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Press Release

UNFCCC Climate Change Conference 2017 in Bonn: atmosfair presents the climate ranking of the world's largest airlines

Global warming and air travel

- **Only 1% of aircraft worldwide highly fuel-efficient**
- **Aviation not on track to reach the 2°C target**
- **Chinese Airlines perform ok, American Airlines rather weak**

Berlin, 11.11.2017: Airlines are only modernizing their fleets at a slow pace. Even the best airline fleets emit on average 20% more carbon dioxide per kilometer than the most fuel-efficient planes, for example, the Airbus A350-900 or Boeing 787-9, operating at full capacity. In contrast, airline fleets with only a medium level of carbon efficiency in technology and operation even release twice as many carbon emissions per kilometer than the most fuel-efficient aircraft. Only one in a hundred planes belongs to this class of highly efficient aircraft. These are findings of the new atmosfair Airline Index (AAI) 2017, presented today in Bonn at the UN climate conference COP 23.

Global carbon emissions of airlines increased by a good 4%, while the kilometers flown have increased by almost 7%. There is no sign yet again this year of the necessary decoupling of growth in air traffic and carbon emissions. "Our findings show that aviation worldwide is not on track to meet the 1.5 degree or the 2 degree target for global warming", says Dietrich Brockhagen, CEO of atmosfair. "While some airlines have significantly improved their carbon efficiency by purchasing new aircraft, the pace of modernization is not fast enough from a global standpoint."

New aircraft models improve fleet efficiency

The AAI shows that even on fuel-intensive, long-haul routes, aircraft models like the Boeing 787-9 or the Airbus A350-900 can achieve values of less than 3.5 liters of kerosene per 100 passenger kilometers. The equivalent for short-haul routes is the A319 which has been equipped with sharklets.

These new aircraft models considerably raise the bar in terms of carbon efficiency. Airlines that have not updated their fleets or have only made slight improvements have lost ground in the current AAI ranking. As these new aircraft models do not comprise the majority of any fleet, not a single airline reached efficiency class A, and only three airlines met the criteria for efficiency class B (previous year: 10).

European and Chinese Airlines perform well, LATAM best international net carrier, American Airlines weak

A charter airline, **TUI Airways** (formerly Thomson Airways), has once again taken the top spot in atmosfair's ranking, reaching 80% of the technically achievable optimum. Its German counterpart **TUIFly** ranked third, having been among the front-runners in atmosfair's ranking for the last five years.

China West Air came in second in the overall ranking. The regional Chinese airline thus maintained its position among the most efficient airlines for the second year in a row (78.6 out of 100 efficiency points). **The world's top 50 most efficient airlines included 16 airlines from Europe and 10 from China**.

Among the **international net carriers**, **Chilean Brazilian LATAM** is ranked No. 1 with a modern fleet and high rate of occupancy (ranked 11, class B). Within the EU this is followed by the Dutch airline KLM (ranked 13, class B) and the Portuguese airline TAP (ranked 33, class C).

From the **American Airlines,** only three make it into the top 50 most climate efficient airlines of the world. Alaska Airlines is the best American Net Carrier (No. 14, efficiency class C), followed by Delta Airlines and United Airlines, which share 41th place in the ranking (efficiency class D). As for American Airlines, the biggest airline in the world, it is ranked No. 66. Its fleet consists mostly of efficient aircraft (e.g. A320, B737-800, B777) and partly of inefficient aircraft (e.g. MD-80). American Airlines still gets points due to high occupancy on middle-haul flights but loses points due to only average occupancy on long-term flights.

Germany´s biggest airline **Lufthansa** improved relative to its competitors, coming in 65th in the overall ranking (efficiency class D). Lufthansa improved its efficiency from the previous years by increasing its occupancy rates and modernizing its fleet. The fleet overall has slightly less than average seating which means its potential efficiency has not been totally exploited. Lufthansa is using fewer and fewer inefficient aircraft models on short and medium-haul routes (including B737-300/500).

Differences among airlines can be substantial. Fuel consumption per passenger and kilometer can be twice as high for one airline than for another on the same route. The best results are achieved by airlines that use modern aircraft ideally suited to the flight distance, have dense seating and good occupancy rates for passengers and cargo.

Low cost carriers are ranked in the AAI in a separate class. The reason: they often benefit from subsidies that allow them to offer artificially low ticket prices. This results in flight kilometers and therefore carbon emissions that otherwise would not have been produced. The best low cost carriers are also found in efficiency class B, but the majority ended up in efficiency class C and some even in D.

Structure, data, and method
The Atmosfair Airline Index (AAI) individually compares greenhouse gas emissions of more than 200 of the largest airlines in the world and evaluates their carbon efficiency. Overall, the AAI captures about 92% of worldwide air traffic which includes 33 million flights around the globe. The current calculations are based on the latest available data on worldwide aviation from 2015.

In the AAI, every airline can score between 0 and 100 efficiency points, broken down into short, medium, and long flight distances. This allows passengers to compare airlines when planning a flight and choose the airline with the lowest carbon emissions on their desired route. This is particularly interesting for companies with many business trips which, in the best case, not only reduce their carbon footprint, but also their costs.

The AAI is based on the carbon emissions of an airline per kilometer and passenger on all routes flown. The carbon emissions are calculated using the aircraft type, engines, use of winglets (aerodynamic wingtips), seating and freight capacity as well as the occupancy on every single flight. The data sources only include international organizations such as ICAO and IATA and a number of specialized data services of the aviation industry as well as computer models by aircraft engineers.

International agreements
Compliance with the 2015 Paris Agreement to achieve the 1.5°C target requires that global carbon emissions reach their peak before 2020 and then begin to decrease. Air traffic is not directly regulated in the Paris agreement, while the new 2016 Montreal climate agreement of the International Civil Aviation Organization (ICAO) only takes effect gradually as of 2021.

More information can be found at: www.atmosfair.de/atmosfair_airline_index

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