A Global Framework for Sustainable Aviation

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Aviation is a key driver of social & economic development
2.2 Billion Passengers
32 Million Jobs
8% of Global GDP (US$ 3.5 Trillion)
2% of Global Man-made CO2 emissions
Major driver of tourism and trade
Aviation emissions challenge

CO₂ emissions from the global fuel burn of commercial airlines

2007: 671mT

Pre-recession ICAO forecast
Post-recession IATA forecast

2005 Level
Industry strong track-record

CO₂ from commercial airline fuel burn, traffic and fuel efficiency

Fuel efficiency

CO₂

Emissions at frozen 1990 Technology

3.3 Billion Tonnes of CO₂ Saved

Actual Emissions

3.3 Billion Tonnes of CO₂ Saved
Industry targets

2010

1.5% p/a fuel efficiency
Working towards CNG

2020

CNG from 2020
Implementation of global sectoral approach

2050

50% reduction in net CO2 emissions over 2005 levels
Industry is united behind these targets
Aviation is facing the challenge

Four-Pillar Strategy

- Invest in new technology
- Fly more efficiently
- Build & use efficient infrastructure
- Use effective economic measures
Emissions reduction roadmap

- No action
- Business as usual emissions
- Gross emissions trajectory

CO₂ emissions

-50% by 2050

(schematic)
Emissions reduction roadmap

- **Business as usual emissions**
- Known technology, operations and infrastructure measures
- Carbon-neutral growth 2020
- Gross emissions trajectory

**CO₂ emissions**

- 2005
- 2010
- 2020
- 2030
- 2040
- 2050

- **No action**
- **Tech Ops Infra**
- **CNG 2020**
- **-50% by 2050**

*(schematic)*
Emissions reduction roadmap

- **Business as usual emissions**
- **Known technology, operations and infrastructure measures**
- **Biofuels and additional technology**
- **Carbon-neutral growth 2020**
- **Gross emissions trajectory**
- **Economic measures**

**CO₂ emissions**

- **No action**
- **CNG 2020**
- **-50% by 2050**

**Schematic**
Industry 1.5% efficiency target

2.2 Billion Tonnes of additional cuts required by 2020 to make -1.5% pa efficiency target
Industry +1.5% efficiency target

12,000 new aircraft to buy at cost of $1.3 trillion

New aircraft deliveries

Scheduled delivery of new jet aircraft

New aircraft required for 'normal replacement' and forecast growth

Number of aircraft

Industry can’t do it alone
Governments must do their part

Investments in ATM improvements

  e.g. NextGen, SESAR

Increased R&D funding in technology
Governments must do their part

Promote aviation biofuels
R&D funding
Pilot projects
Fiscal & investment incentives
Transport & Energy policy
Increased R&D funding
Aviation needs global solutions
Need a global facilitating framework..........

Positive market-based measures
R&T investments
Investment incentives
Aviation access to global carbon markets
Access to CDM mechanisms
Fleet replacement
Biofuels development
....based on sound principles

- Emissions accounted for at global level
- Emissions addressed through combination of technology, operations, infrastructure and economic measures
- Emissions accounted for once
- Open architecture – access to global carbon markets /mechanisms
- Eventual revenues prioritised for reinvestment in aviation carbon reduction
- Differing needs of states taken into account
- Level playing field for operators between markets
ICAO has a major opportunity to take ambitious action at the 37th Assembly
...but ICAO is made up of states
...bridges must be built

Available measures:
- De minimis rules
- Technology transfer
- Technical support
- Financial support
- Implementation frameworks

CBDR
Failure at ICAO will lead to governments taking fragmented decisions
which could question the orderly growth of civil aviation
Governments and industry must work together through ICAO ……

Targets
+
4 Pillar Strategy
+
Global Framework
...to assure a sound sustainable future for aviation.