

think • go climate conscious

atmosfair



Voluntary Offsetting in Aviation

atmosfair gGmbH

29.05.2009

Outline presentation

1. Company Profile atmosfair
2. Climate Impact of Aviation
3. Voluntary Offsetting in Aviation
4. Inclusion of Aviation in EU ETS in 2012

atmosfair gGmbH

- 2003: Research project of the BMU
- 2004: Foundation with former UNEP director general Klaus Töpfer
- 2005: Non profit organisation (gGmbH)
- Exclusive associate: Foundation Zukunftsfähigkeit
- Offices in Bonn and Berlin

Key figures 2008

- Daily bookings 2008:	120
- Turnover 2008	2,5 Mio. EUR
- CO ₂ compensations for 2008:	105.000 t CO ₂
- Webportal Unique Users, daily:	5.000 – 15.000

Business Segments

Aviation



IT



Consulting /
Reporting



Gold Standard
CDM services



Test Winner



Test winner
Tufts University,
Boston, Jan. 07



Test winner
Lunds University,
Lund, Feb. 07



Test winner
Freie Uni. Brüssel
Brüssel, Jun. 06



Test winner
BBC Wildlife Mag.,
Jan. 07



CLIMATE ALLIANCE
KLIMA-BÜNDNIS
ALIANZA DEL CLIMA e.v.

Highest Standards
Climate Alliance,
Okt. 06



The Best
Daily newspaper, Schweden,
Feb. 07



Top flight
Clean Air – Cool Planet,
Dez. 06



Top 3
ENDS Guide to Carbon
Offsets Apr. 08

Test winner of 8 universities and independent organisations

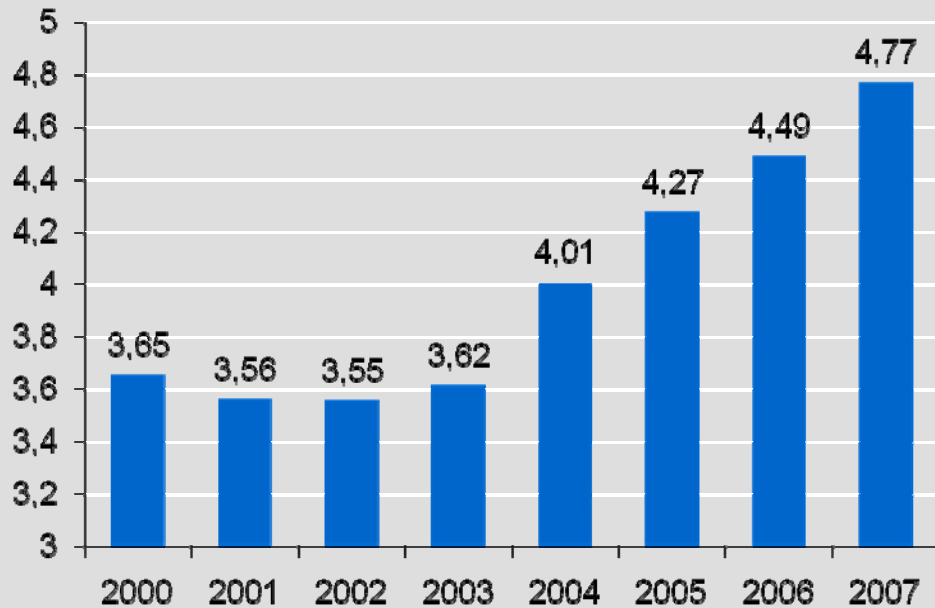
Outline presentation

1. Company Profile atmosfair
- 2. Climate Impact of Aviation**
3. Voluntary Offsetting in Aviation
4. Inclusion of Aviation in EU ETS in 2012

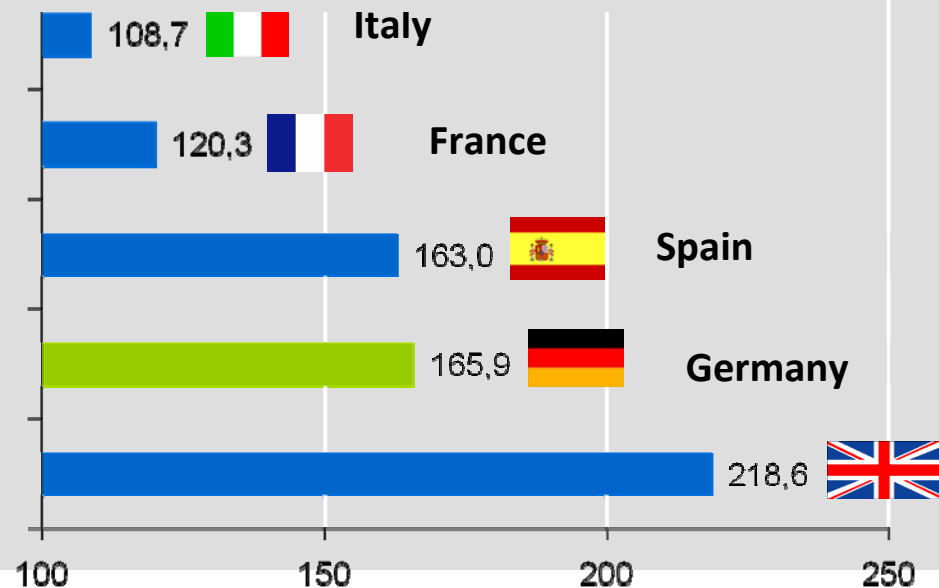
Air Traffic: worldwide growth within the last years

Great Britain most important hub in Europe

Air Traffic Worldwide (billion passengers)



Top 5 EU countries - number of air passengers in 2007 (million passengers)

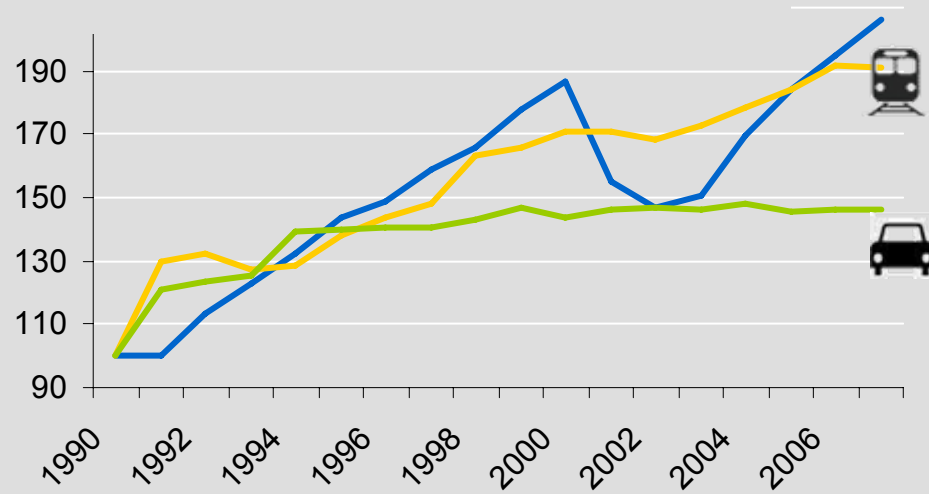


Source: Airport Council International, Eurostat

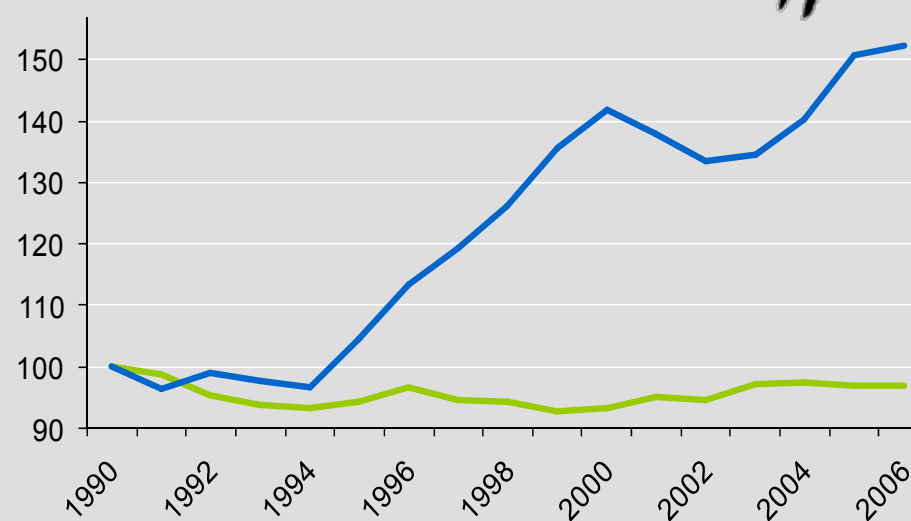
Air Traffic: rapid growth and increasing share of total CO₂ emissions

- small but fast-growing contribution to worldwide greenhouse gas emissions
- Since 1990, CO₂ emissions from aviation have increased by 87% (accounting for approx. 3.5% of total GHG)
- Estimates by IPCC: share will grow to 5% by 2050

Index – Development of the number of passengers in Germany (1990=100)

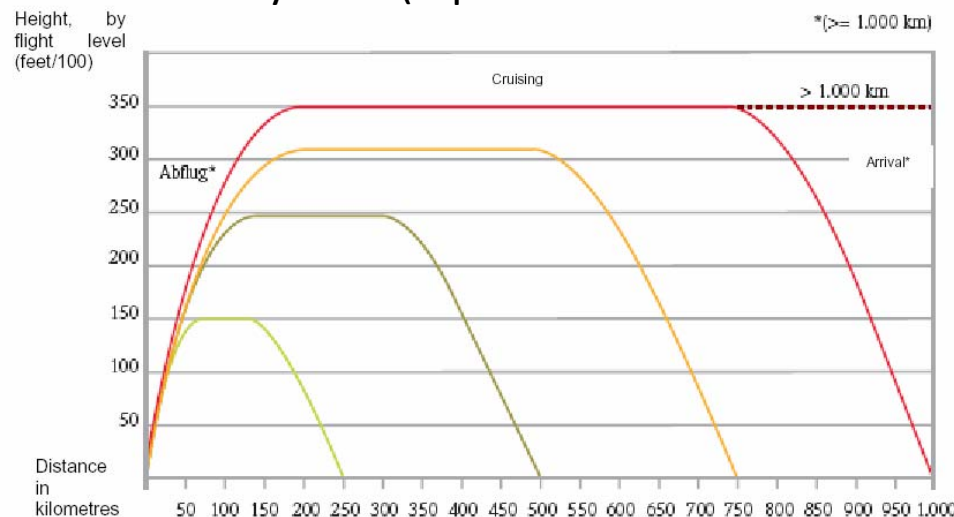


Index – Development of the CO₂ Emissions in EU-27 (1990=100)



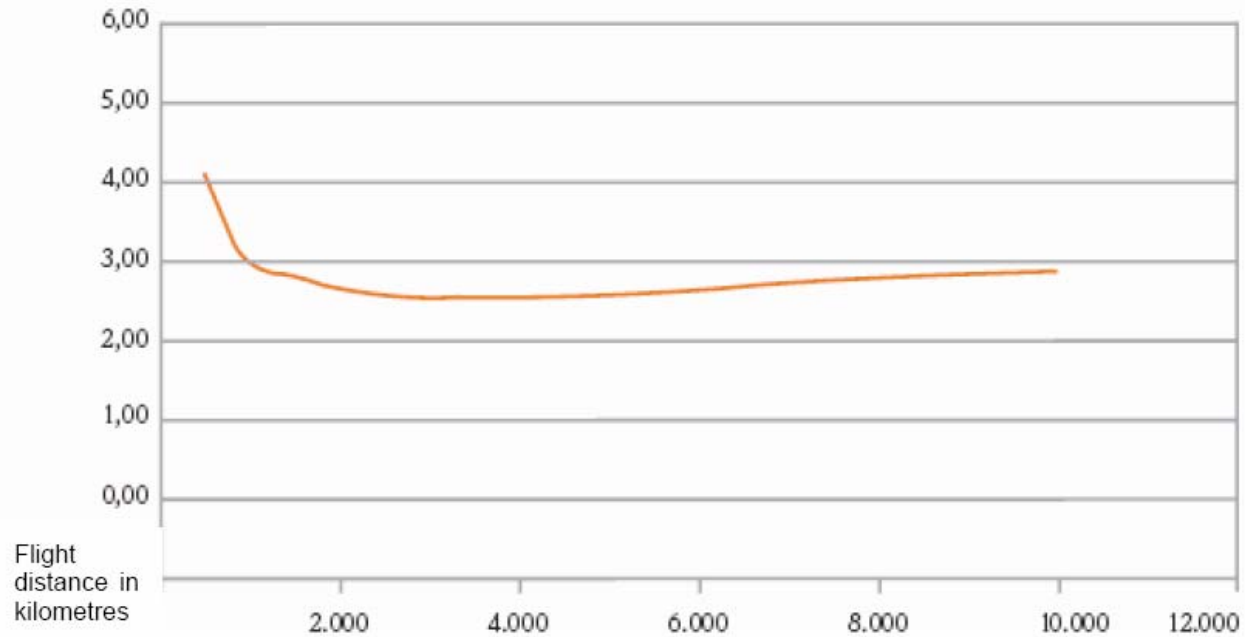
atmosfair flight emission calculator

- Calculation of the distance of a flight as a “great circle distance” (shortest distance between two points on the earth)
- Addition of surcharges for detours, holding patterns etc.
- Calculation of specific fuel consumption per pkm as a function of distance (dependence of consumption on the climb, cruise and descent phases of a particular aircraft type)
- Consideration of factors like service class (seating), occupancy rate, etc.
- considering the Radiative Forcing Index recommended by IPCC (equivalent climate impact of non-CO2 emissions)
- Independent data sources (DLR, QinetiQ)
- 42 Jets, Turboprops and Bizjets
- Verified by:



Fuel Consumption

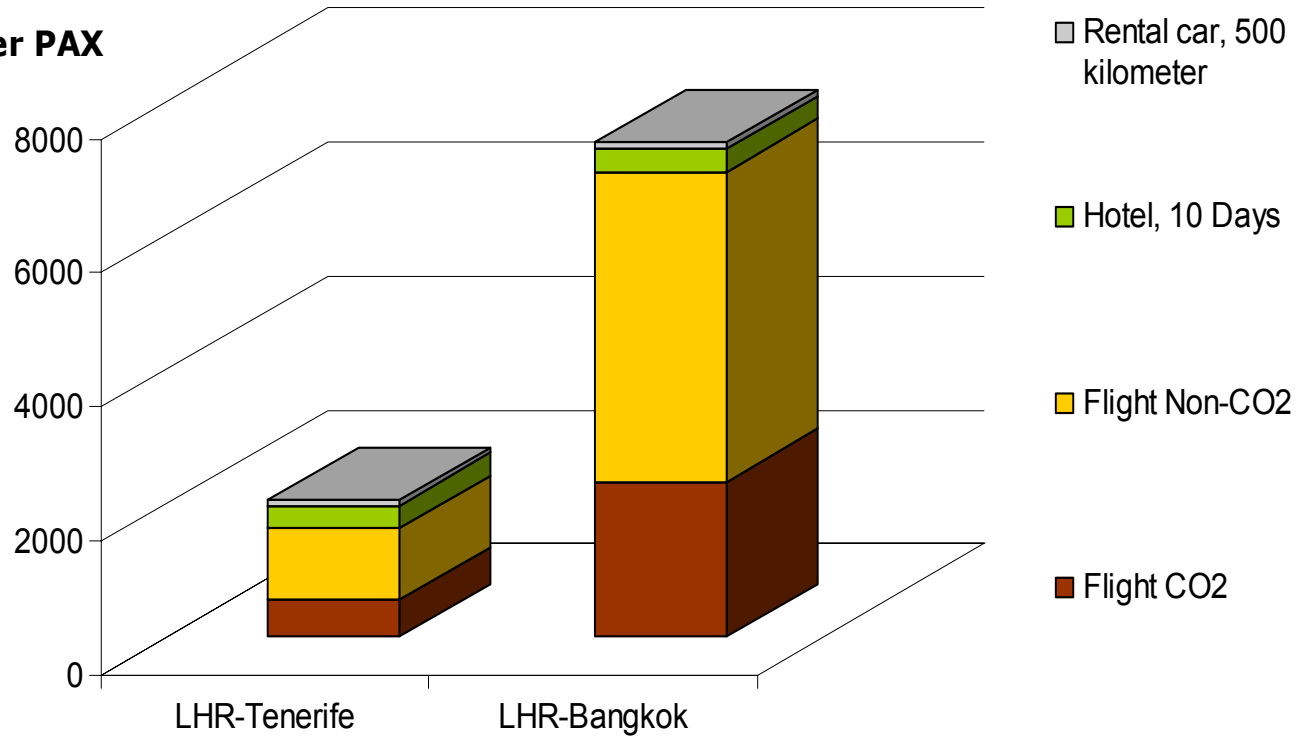
Consumption in litres kerosene per passenger per 100 km



Fuel Consumption of a full Airbus A340 with 271 seats as a function of flight distance.
Source: DLR (2000)

Climate footprint of two roundtrips

Kg CO₂ per PAX



Outline presentation

1. Company Profile atmosfair
2. Climate Impact of Aviation
- 3. Voluntary Offsetting in Aviation**
4. Inclusion of Aviation in EU ETS in 2012

ENDS Guide to Carbon Offsets 2008

- ENDS Guide: to help organisations to develop credible offsetting programmes and choose good-quality offsets and offset providers
- Published by Environmental Data Services (ENDS) / Haymarket Business Media Ltd.
- ENDS has identified over 170 provider worldwide (including project developer, wholesalers, traders, brokers, retailers)
- selection of the top 30 providers based on ENDS criteria

ENDS Guide to Carbon Offsets 2008

Criteria for Selection the top 30

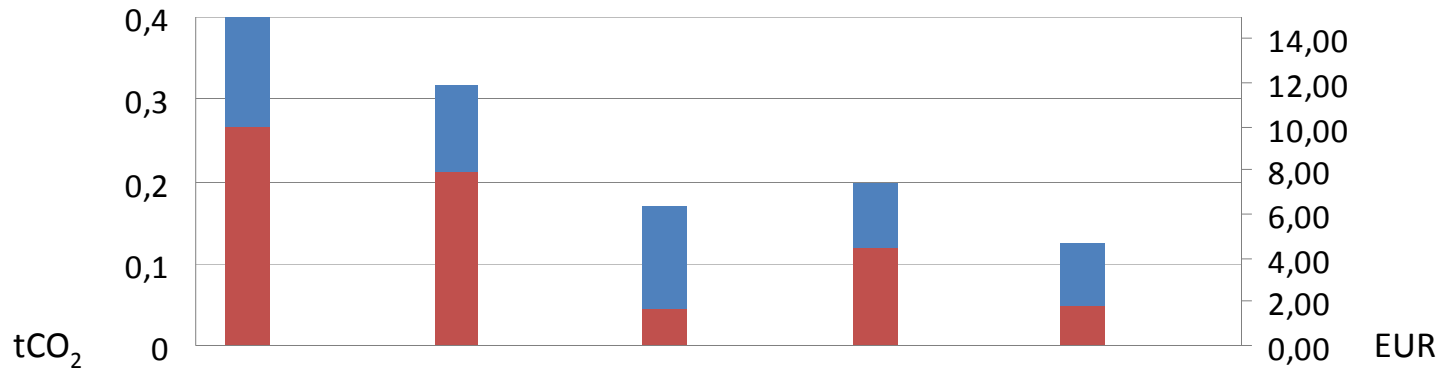
- Quality of offset portfolios according ENDS „Quality scoring system“
 - Carbon Quality:
 - Credit types (CERs and ERUs)
 - Additional Standards (GS)
 - Project Types (Renewable Energy)
 - Sustainable Quality:
 - Additional Standards (GS, Plan Vivo)
 - Project Types (Community Energy and Energy Efficiency)
- Portfolio timeline: delivered credits or delivered within three years
- Choice of offsets: enabling buyers to select higher quality credits
- Transparency: information about projects, offset credits, prices, management
- Additional Services: Advice on Carbon measurement, Carbon Reduction
- Website Quality: ease of use, clarity, functionality

ENDS Guide to Carbon Offsets 2008 – TOP 30

- 3C Carbon
- Action Carbone
- **atmosfair**
- Camco
- Cantor CO2e
- Carbon Aided
- Carbon Capital Markets
- Carbon Clear
- Climact
- Climate care
- Climate Partner
- CO2Logic
- EcoInvest Carbon
- EcoSecurities
- Evolution Markets
- MGM International
- **MyClimate**
- **Offset the Rest**
- OneCarbon
- Pure
- REEEP
- Sindicatum Carbon Capital
- South Pole Carbon
- South South North
- The Carbon Neutral Company
- The Climate Neutral Group
- Tricorona Green
- Tradition Financial Services
- Vertis Environmental Finance
- Zero GHG

Provider Comparison – Berlin Barcelona

Berlin-Barcelona



CO2 (t)	0,4	0,317	0,17	0,2	0,124
Price (Euro)	10,00	7,90	1,65	4,40	1,80

atmosfair

my climate

climate care

carbon neutral

Easy Jet

CO2 (t)
Price (Euro)

Outline presentation

1. Company Profile atmosfair
2. Climate Impact of Aviation
3. Voluntary Offsetting in Aviation
4. Inclusion of Aviation in EU ETS in 2012

Inclusion of the aviation sector in the ETS

- starting date: 1 Jan. 2012
- cap on CO₂ emissions for all planes arriving at or departing from EU airports
- Historical aviation emissions: average greenhouse gases emitted in 2004-2006
- total Aviation Allowance (AA) to be allocated: 97% for 2012 and 95% for 2013 until 2020.
- Free Allocations = Total AA – Auctioning AA (15%) - Special Reserve (3%)
Special Reserve: for operators starting after 2010 or operators with an increase of tonne-km of more than 18% annually
- each aircraft operator is assigned to one Administering EU Member State

Thank you very much for your attention!

think • go climate conscious
atmosfair



atmosfair gGmbH
Zossener Str. 55-58, D-10961 Berlin
Tel.: +49-30-6273550-0, Fax.: +49-30-6273550-29
www.atmosfair.org