



ICAO

ENVIRONMENT



ICAO Workshop on State Action Plans on CO₂ reduction activities

Tracking of Aviation Emissions & Fuel Efficiency Improvements/ Market Based Measures

Michael Schneider

AD Carbon Offset Business Development





- ↗ 2.6 billion passengers
- ↗ 43 million tonnes freight
- ↗ 33 million jobs
- ↗ 3.5 trillion \$\$ contribution to GDP
- ↗ Major driver of trade and tourism
- ↗ ~2% of global man-made CO₂ emissions

**Aviation is a key driver
of socio-economic
development**





Environmental responsibility

GROWTH LICENCE



This licence permits the growth of aviation in a responsible and sustainable manner, for the benefit of the global economy and citizens around the world.

NAME: GLOBAL AVIATION

D.O.B: 1-JAN-1914

L#: BZ975160

VALID: 31-DEC-2050

LT: 3, B, Z, ✈️, 🌍, 💡

AUTH: ICAO, YUL

SIG:

Wilbur Wright



What are we doing about it?

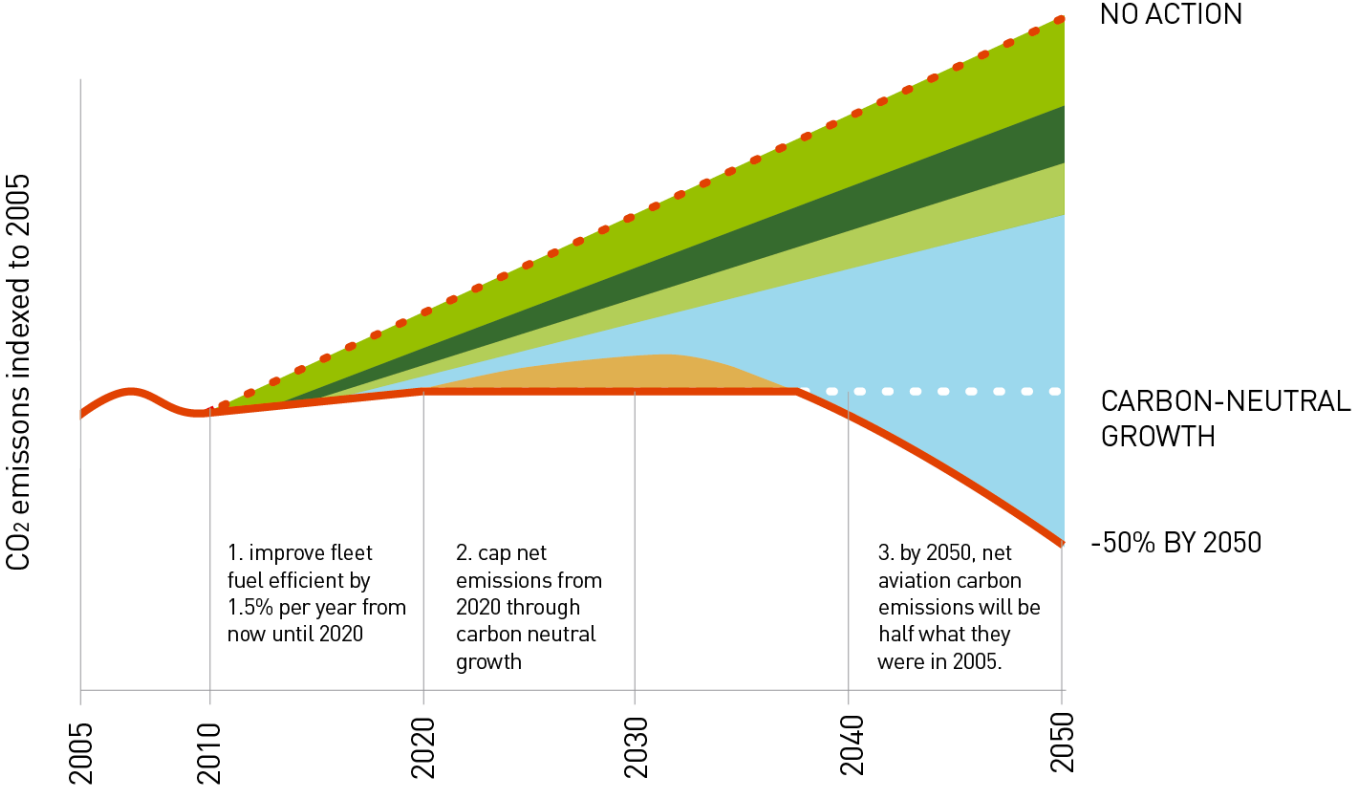
➤ We set targets



➤ We implement solutions



OUR CLIMATE ACTION



Known technology, operations and infrastructure measures

Biofuels and additional new-generation technologies

Economic measures

Net emissions trajectory

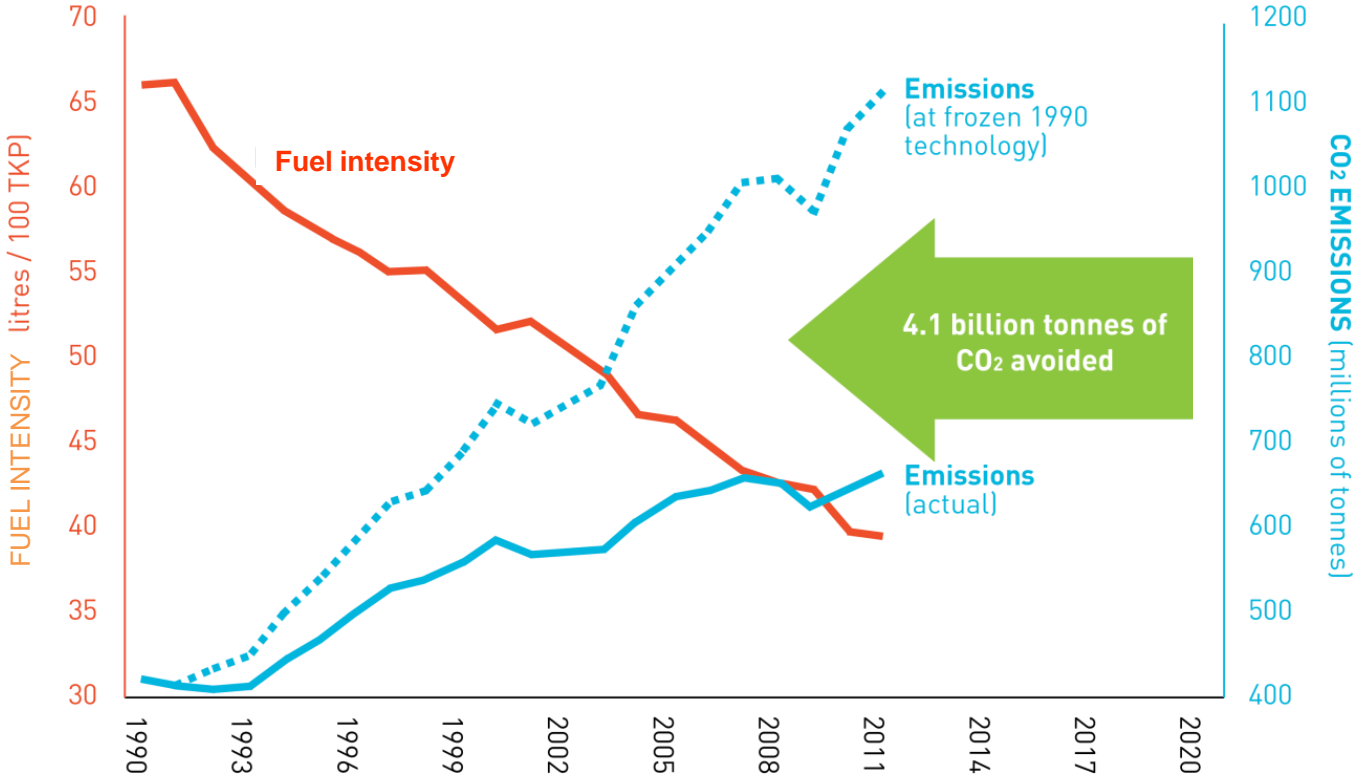
'No actions' trajectory

Aviation emissions

689 million
tonnes of CO₂ from air
travel in 2012

2%
of world CO₂
emissions

70%+
more efficient than
first jet aircraft



How to Track Industry Efficiency Improvements?

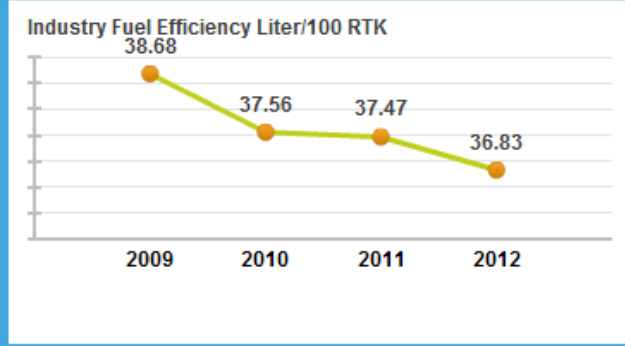
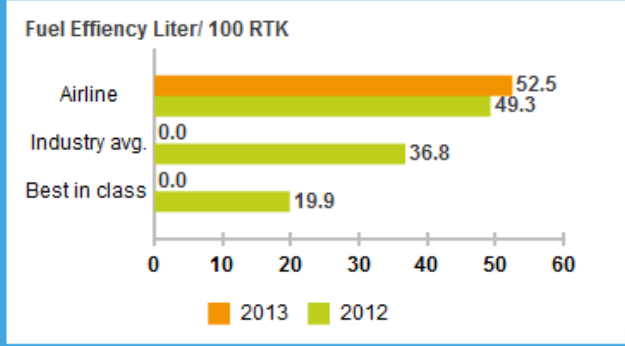
- Reporting of fuel consumption has been made mandatory
- Quality of data?
- Guidance?
- Common protocol that ensures fuel data monitoring and recording is harmonized across the industry?
- Current fuel information systems vary between airline operators.
- Operating differences, some airlines more sophisticated than others.



Steps to Address the Challenge

- FRED was launched in Feb 2013
- Online reporting tool
- Functionalities:
 - Efficiency performance dashboard
 - Fuel measurement protocol - step by step tutorial
 - Fuel measurement methods (addressing airline capabilities)
 - Definitions & support functions
- Strong incentive to report data due to:
 - Blind ranking efficiency benchmark report
 - CO2 emissions reports
 - Airline efficiency Ltr/100 RTK
- IATA airline participation = 90% in 2013

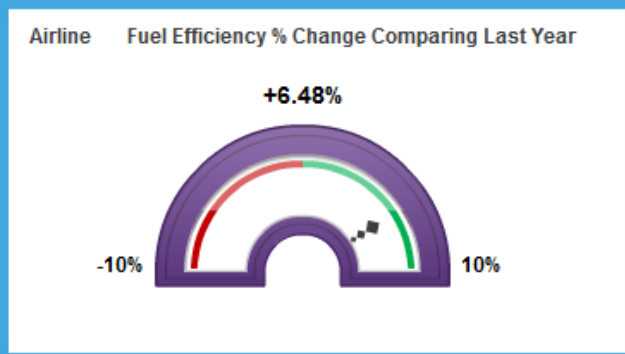
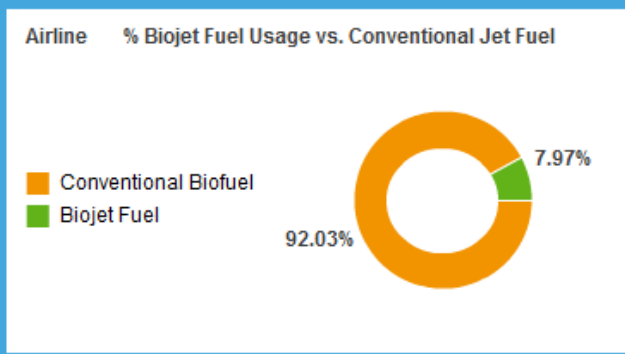




Fuel Data Submission form

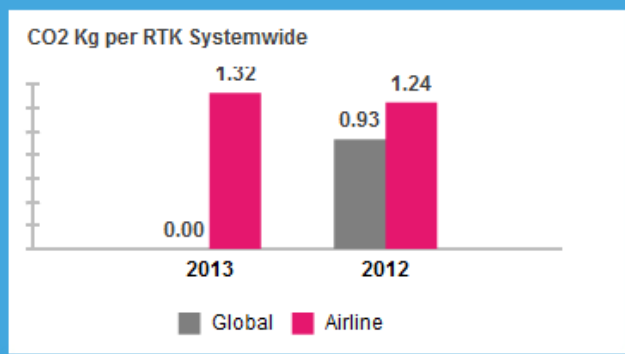
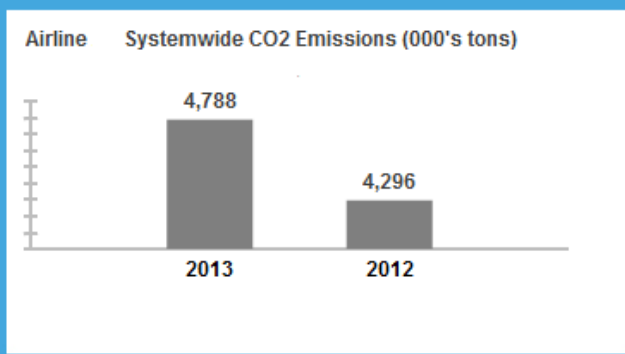
Submit data

How to Measure & Report Fuel



Fuel Definition

Fuel Measurement Methods



My Efficiency Ranking & CO2 Reports!



A Global MBM for Aviation



- **Industry believes that a Global MBM under ICAO is the best way to close aviation’s “emissions gap”**

- **To be effective, the Global MBM must:**
 - Ensure environmental integrity
 - Minimise market and competitive distortion
 - Be administratively simple – especially for small operators
 - Be easy to implement for all States by 2020

- **Industry offsets mechanisms must also be recognized to reach post-2020 targets**



Carbon Offsetting: Aviation


- Passengers (individuals and corporations) offset their share of a flight's emissions by investing in carbon reduction projects that generate carbon credits
- Voluntary offset market is worth more than US \$400 million
- No information-sharing between airlines and offset providers, difficult to determine the “real balance” of aviation's emissions.
- More than 30 IATA airlines have launched their own schemes using different carbon calculators and investing in emission reductions
- Voluntary offset programs operating with varying degree of success



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IATA Carbon Offset Program: TAP Screen Shots (1)



TAP PORTUGAL
A STAR ALLIANCE MEMBER



Book your flight online

DEUTSCH DUTCH **ENGLISH** ESPAÑOL FRANÇAIS ITALIANO PORTUGUÊS

 SEARCH
 SELECT
 PURCHASE
 CONFIRMATION

Itinerary Review

Please review your flight details carefully. Intermediate stops and other important information will be shown if applicable.

Flight	Product	From	To	Departure	Arrival	Cabin	Miles
TP0424 		Lisbon	Paris (CDG)	10 Jun, 07h20	10 Jun, 10h55	Economy	458

Departure from Lisbon on Terminal 1. Arrival at Paris on Terminal 1.

AIRPORT CODES:

CDG - Charles de Gaulle

Please check your flight details at left.

[Know all about TAP Products](#)

Offset your Carbon Emissions


Please be aware that your carbon offset contribution isn't mandatory and can not be refunded once it is paid. TAP does not benefit from this Programme.

Total Distance for this itinerary (km): 1471
CO2 emission for this itinerary (tonnes): 0.189

Total offset cost 2,59 EUR per person

Which Project am I helping?

Add the contribution amount to my flights




Help the Environment and reduce the impact from your flights by offsetting your carbon emissions. Your money will be donated to U.N. certified emission reduction projects.









IATA Carbon Offset Program: TAP Screen Shot (2)



TAP PORTUGAL
A STAR ALLIANCE MEMBER

Book your flight online



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 SEARCH
 SELECT
 **PURCHASE**
 CONFIRMATION

Itinerary R

Please review your flight


Flight **Pr**

TP0424  

Departure from Lisbon


Aquarius Hydroelectric Project

The Aquarius Hydroelectric Project is a small-scale, renewable energy project in Brazil. The project is a grid connected run-of-river hydropower plant (with no dam or flooding) at Itiquira, Mato Grosso State, Brazil and is registered under the United Nations Framework Convention on Climate Change (UNFCCC) Clean Development Mechanism (CDM). The project has an installed capacity of 4.2 MW and utilises the water of the Correntes river. It partly replaces fossil fuel-based electricity generation and is expected to reduce greenhouse gas (GHG) emissions by approximately 15,000 tonnes CO2 equivalent per year. The independent verification report confirmed that, in the period between 15 December 2006 and 31 December 2007, the project reduced emissions by 19,024 tonnes CO2 equivalent.

Close 

AIRPORT CODES:
CDG - Charles de Gaulle

Please check your flight details at left.

 [Know all about TAP Products](#)

Offset you

Please be aware that you are participating in the Carbon Offset Programme.

Total Distance for this flight is 458 Miles


CO2 emission for this flight is 13.5 kg

Total offset cost 2,51€

Which Project am I helping?

Add the contribution amount to my flights

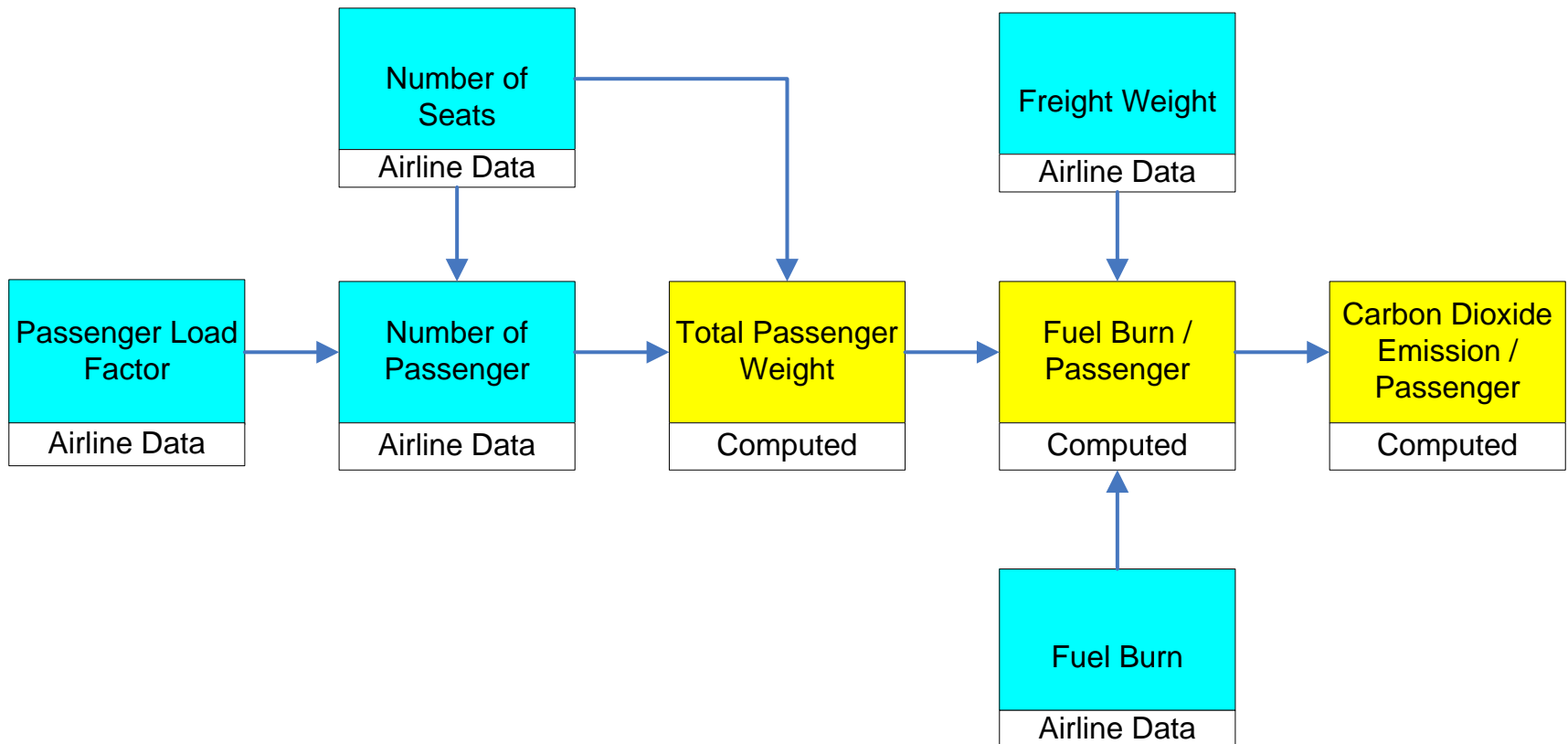
on this



Help the Environment and reduce the impact from your flights by offsetting your carbon emissions. Your money will be donated to U.N. certified emission reduction projects.



IATA's Carbon Calculator Tool



Carbon Offset Projects/Carbon Credits

- Wide choice of offset projects available
- Criteria for Project Selection
 - Price
 - Availability
 - Robustness
 - Compatibility with carbon requirements under a future global mechanism
- Best Practices for Offset Project Selection
 - Use of high quality carbon credits
 - **CERs - CDM projects under Kyoto Protocol**
 - **VERs - Gold Standard, VCS+**
 - Non controversial renewable projects, exclusion of HFC, large dam, flaring , nuclear etc.
 - No mark-up, profits or premium on carbon credits.



ICAO Resolution 38-18, October 2013

“...voluntary carbon offsetting schemes constitute a practical way to offset CO₂ emissions, and invites States to encourage their operators wishing to take early actions to use carbon offsetting, particularly through the use of credits generated from internationally recognized schemes such as the CDM.”



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2 April 2014





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Thank you for your attention

