

# 7th Conference on the Regulation of Infrastructures

## *“EU ETS and CORSIA: rivalry or partnership”*



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# I. Introduction:

## 1.1. Aviation emissions: strong impact on climate

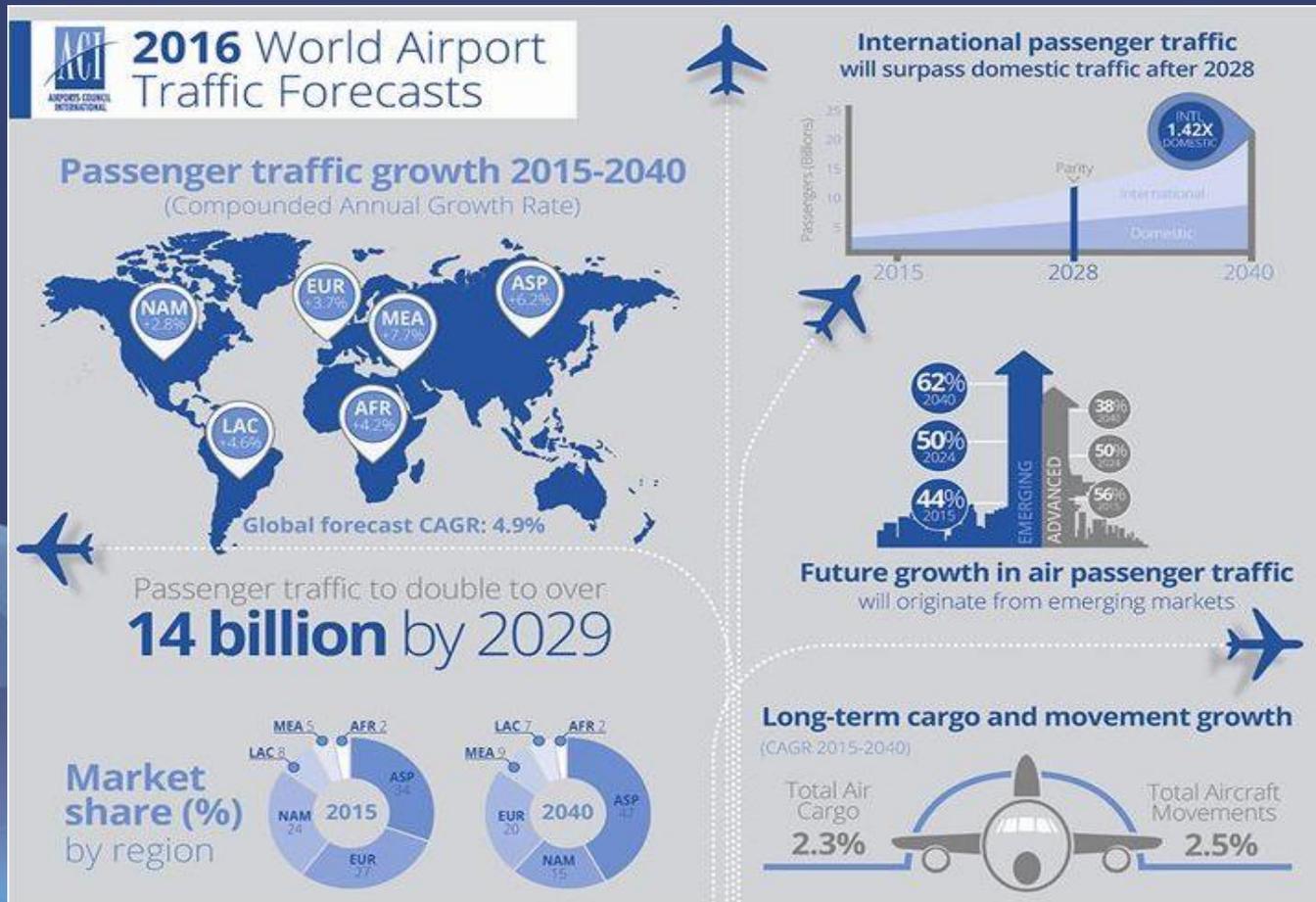


Source: Air traffic world chart, ICAO), 2016

- Since 1999, IPCC considered the GHG, suspended particles and aircraft induced clouds from aviation
- Aircraft induced clouds (persistent contrail and contrail cirrus) have special impact on climate (radiative forcing)
  - In the light of this, offsetting from other sectors is questionable

# 1.2. Air traffic: constantly increasing

According to ACI the forecasted annual air traffic growth: is up to 5.2% (from 7 billion passengers in 2015 to 14 billion in 2029)



Source: Airports Council International (ACI), World Airport Traffic Forecasts 2016-2040, (press release) ACI 2016. <http://www.aci.aero/News/Releases/Most-Recent/2016/09/26/ACI-has-released-the-World-Airport-Traffic-Forecasts-20162040-marking-the-beginning-of-the-ACINAWorld-Annual-General-Assembly-Conference-and-Exhibition>

# 1.3. Regulating aviation emissions

- Scenario (A): EU ETS

- Cap and Trade market

➔ Multisectoral

- » Operating from 2005
- » Aviation operating from 2012

- Aviation scope: regional flights, intended to influence abroad: (Dir 2003/87, Dir 2008/101)

- a) extended (international & regional flights (paralised until 2024)

- b) b) reduced European Economic Area (EEA) + next interconnection Switzerland



2012 all flights to/from EEA (**extended**)  
From 2013 until 2024 exemption to external flights (paralised and revision (**limited scope**))



Coexisting or overlapping?



Voluntary (2021-2026)  
Full applicable in 2027

- Scenario (B): CORSIA

- ICAO: multilateral market based measure (Res. A39-3)

- Offset scheme



International aviation

- » Pilot phase: 2021/2023
- » Phase I: 2024/2026
- » Phase II: 2027/2035



EU ETS: Initial development of an ambitious regional policy:

- Clear vocation for international expansion
- Unilateralism justified by the climatic threat.

Great expectations in market-based measures (MBMs)

CORSIA is not ambitious

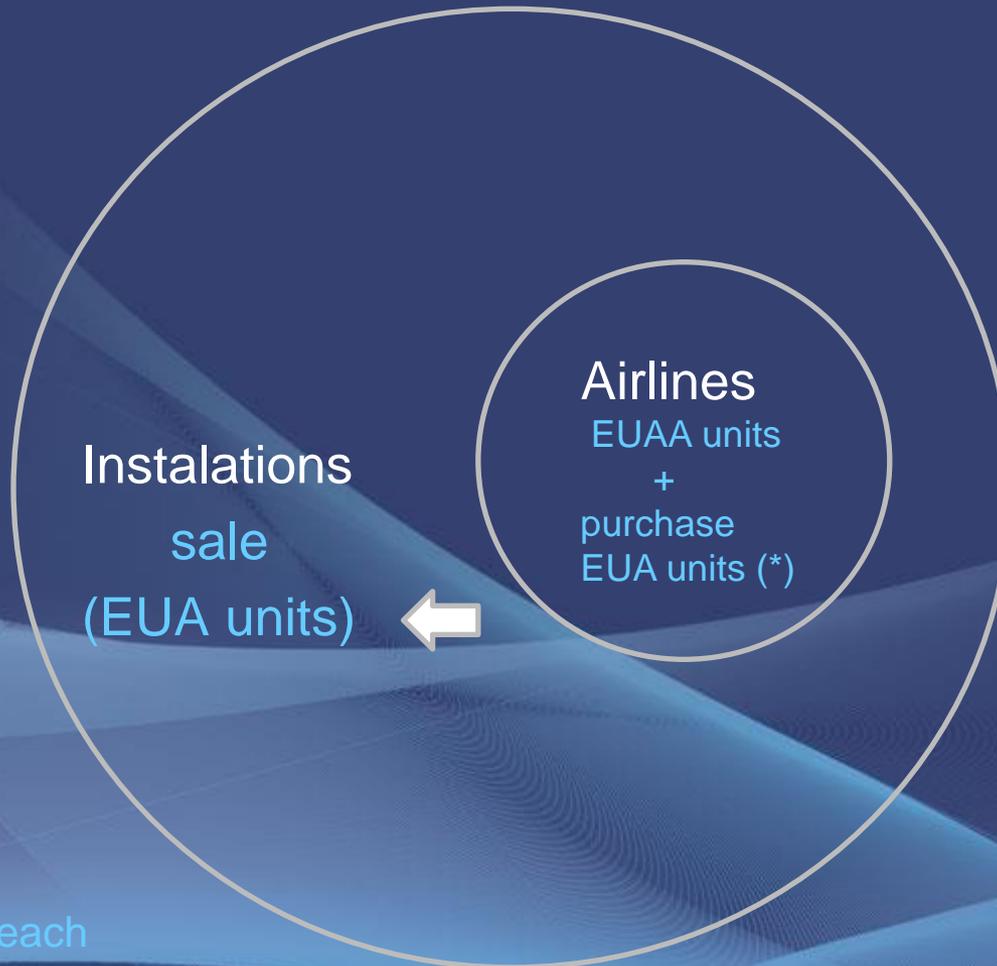
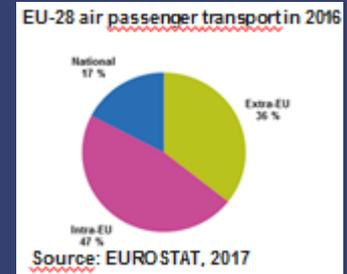
Need to adapt international air transport regulation to the current reality (Chicago Convention)

The EU ETS and CORSIA are insufficient, those might be complemented:

- technology and operational measures
- Others: substitutive infrastructures-train, taxes on consumers or fuel, eco-labeling, responsible investment

# II. The EU ETS Emissions Trading Scheme:

## 2.1. EU ETS (multisectoral)



### Objectives

- a) GHG reduction
- b) highest cost efficiency

### How?

the market must reach a price signal (incentive) to promote use of clean technologies by regulated sectors

(\*) Airlines have deficit in units

they purchase also EUAs and international units (CDM)

Point of criticism

Not measuring the stronger impact on climate than other sectors

## 2.2. EU ETS (aviation)



EU ETS and Switzerland linked markets ([Decision 2017/2240](#))

### I ) Since 2012 all flights to/from EEA (**extended scope**)

28 EU Member States +Iceland, Liechtenstein and Norway)



### II ) Temporal exemption to external flights outside the EEA (**limited scope**)

- Negotiating tactics within ICAO (pre-CORSIA)
- From “*Stop the clock*”: external flights exempted ([Decision 277/2013](#), [Regulation 421/2014](#) and [Regulation 2017/2392](#))

### III) **New roadmap since 2016, (CORSIA)**

- EU ETS scheme reduced scope until ending CORSIA pilot phase (2024)



1. Early to assess the effectiveness of the EU role in international fora
2. Reduced scope discriminates airlines flying to intra EEA airports (most European, but small effects with low EUAs prices)
3. The 1944 Chicago Convention may be considered obsolete (privileged tax treatment of aviation fuel)
4. No double counting (CORSIA and EU ETS): from CORSIA pilot phase in 2021 aircraft allowances should be revised (including Standards and Recommended Practices – SARPs)  
(See amended arts. 28b, 28c, 30 in Dir. 2003/87). Link [Regulation 2017/2392, of 13 December 2017 amending Directive 2003/87 to continue current limitations of scope for aviation activities and to prepare to implement a global market-based measure from 2021, OJEU L350/7](#)

# III. The CORSIA:

## 3.1. objective and development

\* The primary objective:

Stabilization of international aviation net CO2 emissions at 2020 levels among three phases

\* Developing CORSIA:

As of 11 January 2018: 73 States intend to voluntarily participate in the global MBM scheme from its outset (87.7% of international aviation activity)

1. CORSIA`s Schedule:

I. 2021-2023: Pilot Phase

II. 2024-2026: Phase I .....

III. 2027-2035. Phase II .....

2. Costs (IATA)

(By 2025: 2,2 - 6,2 billion USD

(By 2030: 4.3 - 12.4 billion USD

(By 2035: 8.9 - 23.9 billion USD

# III. The CORSIA:

## 3.2. costs

Table 1. Estimated costs at industry level:

Estimated total industry cost	2025		2030		2035	
	Low estimate	High estimate	Low estimate	High estimate	Low estimate	High estimate
CO <sub>2</sub> from international aviation	828 mio tCO <sub>2</sub>	879 mio tCO <sub>2</sub>	945 mio tCO <sub>2</sub>	1,048 mio tCO <sub>2</sub>	1,101 mio tCO <sub>2</sub>	1,270 mio tCO <sub>2</sub>
CO <sub>2</sub> to be offset	142 mio tCO <sub>2</sub>	174 mio tCO <sub>2</sub>	288 mio tCO <sub>2</sub>	376 mio tCO <sub>2</sub>	443 mio tCO <sub>2</sub>	596 mio tCO <sub>2</sub>
Total cost of offsetting	\$2.2 bn	\$6.2 bn	\$4.3 bn	\$12.4 bn	\$8.9 bn	\$23.9 bn



Source: ICAO, Working paper, Assdembly 39th Session, Comments on the cost impact of a global carbon offsetting mechanism, A39-WP/153 EX/57, 9/8/16. [https://www.icao.int/Meetings/a39/Documents/WP/wp\\_153\\_en.pdf](https://www.icao.int/Meetings/a39/Documents/WP/wp_153_en.pdf)

## 3.3. implementation: standards and recommended practices (SARPs) costs

3.1. ICAO CORSIA Implementing elements referenced in Annex 16, Volume IV (\*)

3.2. ICSA`s Recommendations on the ICAO “CORSIA Package” (\*\*).

- “CORSIA Reporting is not sufficiently transparent”
- “Only CORSIA Eligible Emissions Units can be used for compliance”
- “ICAO should refrain from crediting alternative aviation fuels (more robust sustainable criteria)”.

3.3. As suggested by ICSA, some EU Member States (have reacted against these weak environmental implementing policy: CORSIA measures are insufficient (\*\*\*)).

(\*) on November 2017, ICAO proposed a first document (Ref. AN 1/17.14 – 17/129). On December 5, ICAO`s member states were given the possibility of submitting their positions on the so called “CORSIA package” (Proposal for a First Edition of Annex 16, Volume IV, concerning Standards and Recommended Practices relating to the Carbon Offsetting and Reduction Scheme for International Aviation –CORSIA). By March 5 Member States could send their remarks and comments.

(\*\*) Source: International Council for Sustainable Aviation, Recommendations on the ICAO CORSIA Package, February 1, 2018, <http://icsa-aviation.org/understanding-the-corsia-package/>

(\*\*\*) Sources: <https://www.transportenvironment.org/publications/european-countries-say-they-may-pull-out-weakened-aviation-co2-scheme>  
<https://www.reuters.com/article/us-climatechange-aviation-eu/eu-pushes-back-against-weakening-of-aviation-emissions-deal-idUSKCN1J128E>

## 3.4. points of criticism

1. **Lack of global quantitative emissions** limits to reach a low carbon economic development (offsetting not reducing, not cap on emissions)
2. Absence of international authority (enforcement).  
But domestic authorities may require compliance: States can refuse or withdraw authorizations to operate, if the airline has failed to fulfil some ICAO standard (\*).
3. There is a lack of ambition and a lack of political will: (par.17) it will not be an “inappropriate economic burden” on international aviation
4. Appears barely consistent with the 2015 [Paris Agreement](#) objectives (art. 2): on *temperature* (keeping the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C), *adaptation* and *financing flows*.
5. Very **indirect responsibility** to other sectors (offsetting)
6. **Offsetting** applicable to airlines with international flights between participating States
  - not necessary the most polluting airlines flight between two participating States, or their flights are not International.
  - many exceptions (par. 13): operators emitting less than 10,000 metric-tonnes of CO<sub>2</sub> in international flights annually; aircraft with less than 5,700 kg of maximum takeoff mass; humanitarian, medical and firefighting.
7. **Monitoring, Reporting and Verifying (MRV)**: applicable to all airlines with international flights. From 2019 MRV is required each year.

(\*) Campos, P., “Compliance tools for a Global Market Based Measure for International Aviation”, *Carbon and Climate Law Review* 2016, vol 10(2), p.153-163.

# IV. Aviation: global business, global competition, global polluter

1. Within the EU ETS, most costs faced by airlines are transferable to consumers: but still ticket price must incorporate the environmental cost.

2. In some countries (i.e. Asia, Africa, Middle East) airports run in a not for profit policy, with important benefits for the local flag-carrier(\*). Global policy measures are required. Another important problem is competition between low-cost carriers (Norwegian, Ryanair and Easyjet) and the Europe's five biggest groups: with the accusation of predatory pricing in the transatlantic routes (\*\*).

3. Perhaps CORSIA is not effective, until a significant amount of participants are included (States and carriers). Within the EU ETS, reintroducing the aviation broad scope would not have remarkable effects on competition: important environmental benefits.

(\*) Source: The Economist, "Losing Altitud", August 12th, 2017.

(\*\*) Source: The Economist, "Shouting down the competition", April 21, 2018.

## IV. Aviation: global business, global competition, global polluter

4. CORSIA is being developed, without focussing on the demand.(Also IATA`s goal of cutting CO2 emissions in half by 2050, compared to 2005). Even efficiency improvements can cause a "rebound effect", increasing the demand.
5. CORSIA does not represent an incentive to reduce the sector carbon footprint. Most matters are still not clear. There are a series of aspects to improve...
6. The EU should avoid overlapping both systems by 2021. EU ETS could remain including regional flights. The extended scope shall become applicable until CORSIA is effective (in terms of mitigation).

# V. Conclusions

I. Aviation emissions represent a significant problem:

Air Traffic is increasing constantly and serious mitigation policies are required. Concerning mitigation, offsetting or buying units from other sectors should be called into question.

II. Concerning the EU ETS:

EU had a remarkable influence on the ICAO negotiations towards a global MBM (CORSIA). This regional market has been adapted (reducing the aviation scope to EEA internal flights until 2024 and preparing to implement CORSIA in 2021 for international aviation). The experience in the aviation sector is very relevant (domestic and foreign policy actions).

III. CORSIA is not an ambitious international scheme:

1). Within the EU ETS: limited derogation for EEA external flights, applicability revised again from 2024 (Regulation 2017/2392)

2). Reactions against ICAO SARP (Standards and Recommended Practices, Annex 16, vol. IV):

- critical suggestions by ICSA, problems with: transparency, eligible emissions units and stronger criteria for alternative fuels
- resistance from six EU Member States (as evidenced by their response concerning implementation elements)

### III. CORSIA is not an ambitious international scheme (cont.):

- 3). Lack of ambition, lack of global quantitative emission reductions and absence of enforcement
- 4). Incoherence with the 2015 Paris commitments
- 5). Offsetting is a light measure for airlines, contains too many exceptions).
- 6). At least, in the short to medium term, reinforcing regional policies with cap limits is a good option. In the medium to longer term, CORSIA shall take decisive steps to become a real mitigating instrument.

### IV. Aviation as a global business, with global competition, as a global polluter:

- 1). Within the EU ETS framework: important costs are translated from airlines to consumers, with minimal price impact.
- 2). Unfair competition in Asia, Africa and the Middle East, many airports are operating on non-profit basis and protecting local airlines. Also fierce competition takes place with low-cost carriers.
- 3). With a large number of States, CORSIA could become effective. Until then, the extended EU ETS could be reintroduced.
- 4). Managing demand of traffic flow should be present (i.e. to avoid the “rebound effect” by increasing energy efficiency).
- 5). Overlapping both schemes by 2021 is not desirable. The EU intra EEA flight could remain as a good option. External flights could be reconsidered until reaching a more ambitious and comprehensive policy in CORSIA.