

# ICAO: What is going on?

## What to expect from the ICAO assembly's talks on a climate deal for aviation

September 2016

### Summary

Aviation is a substantial and growing driver of climate change, currently responsible for almost 5% of global warming. The objectives of the Paris Agreement cannot be achieved without action to rein in its emissions growth. Since being tasked by the Kyoto Protocol with acting to limit or reduce aviation's climate impact, the UN's International Civil Aviation Organisation (ICAO) has provided little action or leadership.

At its triennial assembly (27 September – 8 October 2016) ICAO has an opportunity to adopt a global market-based measure which can be a starting point for greater global ambition. However, negotiations dominated by the need to protect industry and favour historic emitters is weakening the prospect of a credible deal.

Europe must push for the strongest possible outcome, while recognising that ICAO action alone will never be enough to put aviation on a path consistent with the Paris Agreement. More ambition is needed from Europe's own policies.

### 1. Introduction

Aviation is responsible for an estimated 4.9% of global warming (including CO<sub>2</sub> and non-CO<sub>2</sub> effects). The Kyoto Protocol charged parties to work through ICAO to limit and reduce emissions from international aviation. In the 19 years since, no effective measures have been adopted by ICAO. Instead, emissions from this sector have grown at twice the rate of emissions from the rest of the global economy. International aviation's ongoing exemption from fuel taxation (worth €60 billion a year) has contributed to this outcome.

Unless effective measures are adopted, aviation emissions are expected to grow some 300% by 2050 and consume up to 27% of the remaining carbon budget to limit a temperature increase to 1.5 °C.

### 2. ICAO and civil society

The International Coalition for Sustainable Aviation (ICSA) is the sole environmental observer to ICAO's Committee on Aviation Environment Protection (CAEP). Its members include Transport & Environment, World Wildlife Fund, Aviation Environment Federation, Environmental Defense Fund, and Carbon Market Watch.

ICSA does not have recognised status at ICAO beyond CAEP. It cannot automatically contribute to all relevant meetings (see below for examples).

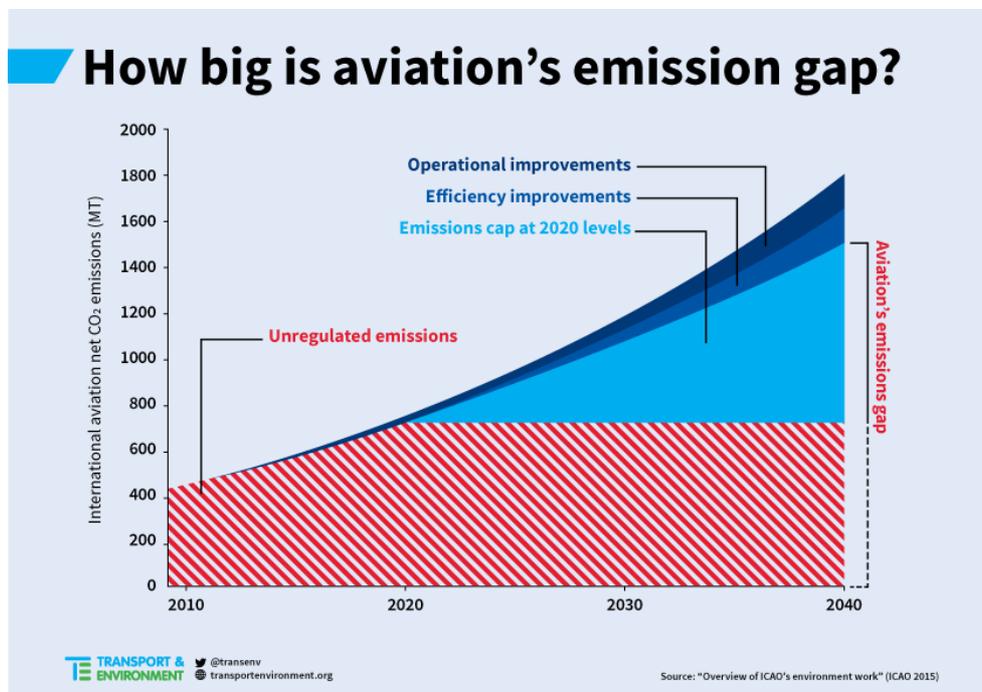
### 3. Aviation and the Paris Agreement

The Paris Agreement makes no explicit reference to international aviation (and shipping). ICAO helped see to that. However, its Article 4 reference to reducing all anthropogenic emissions indirectly includes these sectors. Both international aviation and shipping emissions are excluded from national targets (nationally determined contributions – NDCs). Domestic aviation emissions are included in NDCs. The EU's are covered by the ETS, China will include aviation in its ETS. US domestic aviation emission represent 18% of all global aviation CO<sub>2</sub> and remain totally unregulated. The US noisily promotes ICAO but is silent on its domestic situation.

Despite pressure for inclusion from the EU and other states, there was no language in the Paris Agreement which would indicate how these sectors' international emissions are to be addressed. It therefore remains unclear whether they are to be addressed by action at ICAO/IMO, action at national/regional level or a combination of both. The Agreement's objective of limiting a temperature increase to 'well below' 2°C and pursue a limit of 1.5°C cannot be achieved unless these sectors reduce their emissions.

Despite the lack of a direct reference to these sectors, a number of provisions of the Paris Agreement are relevant to work underway by ICAO.

1. Temperature target: A study commissioned by the European Parliament indicates that ICAO's target of stabilising net emissions at 2020 levels deviates at least 55% from the 2°C target, let alone the 'well below' 2°C /pursue 1.5°C target.
2. Article 6 of the Paris Agreement provides for the establishment of carbon markets and states that markets established under this provision must avoid double counting – one party claiming an emission reduction which is also claimed by another.
3. The Paris Agreement addresses the issue of differentiation by requiring all Parties to act, but at differing speeds.
4. And the Paris Agreement contains important provisions regarding reporting transparency.



## 4. EU policies adopted to date

Aviation CO<sub>2</sub> has grown from a share of 1.4% of EU emissions in 1990 to 4.5% in 2014<sup>1</sup>. Emissions are set to continue to grow strongly in the future unless tougher action is taken.

The inclusion of aviation in the EU's ETS since 2012 remains the most effective measure adopted at international level to limit the sector's climate pact, despite its scope having been drastically cut back after international pressure. A recent study by Transport & Environment<sup>2</sup> found that the measure is properly functioning and has a high degree of compliance including by third country operators. However, its environmental effectiveness will only be assured once issues with the surplus allowances in the stationary ETS are addressed. Until then, the measure will send only a limited price signal to operators and provide little incentive for technology development. The example of EU ETS has encouraged other markets (Mexico, China) to include at least domestic aviation in their ETS.

The Commission's recently published 'Decarbonisation of Transport' communication is weak on climate action for aviation; essentially placing reliance on ICAO and remaining silent on how any gap between ICAO ambition and the 2030/Paris targets will be met. These are very difficult but fundamental questions which DG Move preferred not to tackle. The climate solutions identified for the aviation (and shipping) sector are therefore substantially weaker than those proposed for other transport modes or other sectors of the economy. Yet unconstrained, aviation alone is likely to use up half the emissions reductions the road sector is expected to deliver.

## 5. Recent developments in ICAO

At the conclusion of COP21, ICAO welcomed the absence of a direct reference to the sector – having lobbied hard against such an inclusion – and promised that ICAO itself would act in 2016.

Shortly after the Paris COP, the ICAO Council President circulated a draft resolution to establish a GMBM (global market-based measure) at the Sept/Oct 2016 triennial Assembly. This draft has been subject to numerous discussions and revisions since (outlined below).

In February 2016, ICAO's environment committee, CAEP, met to decide parameters for the first ever CO<sub>2</sub> efficiency standard for new aircraft. The European Parliament sent a delegation to this meeting but the MEPs were refused access on the basis that the work was technical not political. Work began on the standard six years ago. The explicitly agreed purpose was to produce a standard which would require emission reductions beyond those currently being achieved. Given the enormous growth in traffic, in-sector vehicle efficiency emissions reductions are critical.

Industry had all the advantages from the start – only they held the data. Boeing and Airbus (whose aircraft combined account for over 90% of all aviation CO<sub>2</sub>) dominated the analysis and member state thinking to the point that it was decided stringency levels for 2020-2030 would not exceed 2016 level technologies. Inevitably the proposed stringencies for both new aircraft types and new in-productions designs were weak and would take effect too late to have any impact on business as usual trends. (Jet aircraft first introduced in the 1960s were very inefficient but this has improved continuously by over 70% – no one will buy a new aircraft type worse than its predecessor).

Despite the weak outcome before CAEP at its closed door February meeting, the FAA/Boeing and EU/Airbus rendered the standard completely useless by adding a five-year aircraft production cutoff delay which

<sup>1</sup> <http://www.eea.europa.eu/publications/european-union-greenhouse-gas-inventory-2016>

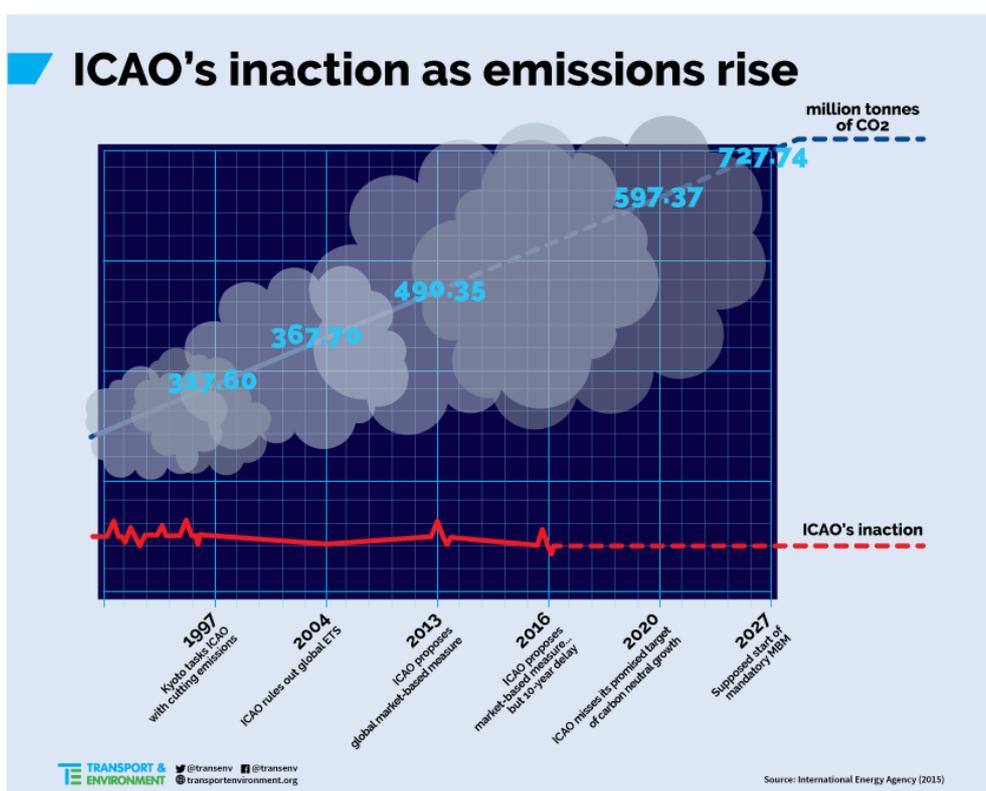
<sup>2</sup> <https://www.transportenvironment.org/press/eu%E2%80%99s-%E2%80%98imperfect%E2%80%99-emissions-trading-system-still-outperforms-draft-un-aviation-deal-%E2%80%93-report>

effectively put back stringency by five years – until 2028. This was in order to extend the ailing A380's production life and permit deliveries of the troubled order of 177 inflight tanker aircraft – the KC46 – for the US Airforce, to be completed by 2027. The KC-46 is a modification of the B767 which, like the A380, would have been required to go out of production in 2023 under initial stringency plans. In this case, ICAO's spectacular failure to regulate aircraft efficiency is squarely due to US/EU intervention reacting to commercial pressures. ICAO and member states surround this decision with a wall of silence. The external costs of the additional CO<sub>2</sub> this delay will generate amount to some \$10 billion. Society pays. It remains to be seen whether the US Environment Protection Agency will use its authority to introduce a stricter American domestic standard which would in effect regulate Airbus US sales.

Aside from placing faith in technical measures, ICAO and industry see biofuels as the big solution to emissions. Yet ICAO's June 2016 environmental report contained important information on the limited penetration by alternative fuels in the short to medium-term. This reflected a similar report released by the European Aviation Safety Authority (EASA) which revised downward 2020 alternative fuel projections from 2MT to 0.05 MT<sup>3</sup>. Fundamental questions hang over the future utility of aviation biofuels – their sustainability, availability and price.

## 6. Global market-based measure (GMBM) and carbon neutral growth in 2020

The EU included aviation in its ETS in 2012 after ICAO repeatedly failed to agree measures and had in fact encouraged states in 2004 to pursue national or regional ETS measures instead. Following uproar from industry and third countries led by the US, the EU agreed in late 2012 to exempt extra EU flights from the scope of its ETS to provide ICAO with time to develop a global market based measure (GMBM) – the stop-the-clock legislation.



<sup>3</sup> <http://ec.europa.eu/transport/modes/air/aviation-strategy/documents/european-aviation-environmental-report-2016-72dpi.pdf>

At ICAO's 2013 triennial assembly, the EU's attempt to agree rules around regional measures was humiliatingly defeated and resolution A38-18 was adopted, promising agreement on a GMBM at the next assembly in 2016 to deliver "carbon neutral growth" i.e. stabilise net emissions at 2020 levels. The resolution contained an Annex detailing criteria for such a GMBM including non-discrimination, simplicity and environmental integrity. The most significant reservation came from European states, which called for a more ambitious target than stabilising emissions at 2020 levels. The EU stopped the clock again until after the 2016 assembly until January 1<sup>st</sup> 2017 when 'full scope' will automatically return.

Since 2016, work at both a technical and political level on GMBM details has been underway. Political work has taken place between a small number of states in a committee of the ICAO called the Environmental Advisory Group (EAG). Civil society has consciously been excluded from this group and its successor, the High Level Group (HLG). Industry, through IATA, has been at the table throughout. The technical work has taken place under CAEP and included 24 states, industry and civil society. It has produced a number of technical recommendations concerning emissions unit criteria (EUC) and monitoring, reporting and verification (MRV). However, these are subject to approval by the ICAO Council when it adopts them in the form of a Standard or Recommended Practices (SARP).

When work on the GMBM began, Council had already effectively dismissed options such as taxation or emissions trading and agreed to focus on IATA's proposal for a GMBM entirely based on offsetting with no revenue raising dimension. No real opportunity was available to discuss cap and trade/emissions trading systems, which would have been more robust, or revenue generation for climate finance, which ICAO continues to vehemently oppose.

## 6.1. Analysis of current draft

CAEP, where civil society could participate, was left to do the technical work. The Europeans, still smarting from the 2013 assembly were all diplomatic. The FAA, with members of the A4A in tow, dominated proceedings – after all, the EU had had its day with the ETS; this was to be an American show. The EAG discussed the political architecture behind closed doors. Other ICAO members were essentially kept in the dark as well. The draft assembly resolution distributed by the ICAO Council President shortly after the Paris COP, and largely reflecting secretariat views, became the basis for subsequent discussions.

Civil society (ICSA) has provided feedback throughout including the High Level Meeting (HLM), Madrid informal and Friends of the President meeting. ICAO also held two rounds of informal meetings in the ICAO regions (the GLADs) which were mainly notable for revealing a high level of questioning among member states as to what was going on. (ICAO is a top-down organisation dominated by the Council. Its environment committee CAEP contains only 24 members – many of the historical emitters. By contrast, IMO's environment committee contains the entire membership.)

ICSA recently published its analysis of the current draft, finding that it falls well short of being considered a successful agreement and highlighting four ways to improve it. These include:

- 1) **Expanding the coverage:** A38-18 in 2013 envisaged a mandatory system and this was the presumed outcome until a few months ago. The level of exemptions and non-participation currently on offer will reduce the starting emissions coverage by an estimated 25% over the period 2021-2035.<sup>4</sup> This is especially important as UNFCCC synthesis reports presume that international aviation will stabilise

---

<sup>4</sup> <https://twitter.com/TheICCT/status/780527148293513217>

emissions at 2020 – for every tonne falling short of this target, other sectors of the economy will have to raise their ambition or we move even further from the 2°C /1.5°C.

**Recommendation:** The GMBM should be binding from 2021 or at least from 2027 onwards. States are encouraged to participate, in particular large and growing aviation markets, in order to maximise coverage and avoid potential market distortions.

- 2) The resolution continues language introduced by the US in May attempting to prohibit **greater regional or national ambition**. This is very sensitive, harking back to the bitter controversy at the 2013 Assembly and will/should be an absolute red line for the EU if maintenance of the ETS is threatened. This hostile US act is an incredible departure from international environmental agreements which are generally a floor, not a ceiling, to ambition. It also departs from accepted climate politics which expects and requires developed countries to pursue a greater level of ambition.

However, it must be questioned whether ICAO has the authority to limit such additional ambition. The EU should continue to take the position that it has the right and requirement to go further on climate action, especially if ICAO will not achieve its own target.

**Recommendation:** The EU must oppose language which attempts to limit or prohibit greater climate ambition and which might well otherwise restrict the ability of the European Parliament to help decide the future of the ETS.

- 3) A38-18 in 2013 required a measure which would have **environmental integrity**. As the current draft proposes a measure entirely based on offsetting, its environmental integrity will be determined by the quality of offsets permitted. The EU has extensive experience here, having purchased offsets for the 2020 target which later turned out to have limited/no/perverse environmental integrity. One study found that 75% of one type of offset purchased turned out to have no assurances that emissions were reduced (Kollmus 2015). Due to these issues, the EU introduced progressively stricter criteria and eventually decided that offsetting will play no role in its 2030 climate policy. Aviation now looks set to be the only sector which will be permitted to use offsetting to help achieve its target.

The technical work in CAEP has produced some important proposals for environmental safeguards under the GMBM, such as the requirement that emission reductions be additional and verifiable. However, the EAG/Council has refused to act on any recommendations and deferred all consideration into the future. The safeguards may be subject to negotiation as part of efforts to encourage other states to opt-in. What's alarming is that the draft assembly Resolution contains few references to environmental integrity of offsets. For example, the agreement fails to reference no double-counting (emission reductions can only be claimed once).<sup>5</sup> While the Paris Agreement made numerous and explicit references to no double counting, less than a year later the same parties are proposing a climate agreement which makes no reference to the problem of double counting. This is a remarkable prospect given the GMBM is entirely dependent on offsetting.

**Recommendation:** the resolution should contain stronger language on environmental integrity of units used, including an explicit requirement that double counting not be permitted.

---

<sup>5</sup> Article 20 makes a reference to no double counting but this relates only the offsets produced within the aviation section – a very limited source of offsets, almost non-existent at present.

- 4) The current draft contains an **opt-out clause**. This provides the GMBM with a particular vulnerability – states can decide no longer to take part if, for example, the enforcement is perceived to be too strict or if its carriers believe that the minor costs are still too much.

**Recommendation:** The opt-out clause should be removed.

## 7. Conclusion

ICAO's proposed measure has gotten progressively weaker as the assembly has approached. Developing countries have rushed to be exempt. The ICAO secretariat facilitated this by creating a new formula to calculate the exemption criteria – instead of *de minimis* being based on departing flight activity they changed it to departing flight activity of that country's carriers only – effectively halving the exemption hurdle. It is now possible that exemptions means less than 50% of emissions needed to achieve CNG in 2020 will initially be covered. Even this coverage will be illusory unless there are strict and effectively-enforced rules regarding the environmental integrity of offsets.

China complains that there isn't sufficient differentiation for developing countries in the deal. This is justified. The main differentiation is the exemption criterion – hence the push to be exempt. Instead of routes to be offset having varying intensity according to whether they touch developing countries or not, all routes in the GMBM have the same offsetting intensity. The US insisted on this. The question of special treatment for fast growers became a really sore issue as carriers in the US and EU are generally mature slow growers while those in Asia/Gulf are fast growers. Since all carriers would have to offset growth above 2020 levels, this would mean fast-growing Asian carriers, for example, would pay more for offsets as a percentage of turnover than legacy carriers. This inequity was partially rectified by requiring carriers to offset the average sectoral growth percentage, but the A4A/US continues controversially to fight this. These are some of the issues believed to lie behind Chinese concerns.

Securing global participation in an effective GMBM to address aviation emission is important in the post-Paris world. However, there are risks – that ICAO and the EU would endorse a deal which has limited or no environmental integrity. This would mislead policy makers to believe the issue of aviation's climate impact is 'solved', relieve pressure, block further ambition and mislead consumers and the public into thinking they can 'fly green'. Tackling aviation's out of control emissions growth is one of the most serious challenges facing climate policy

The Bratislava Declaration says that the European states will join the GMBM provided certain conditions, including environmental integrity, are met. This must remain the European position at and beyond the assembly. Europe should not endorse a malfunctioning carbon market. It may not be until the 2019 assembly that the environmental effectiveness of any ICAO measure is known, which may be a more appropriate time for Europe to declare its position. The EU should use this time to mobilise other higher ambition states to broaden the measure's participation and improve environmental effectiveness.

As ICAO is likely to fall well short of its own 2020 target, and as that target is itself quite insufficient to meet Paris expectations, it is important that the EU pursues further measures to limit aviation's climate impact. There are a number of tools at the EU's disposal that in no way fall under ICAO's remit. This includes phasing out the fuel tax exemption, ending subsidies to loss-making airlines and airports and expanding EASA's environmental capacity. Only a twin track approach of international and regional measures is likely to have any significant effect on limiting aviation's climate impact.

## Note

It is fundamental to remember that the EU ETS regulates emitters not countries. So all airlines calling at EU airports were required to comply with EU law – the aviation ETS. That’s fair – and was upheld by the ECJ as it essentially says; you come into my house, you obey my rules. Tragically EU politicians under internal, US, industry and Airbus pressure, resiled from this settled principal of international law. By deferring to an international body – ICAO – which has no binding treaty provisions other than a new treaty, climate mitigation policy has been handed to countries to decide collectively. Nothing has been decided since before Kyoto and clearly many countries are still not ready to decide. And for those that opt in, how common rules will be agreed – let alone enforced –remain key questions. As we all judge how negotiations at ICAO proceed, it remains important to remember that international law still gives countries the absolute right to regulate emitters/operators who enter their territory. In addition, there are plenty of precedents for unilateral measures. Every day in most countries/airports, passengers are required by airports /countries to pay ticket taxes. The US charges \$20 per passenger for both arriving and departing. Such charges have *never* been successfully challenged internationally.

## Further information

Bill Hemmings  
Aviation and shipping director  
[bill.hemmings@transportenvironment.org](mailto:bill.hemmings@transportenvironment.org)  
Tel: +32 (0)2 851 02 15 / +32 (0)487 582 706

Andrew Murphy  
Aviation policy officer  
[andrew.murphy@transportenvironment.org](mailto:andrew.murphy@transportenvironment.org)  
Tel: +32 (0)2 851 0217 / +32 (0)485 00 12 14

# ICAO and aviation emissions: the clock is ticking

## Urgency of tackling aviation emissions

Since Kyoto, ICAO has failed to deliver any effective global policies to mitigate emissions. It spent much of this time opposing market measures and lobbying against fuel taxation. It spent 6 years developing a CO2 standard for new aircraft which will have zero impact on reducing emissions. Following EU action, ICAO agreed in 2013 to develop a global market-based measure with a target of stabilising emissions at 2020 level. This is due to be adopted at the triennial Assembly this October.

## Aviation's impact on climate change

Unregulated and untaxed, aviation emissions are growing twice as fast as the rest of the global economy. In less than 50 years aviation has given rise to an estimated 4.9% of global warming. Without action, it will consume 27% of the remaining global carbon budget by 2050. While the Paris Agreement does not directly mention aviation, its objectives cannot be achieved if aviation continues to grow.

The Kyoto Protocol charges developed countries to work through ICAO to limit/reduce aviation emissions.

ICAO endorses the development of an open emissions trading system (ETS) for aviation.

After five years of ICAO inaction, European Parliament and Council first instructs the EU Commission to propose aviation emission reductions if ICAO does not act.

ICAO Assembly calls for the development by 2013 of a framework for aviation market-based measures (MBMs).

ICAO Council supports the development of a global MBM (GMBM). Europe proposes to defer compliance with its ETS for flights to and from Europe by one year to provide political space for ICAO to act. This followed a sustained campaign against the EU ETS by states and industry.

ICAO's Assembly endorses the development of a GMBM to stabilise net emissions at 2020 levels. In response, Europe agrees to limit its ETS to flights within Europe until 2017. Though reducing its scope, it remains the only MBM to limit international aviation emissions anywhere.

1997      2001      2002      2004      2008      2010      2012      2013      2013-2016      2015      2016

ICAO rules out establishing a global emissions trading system for aviation. Instead it decides to provide guidance to countries that wish to include international aviation emissions in their own national emissions trading programs.

After 11 years of ICAO inaction, EU includes aviation in the ETS from 2012.

ICAO works on the GMBM, quickly ruling out allowance trading or taxes in favour of a cheaper and simpler offset-only mechanism. ICAO continues to oppose fuel taxes, even for climate finance.

Oil prices fall to a record and sustained low of \$40, reducing incentives for emissions savings (new aircraft, alternative fuels) and stimulating further growth in aviation demand. Without effective carbon pricing or efficiency standards, aviation emissions will grow ever faster.

After 6 years of effort, ICAO adopts the first ever CO2 efficiency standard for new aircraft. However the standard will only come into force in 2028, by which time it will be out of date. As a result it will have no impact on emissions. China and Mexico both announce they will follow the EU by including aviation in their respective domestic ETS.

## So, what's at stake?

Having failed to adopt an effective CO2 efficiency standard, there is now even more pressure on ICAO to agree an environmentally effective GMBM which in the first instance meets ICAO and industry's goal of stabilising emissions at 2020 levels. Paris showed the urgency of the need to act. If ICAO again fails to rise to the challenge, then focus should turn to greater ambition from Europe, North America and other countries.