Emissions Trade, Trade and 'Trade Wars': the example of Market Based Measures to reduce aviation emissions

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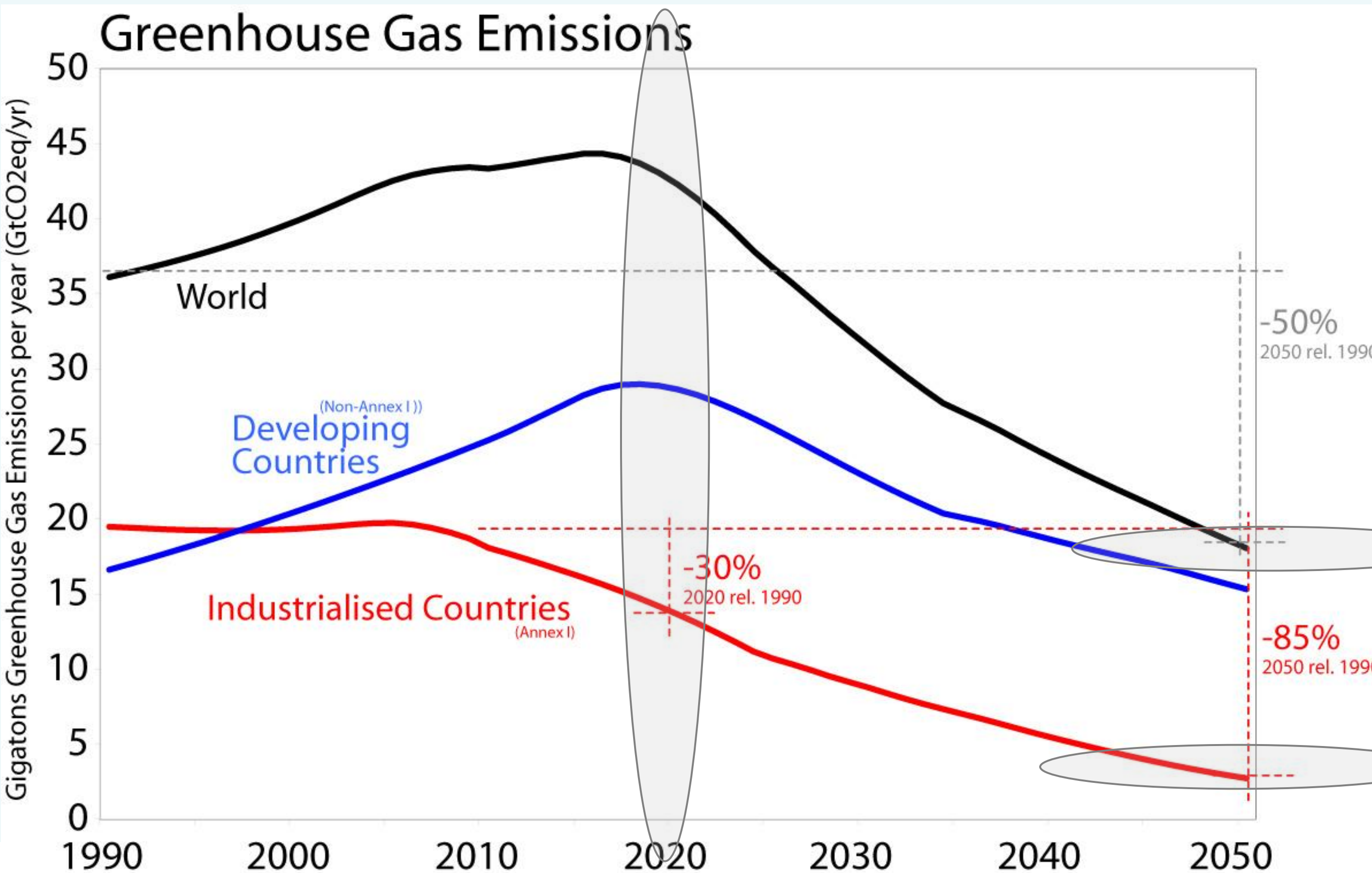
Greenhouse gas emissions reductions – what scientific evidence indicates is needed



Global -50% below 1990 by 2050

Developed countries 80-95% below 1990 by 2050

Global peak for all emissions by 2020

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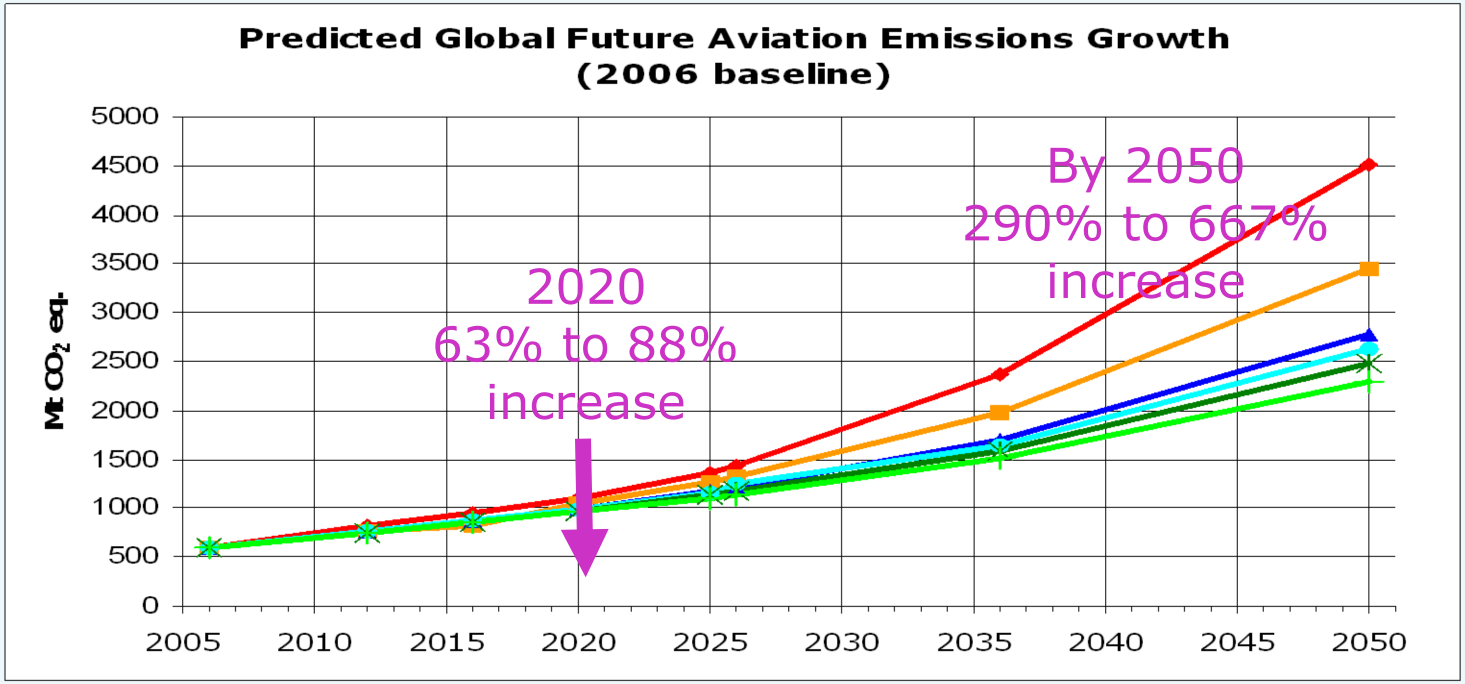
To be compared with growth forecasts for aviation emissions



- Source ICAO

- 3.5 Gt is almost 20% of the 18 Gt to which global emissions need to be limited in 2050 to contain climate change to 2^{o}C

Ways to reduce emissions

- Command and control (e.g. technology requirements)
- New Standards e.g. new aircraft CO_2 standard
- Product labelling, information campaigns, targets
- Demand-side management/ Action by individuals
- Market-based mechanisms:
  - Taxes
  - Charges
  - Subsidies
  - Emissions Trading Systems
- The more cost-effective the instrument, the greater the reductions that can be made for the same cost
- ATM Modernisation, Single European Sky, SESAR Joint Undertaking, Research and Development of New Technology, Clean Sky Joint Technology Initiative (€1.6 bn over 7 years), Sustainable alternative fuels

Why market-based measures are appropriate for aviation

- All sectors should contribute to emission reductions
- Market-based measures make sense:

  "*You have to put a price on carbon… the key is to change incentives for the market place… if a price is placed on them, if industry has to take them into account then we can count on the market place responding effectively. If it's free to pollute then you're never going to have a, companies making all the myriad decisions that are required in order for the entire system to move in a better direction… What you have to do is have a market mechanism to make it work more efficiently.*"

  – US President, April 2010

- Emission trading/ offsetting has clear benefits:
  - Achieves least cost emissions reductions
  - Predictability and guaranteed environmental outcome
  - Flexibility for business: to reduce, to acquire reductions from CDM, to acquire reductions from other sectors, and auctions

Background to aviation's inclusion in EU ETS

- ICAO discussions on market-based measures since 1991 and emissions trading since 1998
- 2001 ICAO Assembly endorsed the development of open emissions trading for international aviation: open systems involve aviation buying allowances from other sectors if cost effective
- U.S. economy-wide climate bills from McCain-Lieberman through to Waxman-Markey would have covered international aviation through upstream regulation
- 2004 Assembly decided not to establish new global legal instrument under ICAO, and endorsed the incorporation of international aviation into States' existing emissions trading schemes

- Extensive EU consultation process in 2004/05
- If there is regulation, business prefers it to other regulations: "*Extending the EU ETS to cover aviation is probably the least-cost and most effective way to reduce aviation's climate impacts in Europe*" – IATA, September 2006
- EU legislative proposal made in 2006 and agreed in 2008
- 2007 ICAO Assembly Resolution opposed application of ETS without "mutual consent" with a formal reservation on this point entered by 42 European states who considered non-discrimination to be the key principle

Scope of aviation's inclusion in the EU ETS

- Aviation activities in the EU market on basis of arrival/departure from airports, without discrimination on the basis of nationality:
  - Flights between EU airports (N.B. including Fedex, UPS, Emirates, Air China, Singapore airlines…)
  - Flights departing from EU airports
  - Flights arriving at EU airports, subject to exclusion on the basis of 'optimal interaction' - non-discriminatory application i.e. applies equally to incoming flights by European and non-European aircraft operators
- European Court of Justice ruling in 2011 confirmed legislation is compatible with international law
- Flexibility also foreseen in legislation, in the event of an international agreement on global measures to address aviation's GHG emissions, for the system to be reviewed and amended accordingly

98 ICAO States have no commercial carriers covered by the EU ETS

Afghanistan	*Chile*	Gambia	Malawi	Papua New Guinea	*Suriname*
Andorra	Comoros	Ghana	Maldives	Paraguay	*Tajikistan*
Antigua and Barbuda	*Congo*	Grenada	*Mali*	Peru	Timor-Leste
Bahamas	Cook Islands	Guatemala	Marshall Islands	*Philippines*	*Togo*
Barbados	Costa Rica	Guinea-Bissau	Mauritania	Rwanda	Tonga
Bangladesh	*Cuba*	Guinea	Micronesia (Federated States of)	Saint Kitts and Nevis	*Trinidad and Tobago*
Belize	*Côte d'Ivoire*	Guyana	Monaco	Saint Lucia	Uganda
Benin	Democratic People's Republic of Korea	Haiti	*Mongolia*	Saint Vincent and the Grenadines	*United Republic of Tanzania*
Bhutan	Democratic Republic of the Congo	Honduras	*Mozambique*	Samoa	Uruguay
Bolivia	Djibouti	Iraq	Myanmar	San Marino	Vanuatu
Botswana	Dominican Republic	*Jamaica*	*Namibia*	Sao Tome and Principe	*Yemen*
Burkina Faso	Ecuador	Kiribati	Nauru	*Senegal*	*Zimbabwe*
Burundi	El Salvador	Kyrgyzstan	Nepal	Sierra Leone	Zambia
Cambodia	Equatorial Guinea	Lao People's Democratic Republic	Nicaragua	Solomon Islands	
Cameroon	*Eritrea*	Lesotho	Niger	Somalia	
Central African Republic	Fiji	Liberia	Palau	Swaziland	
Chad	Gabon	Madagascar	Panama	*Sudan*	

- 75 States have no commercial operator with flights to the EU; and
- 23 States have commercial aircraft operators which fall under the *de minimis* provisions in the EU ETS and are thus exempt from EU ETS (in italics).

Source: Eurocontrol

EU ETS's impacts on the cost of air travel

- Cap: A 5% static reduction below 2004-6 levels between 2013-2020
- 85% free allocation, 15% auctioning plus use of international credits foreseen
- Airlines treated equally, so competition between airlines will not be impacted

- LOW CASE: If only **actual cost** at current carbon prices are passed through, should be below €2 per passenger each way on a long-haul flight
- HIGH CASE: If **full value** of all allowances are passed through – as has been experienced e.g. the energy sector – this could go up to around €12 per passenger for the same flight
- If full pass through, then potential increase in airline revenue: *"Windfall gains from free allowances may be substantial" – MIT study (part funded by US FAA)*
- "*Large global network carriers with more fuel efficient fleets will be best placed… low cost and short haul airlines… will be the more adversely affected*" - Standard & Poors

- Compared to other policies:
  - Significant and justified costs for US and other countries' aviation security requirements
  - Passenger fees e.g.
    - US - $16.30 arrival, $16.30 departing, plus ESTA charges for non-citizens
    - India – 500 Rp ($10) departing, since 2010

Developments internationally and in ICAO

- 2010 ICAO Assembly adopted 15 guiding principles for the design for the design and implementation of market based measures by States, and:
  - recognition that some states may take more ambitious action prior to 2020
  - further consideration on feasibility of a global market based measure
  - undertaking further work to develop a framework for market-based measures in international aviation
- Concerns expressed by third country representatives about the EU ETS:
  - Meetings in Delhi, Moscow and Washington
  - Claims of retaliation mixed with support for progress in ICAO
  - Chinese administrative order, passage of Thune bill in U.S. Senate
- All stakeholders agree that ICAO is the appropriate forum to make progress
- ICAO Council has identified 3 options for global market-based measures for aviation emissions (offsetting, offsetting with revenue, emissions trading)
- Work is also underway on further developing a framework for market based measures (to be used by States)
  - An expert working group is defining and developing options for global market-based measures and the framework for MBMs relating to international aviation emissions
  - Next meeting of ICAO Council in early November
- EU is working bilaterally/multilaterally for progress in ICAO (agreement on a global measure, or interacting national and regional systems in the absence of such a global measure)

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