize an exhibition on renewable energies*

With the increase in donations, atmosfair broke new ground in 2007 in its support for carbon offset projects. The objective was to support project operators for whom the atmosfair funding constitutes a vital part of the financing (the criterion of „additionality"). At present, when a wind park in China or India is co-financed by the CDM (see box on CDM Gold Standard), the CDM portion of the investment is typically less than 5 percent.

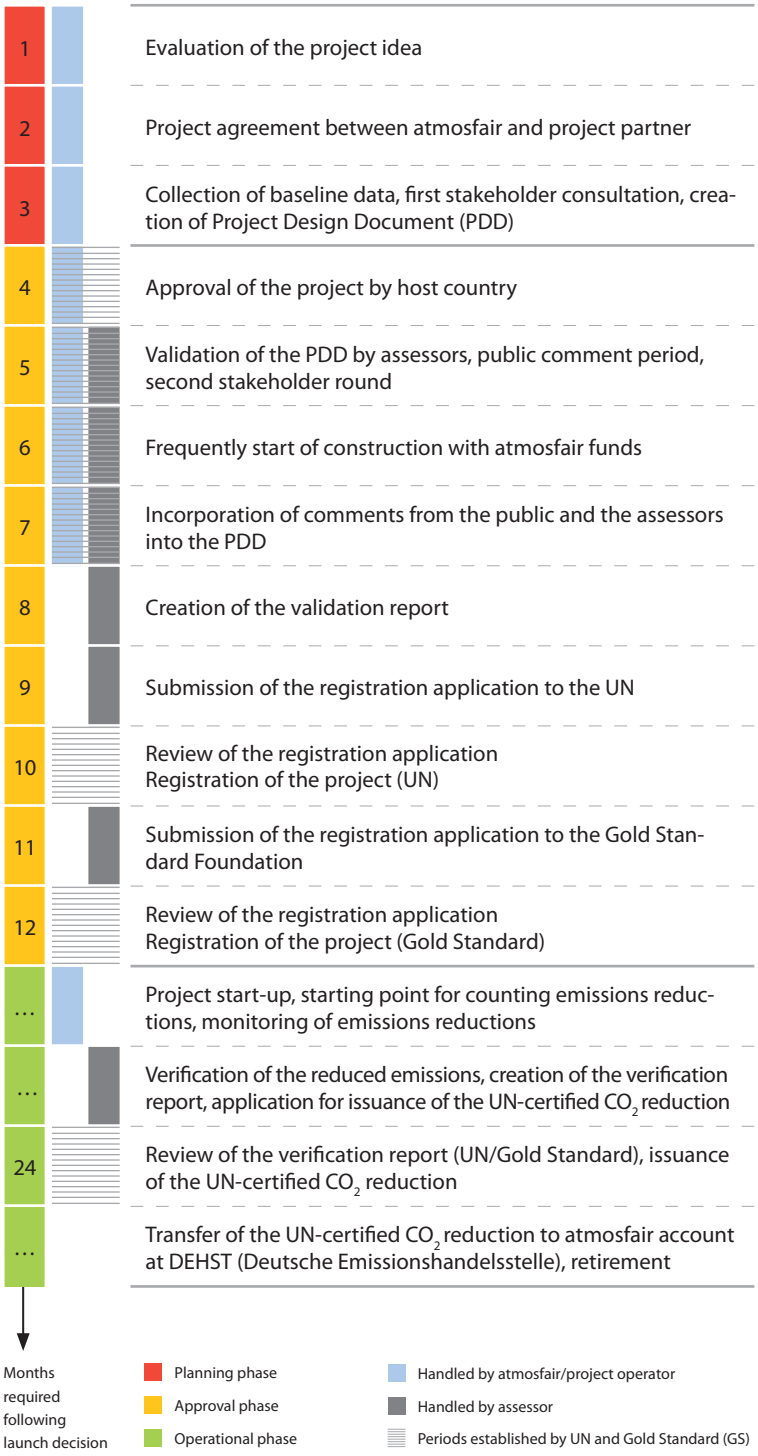
Even if it is technically feasible to demonstrate the „additionality" under the CDM and even the Gold Standard, it is not convincing to maintain that a project of this kind is only possible through these CDM funds (the condition for „additionality"). Critics therefore point out that certain technologies in certain regions (e.g., wind power in China) are in general no longer „additional" and should therefore no longer be eligible for climate funding.

Consequently, atmosfair has taken a different approach. In order to make „additionality" truly evident, increased resources are being provided in the development phase and as a substantial portion of the initial investment. In the case of the new projects in Nigeria (efficient stoves), this portion is 100 percent, and in China (hydraulic rams) it is approximately 40 percent.

However, this desired „additionality" comes at the expense of security and speed. On the one hand, there is the risk that, despite careful scrutiny at the outset and good will, the project partner in the developing country may fail. In the worst case, the donated funds allocated by atmosfair could then be lost. So far, this has not happened (see page 10). On the other hand, it means that there will be a period of at least two years between receipt of the donation and a demonstrated reduction of greenhouse gases in the project. The figure at the right shows the time required in various stages when a project is funded by atmosfair. It is clear from this that atmosfair is dependent on other participants to a considerable degree during the start-up process and must go through individual stages and approvals over which it has no influence. Setting up workshops and a distribution system in Nigeria, for example, takes time, but only in this way do the donated funds make the project possible in the first place.

**2 Year-Start-Up Phase for a New CDM Gold Standard Project**

**atmosfair and interactions with partners and public agencies, pre-established time-frames.**



# Objectives Achieved, Commitments Fulfilled

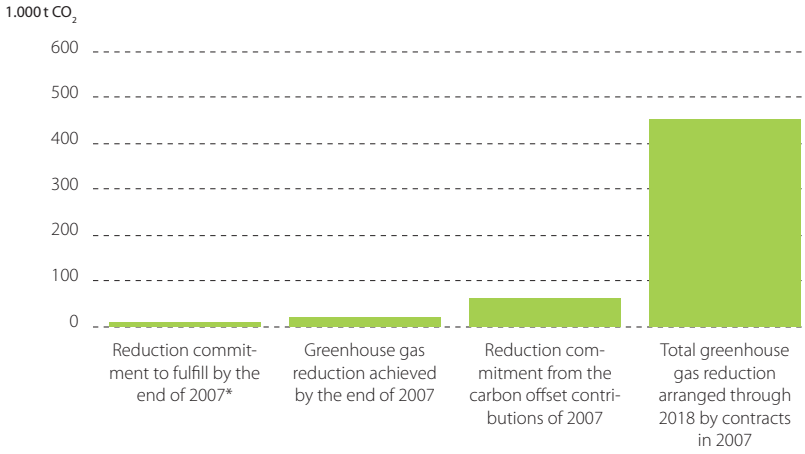
Special attention was again paid to the long-term character of the carbon offset projects during portfolio planning in 2007. The funding agreements with the projects remain in effect until 2018 in some cases, because the projects have loans that must be serviced repeatedly during this time or need money to grow (e.g., the projects in China and Nigeria). The project operator must therefore be able to depend on atmosfair to fulfill its promises not just now but in 2018 as well.

Hence, without a long-term approach, atmosfair would not have been able to sign contracts for any new projects in 2007: It has promised the projects put under contract through the end of 2006 at least two million euro in funding through 2018, but its revenues from the commencement of operations in 2005 through the end of 2007 amount to 1.7 million euro. On the other hand, whereas revenues in the year 2007 alone totaled approximately 1.3 million euro, atmosfair has committed itself to over 62,500 tonnes of $CO_2$ reductions. But the projects under contract as of the end of 2006 collectively eliminate only slightly less than 30,000 tonnes of $CO_2$ per year, which is why new projects were needed in 2007. This tension between the donations received today and the long-term planning for their use over ten years in advance is an inevitable consequence of funding „additional" offset projects: These projects must be supported from an early stage (see page 9), and they have a start-up period of at least two years (see timeline on page 9). There is no liquid „market" for such projects at which atmosfair can „purchase" more at short notice if more donations are received and vice versa.

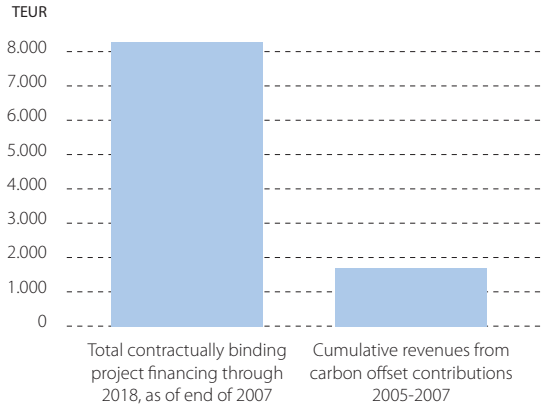
For this reason, atmosfair sets up its project portfolio according to the following principle, which is also laid out in its „General Terms and Conditions": Projects are contracted if they can provide the corresponding annual $CO_2$ reductions within two years following receipt of the donation. This makes it possible to take on new projects in a timely manner when donations increase. In addition, besides the reserves for the contractually committed funds, atmosfair also sets aside reserves for venture funding that can be used to get new projects started.

The following two charts show in detail how atmosfair fulfills its commitment vis-à-vis the donors. The last table on page 13 shows that within the two-year period, atmosfair has always reduced greenhouse gas emissions by more than the amount required by the donations received.

**Total greenhouse gas reduction arranged through 2018 by contracts in 2007**




**Total contractually binding project financing through 2018, as of end of 2007**




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

# Our Work in Context


Quelle: atmosfair

## Climate-Neutral?

„climate-neutral" was awarded the negative buzzword of the year 2007 by a german language watchdog initiave. The jury criticized the attempted use of the concept to play down environmentally harmful behavior. And 2007 was indeed a year in which customers were offered „climate-neutral" versions of all sorts of things, from laptops to cobblestones, from driving to one's entire life.

As atmosfair sees it, this is a worrisome trend. Too often, consumers have far better opportunities to reduce greenhouse gases directly and on their own instead of opting for these products or activities. While a car driver can lower $CO_2$ emissions by driving more slowly or switching to a more economical model, these options are not available to the airline passenger. If the car driver already sees himself as driving „climate-neutrally," the incentives for choosing these better options are diminished. The second-best solution, compensation, then challenges the best solution, and that is undesirable from an environmental point of view. Only changes in behavior will lead to the goal of climate protection over the long term (see diagram on page 17). In the worst case, the compensation may have a negative effect on the climate: If laptops are sold with „climate-neutral" electricity that is ultimately based on compensation projects only, this occurs at the expense of real green electricity generated solely from renewable energies in one's own country. But since this solution is more expensive than the compensation, it is often less attractive for companies.

| Activity | Best measures | Options for consumers | Competition bewtween best measures and compensation |
|---|---|---|---|
| **Car** | Drive more slowly<br>Buy a small car<br>Car sharing<br>Public transit | Very large range of options | Very high |
| **Train** | Continue to ride trains | Train is already best choice | Low |
| **Air travel** | Don't fly | No other options | Low |
| **Household appliances, computer, entertainment electronics, etc.:.** | Power-efficient devices<br>Green electricity<br>Standby mode | Large range of options | High |

*When compensation becomes too easy and begins competing with changes in behavior, it can be counterproductive for the climate. Source: atmosfair*

In 2007, several companies from various sectors approached atmosfair in the interest of making their products „climate-neutral." After a careful review of each case in coordination with the advisory board (see page 22), atmosfair declined to participate in these efforts, because the ultimate objective of atmosfair is climate protection, not the maximization of revenues.

**CDM – Gold Standard:** The CDM (Clean Development Mechanism, defined in Article 12 of the Kyoto Protocol) establishes the rules for verification of emissions reduction projects. The mechanism requires a UN-accredited verifier that must demonstrate its independence and competence and accepts liability for errors. The verification has several phases: prior to the beginning of the project, during the course of the project, and at the end of the project, when the verifier testifies the greenhouse gas reductions.

The Gold Standard is an extra standard that applies to the content of CDM projects. It was developed by international environmental groups such as the World Wildlife Fund, and it establishes stringent criteria for projects to ensure that they effectively contribute to sustainable development. For the Gold Standard, only renewable energies and energy efficiency projects are eligible. The „additionality" of the project must be proven with economic criteria, and impacts on social criteria like employment and the local environment must be deemed favorable. Only the combination of the CDM and Gold Standard as the CDM-Gold Standard provides the integrity needed: stringent criteria and independent verification with accountability.

# Status* of the atmosfair CDM Carbon Offset Projects

*India: Solar thermal system for kitchens*

**Planning** ✓
- Project drafts reviewed
- Project Design Document (PDD) created
- Agreement among Ghadia Solar, GTZ and atmosfair

**Approval + Contruction** ✓
- Consultation of the local population
- Validation of the project design by TÜV
- Submission of the validation report and registration at UN and Gold Standard

**Operation** ✓
- Construction work finished
- Solar mirrors put into service

*Thailand: Biogas from waste water*

**Planning** ✓
- Project drafts reviewed
- Project Design Document (PDD) created

**Approval + Contruction** ✓
- Consultation of the local population
- Re-validation of the project design according to new CDM-Gold Standard method

**Operation** ✓
- System in test operation

*Honduras: Small hydropower plant*

**Planning** ✓
- Project evaluated
- Project Design Document (PDD) created
- Agreement between CISA and atmosfair

**Approval + Contruction** ✓
- Consultation of the local population
- Validation of PDD by DNV
- Registration at UN and Gold Standard

**Operation** ✓
- Plant in operation

*India: Power generation from crop waste*

**Planning** ✓
- Project drafts reviewed
- Project Design Document (PDD) created
- Agreement between KPTL and atmosfair

**Approval + Contruction** ✓
- Consultation of the local population
- Validation of PDD by TÜV
- Currently application for registration at UN, then application for Gold Standard registration

**Operation** ✓
- Plant in operation

*China: Hydraulic rams*

**Planning** ✓
- Joint project planning with BORDA and local partners
- Atmosfair has created Project Design Document (PDD)
- Contract signed with BORDA

**Approval + Contruction** ✓
- Consultation of the local population
- Currently validation of the PDD by TÜV

**Operation** ☐

*Nigeria: Efficient wood stoves*

**Planning** ✓
- Joint project planning with DARE and LHL
- Project Design Document (PDD) currently being created by atmosfair
- Conclusion of contract with DARE and LHL

**Approval + Contruction** ✓
- Consultation of the local population

**Operation** ☐

*Status as of June 2008

# Planning of Project Portfolio and Comparison with Donations

**Greenhouse gas reduction, already achieved or contractually binding**

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010-2018 | Gesamt bis 2018 |
|---|---|---|---|---|---|---|---|
| **India Solar Mirrors** | | 0,1 | 0,1 | 0,3 | | | **0,5** |
| **Honduras Small Hydropower Plant** | | 15,0 | 6,0 | 15,0 | 15,0 | | **51** |
| **Nigeria Efficient Wood Stoves** | | | | | 4,0 | 213,0 | **217** |
| **Indien Power Generation from crop waste** | | | | 5,0 | 30,0 | 90,0 | **125** |
| **Thailand Biogas from waste water** | | | | 5,0 | 10,0 | 30,0 | **45** |
| **China hydraulic rams** | | | | 1,0 | 1,5 | 16,0 | **19** |
| **Sum** | **0,0** | **15,1** | **6,3** | **26,5** | **60,5** | **349** | **458** |

**Reduction commitment from carbon offset contributions received**

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010-2018 | Gesamt bis 2018 |
|---|---|---|---|---|---|---|---|
| **Greenhouse gas redution commitment *** | 0,0 | 0,0 | 9,5 | 9,5 | 63,5 | | |

*Figures refer to thousand of tonnes of $CO_2$*
** There may be an interval of up to two years between receipt of a donation and its use in an offset project.*

All atmosfair projects are energy-efficiency projects or use renewable energies; other types of projects, such as reforestation projects, are not funded by atmosfair. The uncertainties regarding the permanence of the $CO_2$ reductions are too great in these cases. All atmosfair projects abroad meet the CDM Gold Standard or are currently being designed as CDM Gold Standard projects.

The combination of the internationally recognized and official UN process (Clean Development Mechanism) and the Gold Standard developed by environmental and development organizations has proven itself; together, they represent the maximum carbon offset with simultaneous benefits for the local population through improvement of the basic socio-economic and environmental conditions.

## Commitments Fulfilled

The table at the top shows the contractually binding greenhouse gas reductions that the individual projects should achieve, according to the funding agreement, or already have achieved. The middle table, by contrast, shows the reductions that must be realized by the projects in order for atmosfair to achieve

**Greenhouse gas reduction vs. reduction commitment**

| | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| **Cumulative greenhouse gas reduction, already achieved or contractually binding** | 0,0 | 15,1 | 21,4 | 47,9 | 108,4 |
| **Cumulative reduction commitment from carbon offset contributions received*** | 0,0 | 0 | 9,5 | 19,0 | 82,5 |
| **Fulfillment of commitment** | ✓ | ✓ | ✓ | ✓ | ✓ |

*Figures refer to thousand of tonnes of $CO_2$*
** There may be an interval of up to two years between receipt of a donation and its use in an offset project.*

the $CO_2$ reductions promised to the donors (a total of 82,500 tonnes of $CO_2$ since 2005). The table takes into account the fact that up to two years may pass from the time a donation is made to the time it is used in a carbon offset project because an offset project must first be started up (see page 9).

Lastly, the small table at the bottom compares the reduction commitments from the middle table with the projects under contract from the top table. Ever since 2005, its first year of operations, atmosfair has fulfilled its commitments.

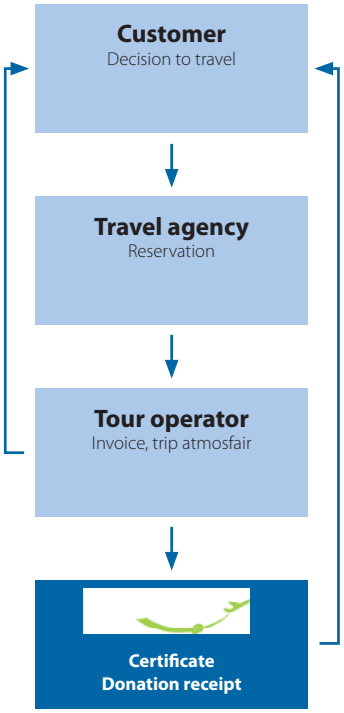
# Tourism Business Travel and Climate Research

Source: photocase.de | © kokok

In 2007, atmosfair again succeeded in gaining new partners in the travel industry and offered innovative products for this sector. In addition to the classic tour operators in the private travel segment and online sales, atmosfair is working with more companies in the corporate travel sector. One common foundation for all of these partnerships was the upgraded information technology at atmosfair, with new, powerful server hardware and enhanced software that allows a Web-based exchange of data with the partners according to modern IT standards. The other foundation was the scientific work in the field of air travel and the climate. This has made it possible to ensure that the calculation of the environmental impact of the carriers agrees with the latest scientific findings.

The decision to commercially distribute software that determines $CO_2$ emissions for corporate travel customers and directs the travelers to money- and time-saving methods of communication instead has paid off. With the profits earned, the not-for-profit part of atmosfair, the funding of offset projects, can be supported, so that the overall administrative costs of atmosfair can be lowered further.

# Tourism




*Efficient connection with tour operators and travel agencies through modern reservation IT. The customer receives a certificate and a donation receipt. Source: atmosfair*

In early 2007, atmosfair laid the technical foundations for linking itself with the travel industry more closely than before. The objective has been to offer customers the opportunity to make carbon offset contributions during the travel-booking process itself. In such cases, the customer should be informed clearly and directly and then have the option of making a voluntary contribution by clicking a button or checking a box on the reservation form online. At the end, he should receive a donation receipt and a certificate. These processes require an exchange of data between the tour operator and atmosfair, one that must be kept as streamlined as possible. In close consultation with the travel industry, atmosfair set up new data exchange processes that connect seamlessly to the existing structures in travel agencies, tour operators and on Internet sites.

### Fast Online Sector

The first partner to use these capabilities has been the association of German online travel portals VIR (Verband Internetreisevertrieb). The Internet sector already has a reputation for being very fast, and it made no exception in the case of carbon offsetting. The eight VIR member portals, which include the largest in the travel industry, immediately liked the idea of offering atmosfair to their customers, because, as pure sales platforms, they themselves have no other way of contributing to carbon offset directly. At the travel industry trade show ITB in Berlin, VIR introduced the partnership, which also entails that for each flight, 1 € will go to the Fifty/Fifty school project in Germany (page 8) co-founded by VIR. Through the Web-based technology, atmosfair was able to eliminate all administrative expenses for the individual portals of services like Lastminute, Hin und Weg, Expedia and Opodo. The bank account of the customer is debited by atmosfair separately from the payment for travel, so that the customer sees a separate entry for atmosfair on the bank statement and can contact atmosfair directly if there are any questions. Through the inclusion of atmosfair in the large Internet booking engines of Traveltainment and Traffics, other Web portals now also have the opportunity to offer atmosfair on their Web sites in just a few hours and without any programming work.


*Press conference of the Verband Internetreisevertrieb (VIR) at the ITB 2007: The close cooperation with the VIR, the first industry association to work with atmosfair, shows once more that the online sector recognizes the signs of the times.*

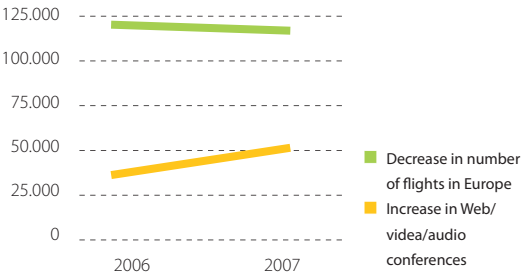
### Tour Operators Pay Contribution Themselves

There were new arrangements among the tour operators also: The DAV Summit Club and the Voyage Gruppe were added as partners, among others. The DAV, Neue Wege Reisen and Demeter Reisen even opted for an especially dedicated model of cooperation: In the case of each flight for which a customer pays a ccarbon offset contribution, the tour operator makes a matching contribution of the same amount from its own pocket.

# Business Travel

There was plenty to do for atmosfair in the field of business travel in 2007. For corporate customers, it is first important to learn how large their carbon footprint is in business travel (reporting). In a second step, one can then analyze the potential for simultaneously reducing costs, outlays of time and greenhouse gas emissions through intelligent travel management or a shift to telecommunications.

For the reporting, atmosfair refined its emissions calculator for air travel and extended it to include travel by car and train as well as hotel stays. The first customer was an American chain of corporate travel agencies that operates worldwide. In a particular case, the travel agency provides atmosfair with the travel data of the company, and the atmosfair software then uses that data to generate a report for the company. The report analyzes the $CO_2$ emissions of the company at various levels of detail and aggregation. 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. In the summer of 2007, atmosfair presented these methods and data sources at the conference of the German Business Travel Association (Verband Deutsches Reisemanagement). As a result of the close cooperation with almost all the business travel chains, the atmosfair software is now widely used.




*Changing behavior through education: The Elektrolux-atmosfair partnership cuts costs and carbon dioxide.*

Through a partnership with Lufthansa subsidiary AirPlus, atmosfair was also able to fully integrate the carbon offset contributions into the existing billing processes for business trips. It has therefore become possible for customers like Provinzial or Hannover Rückversicherung to fly atmosfair without any administrative costs.

In intelligent travel as well, atmosfair has again chalked up successes for its customers. For Elektrolux, atmosfair installed software that not only calculates the emissions generated by travelers but also recommends alternatives from the field of telecommunications. The graph above shows that while the number of flights in Europe has decreased, the use of Internet or video conferences has increased substantially during the same period. Although it is not possible to demonstrate in detail that this effect is a result of the atmosfair software, the correlation is clear. For Elektrolux, the commitment to protecting the environment has thus quite likely led to lower costs. At the moment, atmosfair is adding more features to the software so that it can modify the arrangements of travelers in specific ways in accordance with the travel guidelines of the company and can serve as a full-fledged controlling instrument when used in conjunction with a database.

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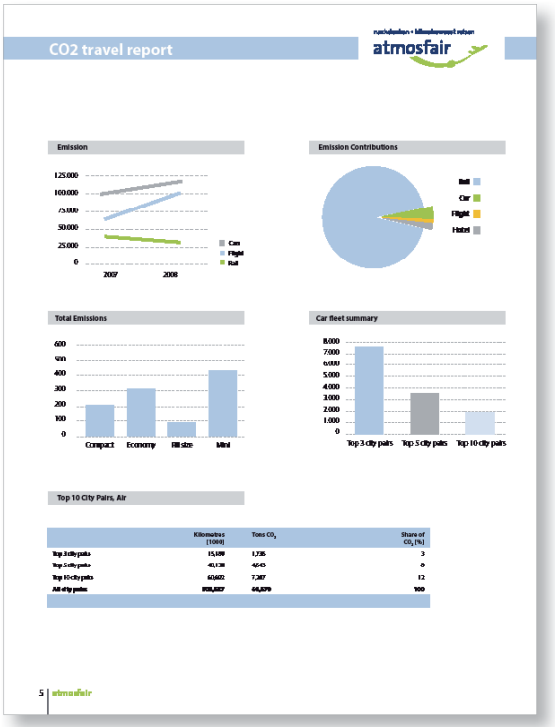


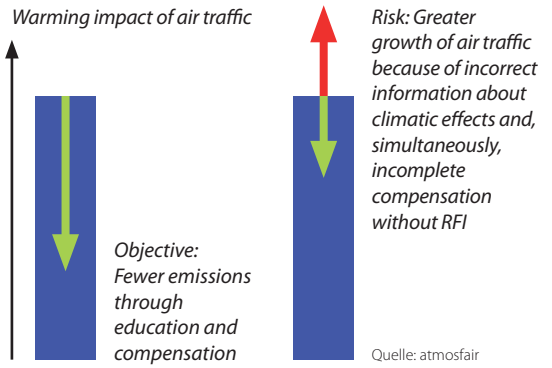

*A page from a $CO_2$ report of the kind generated by atmosfair for business trips in cooperation with travel agencies and credit card companies.*

## Compensation Under Environmental Scrutiny

In 2007, atmosfair was in negotiations with a large airline concerning voluntary offsetting. The airline required that the calculation of the environmental effect of the flights should take into account only the pure $CO_2$ emissions but no other effects, such as the formation of vapor trails or the buildup of ozone at altitudes of 9-13 kilometers. But according to established findings, of all the effects of air traffic, these probably contribute the most to global warming at present. This was most recently confirmed in a study by the German Federal Environment Agency. Omitting these effects would therefore critically understate the true impact on the climate (see table regarding „RFI factor" or Radiative Forcing Index, according to IPCC).

Of course, one could hope that this omission would reduce the offset price and thus lead to greater participation and ultimately more revenues and offset projects. But this argument fails to persuade, because it is not the compensation for greenhouse gases that leads to the goal of climate protection but instead only reduction at the source itself. Even if there were compensation for all aircraft emissions and their growth worldwide, it still would not bring down emissions to the extent needed. For that, aircraft emissions themselves must decrease too. But that also requires a reduction in the number of flights, since even under optimistic assumptions regarding technological development, technology itself will not solve the problem—if only because airplanes stay in the fleets for 30 years and more. Flying less requires a change in attitudes, however, and this can only be achieved if passengers learn the truth about the environmental impact of flying. Any deviation ultimately makes it more difficult to follow the necessary course.

**Only changes in behavior, not compensation, will save the climate. Incomplete compensation without reference to RFI makes achieving climate protection doubly difficult.**




Quelle: atmosfair

Since raising awareness is one of the main objectives of atmosfair, as indicated in the articles of incorporation, atmosfair refused to agree to the aforementioned condition of the airline and withdrew from negotiations. The point was not to force customers to make higher payments in general. After all, since the offset is voluntary, the passenger can freely choose the payable amount. But to do so, he must be informed how large the full amount is. All of our customers and partners from the travel industry endorse these principles of atmosfair, including the Federal Ministry for the Environment, Münchener Rück Versicherung, VIR (page 15) and Thomas Cook, for example. They show that it is not necessary to sacrifice environmental integrity for a voluntary measure.:

Source: WBGU

*Professor Hartmut Grassl, Max Planck Institute and atmosfair patron, wrote a new study concerning the climatic impact of air traffic.*

**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-$CO_2$ effects to the effects of the $CO_2$ of air traffic. Today, air traffic thus warms the climate at a rate approximately two to five times greater than through its $CO_2$ 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

# Finances of atmosfair

Source: atmosfair

In 2007, the donations received by atmosfair grew to over 1.3 million euro. That means that in 2007 atmosfair was again entirely independent financially and received no public subsidies. In addition to the donations, there were also revenues from the sale of $CO_2$ reporting software. The profits from that area were used to lower the effective administrative costs of the not-for-profit company atmosfair to 8 percent. Out of every 100 euro in donations, 92 euro therefore goes to the operator of a carbon offset project.

In 2007, all the donations received in the years 2005 to 2006 went to offset projects; these funds were thus used for their purpose as defined in the articles of incorporation.

## Organization

The Stiftung Zukunftsfähigkeit (Foundation for Sustainability) remained the sole shareholder of atmosfair in 2007. The four-member atmosfair Advisory Board, consisting of two members of the Federal Ministry for the Environment and two members from environmental organizations, approved the two new carbon offset projects and the many partnerships within the travel sector in 2007. The advisory board rejected several requests for cooperation with regard to „climate-neutral" products and also declined to cooperate with an airline under certain conditions (see page 17). The tax exemption for 2006 of the not-for-profit company atmosfair gGmbH was certified by the tax authorities in February 2008. At the beginning of 2008, the not-for-profit company duly issued the donation receipts for the climate-protection contributions received in 2007.

## Financially Independent

In 2007, atmosfair retained its full financial independence and received no public funds. Nor did the Stiftung Zukunftsfähigkeit make any payment to atmosfair in 2007, and conversely, atmosfair made no payments to the Stiftung Zukunftsfähigkeit, its sole shareholder. In 2007, atmosfair thus financed itself exclusively through donations.

## New Source of Revenue from $CO_2$ Reporting

The only exception to this is the revenue from the commercial business activity, which is allowed to a small extent within a not-for-profit organization. In the framework of this activity, atmosfair generated revenues by developing and successfully distributing (see page 16) $CO_2$ reporting software for the travel industry.

## Revenues and Expenditures

In 2007, donors paid a total of over 1.3 million euro into the donation account of atmosfair for more than 40,000 atmosfair flights. That represents an approximately six-fold increase over the previous year. Among the expenditures, the largest item was the carbon offset projects, for which reserves of over one million euro were formed because of the long-term nature of the commitments. These reserves will gradually be liquidated in the coming years, as payments from atmosfair become due in accordance with the contracts with project operators. In all, atmosfair had more contractual commitments than reserves at the end of 2007, so that donations from subsequent years must also be used to service the existing contracts (see discussion regarding short-term versus long-term aspects on pages 9 and 10).

**Balance sheet of atmosfair gGmbH**

| **January 1, 2007 - December 31, 2007** | | | |
|---|---|---|---|
| **Assets** | **€** | **Liabilities** | **€** |
| A. Non-current assets | 14.660,00 | A. Equity | |
| | | I. Issued capital | 25.000,00 |
| | | II. Reserves for purposes defined in articles of incorporation | 1.177.050.23 |
| | | - Reserves for carbon offset projects | 1.086.192,70 |
| | | - Free reserves (also usable for offset projects) | 90.857,53 |
| B. Current assets | | B. Provisions for liabilities and charges | 19.648,00 |
| I. Receivables and other assets | 77.466,79 | C. Current liabilities | |
| II. Checks, cash-in-hand, bank balances | 1.154.224,25 | - Trade accounts payable | 7.210,85 |
| | | - Other liabilities | 17.441,96 |
| **Total** | **1.246.351,04** | **Total** | **1.246.351,04** |

**Profit and loss statement of atmosfair gGmbH**

| Year | 2007 | 2006 |
|---|---|---|
| **Revenues** | **€** | **€** |
| Donations | 1.328.208,42 | 190.112,61 |
| Income from $CO_2$ reporting software | 28.501,57 | |
| Interest | 17.807,48 | 4.263,21 |
| **Sum** | **1.374.517,47** | **194.375,82** |
| **Expenditures** | **€** | **€** |
| Disbursements to carbon offset projects | 380.690,65 | |
| Personnel | 48.629,67 | 16.854,00 |
| Contracts for services | 41.426,85 | |
| Rent | 8.509,36 | 7.604,67 |
| Travel costs | 7.757,50 | |
| Telecommunications and postage | 1.545,06 | |
| Advertising material | 2.921,85 | |
| Fees for payment instruments (Visa, etc.) | 12.386,86 | 2.895,07 |
| Depreciation and other costs | 9.456,97 | |
| Tax on interest earned | 0,00 | -45,52 |
| Annual result | **861.192,70** | 166.838,60 |
| **Sum** | **1.374.517,47** | **194.375,82** |

In 2007, a good 380,000 euro flowed to offset projects, which was more than the cumulative donations received from the years 2005 to 2006. Thus, all donations went to carbon offset projects within the two-year period following their receipt (cf. page 9).

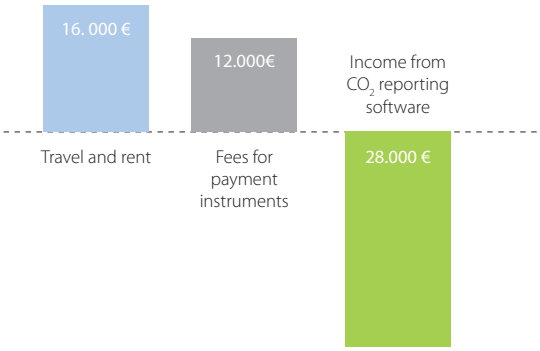
Personnel costs made up the second-largest cost factor in 2007 at over 48,000 euro. In addition to these resources for salaried employees, another 41,000 euro went to numerous external contractors who performed certain services including programming, research, layout work, etc., without being part of the salaried staff. Work was also done in part by volunteers.

There continued to be relatively high costs for IT service providers who record the incoming payments via the atmosfair Web site and deposit them in the atmosfair account. Through its own programming, atmosfair has been able to lower its costs considerably here, but certain fees are unavoidable, e.g., for the payment of donations on the Internet using credit cards.

### Administrative Costs Are 8% of Total Revenue

One of the atmosfair standards requires that at most 20 percent of the revenues be used to cover any and all administrative costs. This goal was immediately reached with room to spare in 2005 and 2006, when administrative costs totaled 12 and 14 percent of revenues, respectively. In 2007, only 10 percent of revenues were spent on administration, which is broken down into the following four segments: administrative support for carbon offset projects, donor advertising, donor relationship management and pure administrative costs. The largest item here was the administrative support for offset projects (5%), followed by donor advertising (2%). The pure administrative costs for accounting, rent, consumption of fixed capital, etc., were only 1%.

**Reduction in administrative costs through income from sale of $CO_2$ reporting software**



In real terms, the total administrative costs are even lower, because atmosfair earned income through the sale of $CO_2$ reporting software, and that revenue is used to support the not-for-profit activities. If this important effect is included in the calculation, then administrative costs amount to only 8% of total revenues. In other words, out of every 100 euro donated to atmosfair, atmosfair kept 8 euro for its own personnel or contractors and for the other administrative expenses, and 92 euro were either transferred directly to the operator of a carbon offset project, or this amount was used to create the appropriate reserves for the contractually agreed payments to the projects in the coming years.

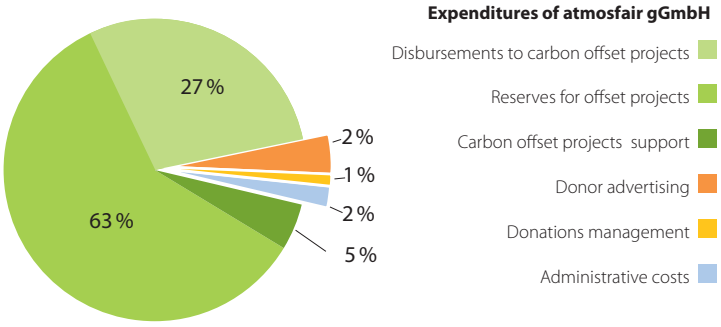
The low costs were also made possible through the use of atmosfair's own software through which most of the donated funds can be managed at almost no cost. For the most part, atmosfair also avoids hiring commercial services for marketing and instead mainly uses its own advertising and free PR measures in the media. Nevertheless, administrative costs could rise again in the future, e.g., from the larger office needed, new staff, etc.

### Achievement of Objectives

The offset projects underway so far should reduce $CO_2$ emissions by about 60,000 tonnes per year, according to the contracts. This is sufficient to cover the entire reduction commitment of atmosfair from its beginning in 2004 to the end of 2007 (see overview on pages 12-13). Within the two-year period permitted between the receipt of a donation and its use in an offset project (see page 9), the atmosfair projects have consistently either already cut more tonnes of $CO_2$ or been contractually bound to achieve reductions of that size. Amidst the conflicting pressures of a current increase in donations and the long-term commitments to offset projects through 2018, atmosfair has opted for a conservative approach (see page 10).

**At a glance...**

| | |
|---|---|
| • Donations received in 2007: | 1.328.000 EUR |
| • Donations received in 2006: | 190.000 EUR |
| • Average donation per flight: | 32 EUR |
| • Number of atmosfair flights in 2007: | 41.900 |




In terms of the expenditures, the administrative costs of atmosfair in 2007 collectively amounted to 10% of revenues. Taking into account the fact that atmosfair uses income from the sale of $CO_2$ reporting software to help cover these costs, the total effective administrative costs were only 8% of revenues.

### Statements Audited and Managing Director Granted Approval

The managing director of the gGmbH prepared the annual financial statement for December 31, 2007. The shareholders' meeting found the statement to be duly prepared and granted its formal approval to the managing director. There followed a resolution concerning the allocation of the surplus with the creation of reserves as indicated.

### Outlook

Following the successful year 2007, atmosfair hopes to make the mechanism of voluntary carbon offset payments even more widespread. Important partners were attracted in 2007, such as the credit card AirPlus, the tour operator Tui Nordic, and the association VIR with its large German travel Web sites, including Expedia, Lastminute, Hin und Weg, and Opodo.

In an environment in which „climate neutrality" is increasingly being seen as a marketing instrument, atmosfair will continue to uphold its standards, not only in regard to the calculation of emissions and the offset projects but also with respect to new partnerships and cooperation with firms from the travel industry.

# 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, formerly positions at the German Aerospace Center (DLR), the EU Commission and the German Federal Ministry for the Environment.

**Inga Haller**

Biologist and tourism industry specialist, support for partners and companies in integration and implementation.

**Sabine Minninger**

Geographer and tourism specialist, support for tourism industry partners in implementation of CSR and climate-protection issues.

**Dirk Holzapfel**

Computer scientist, system support and Web services.

**Andreas Jansen**

Engineer and environmental scientist, project support for Latin America.

**Lalith Severantine**

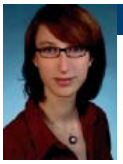
Project support Sri Lanka.

**Robert Müller**

Biologist, development and support of carbon offset projects.

**Florian Zerzawy**

Geographer, development of carbon offset projects, project support, biomass specialist.



**Barbara Wagner**

Engineer, development of carbon offset projects, project support, hydropower specialist.

## Advisory Board for atmosfair Standards

**Nicole Wilke**

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

**Klaus Milke**

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

## Award winner

## We fly atmosfair (selection)

## Travel industry partners

### Business travel

### Tourism

### Online

## Carbon Offset project partners

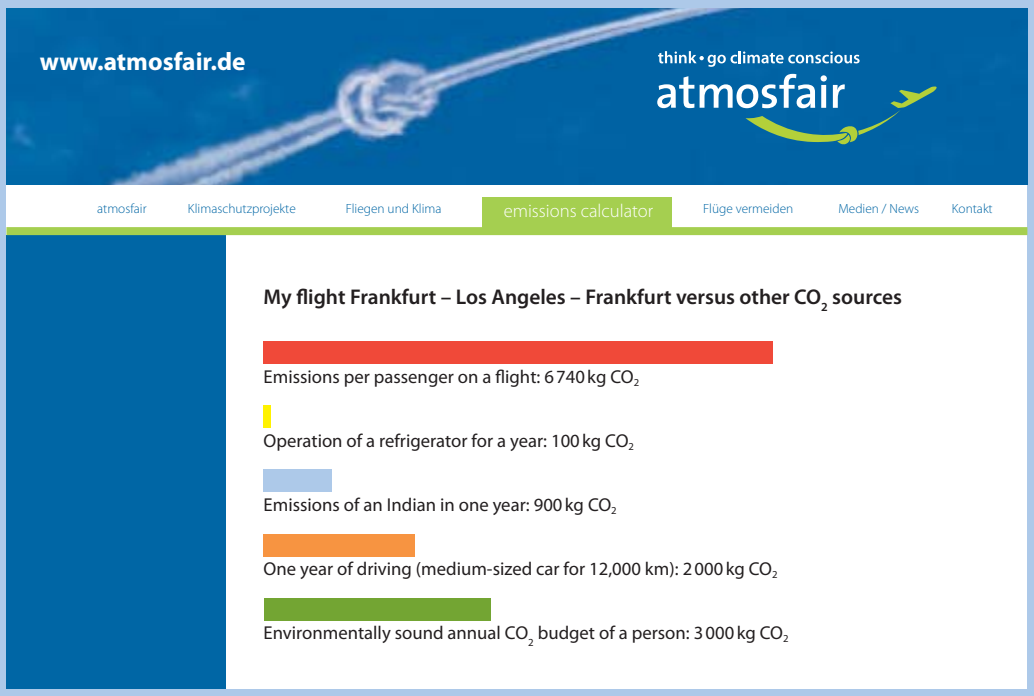
## Founding partners

## Memberships

## If I fly—I fly atmosfair

**Atmosfair is a non-profit organization working toward 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 carbon offset payment.**
**This money will be invested by atmosfair in offset projects in order to cut 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 receive written confirmation of your donation.**

**www. atmosfair.de**




*Klaus Töpfer, atmosfair patron*