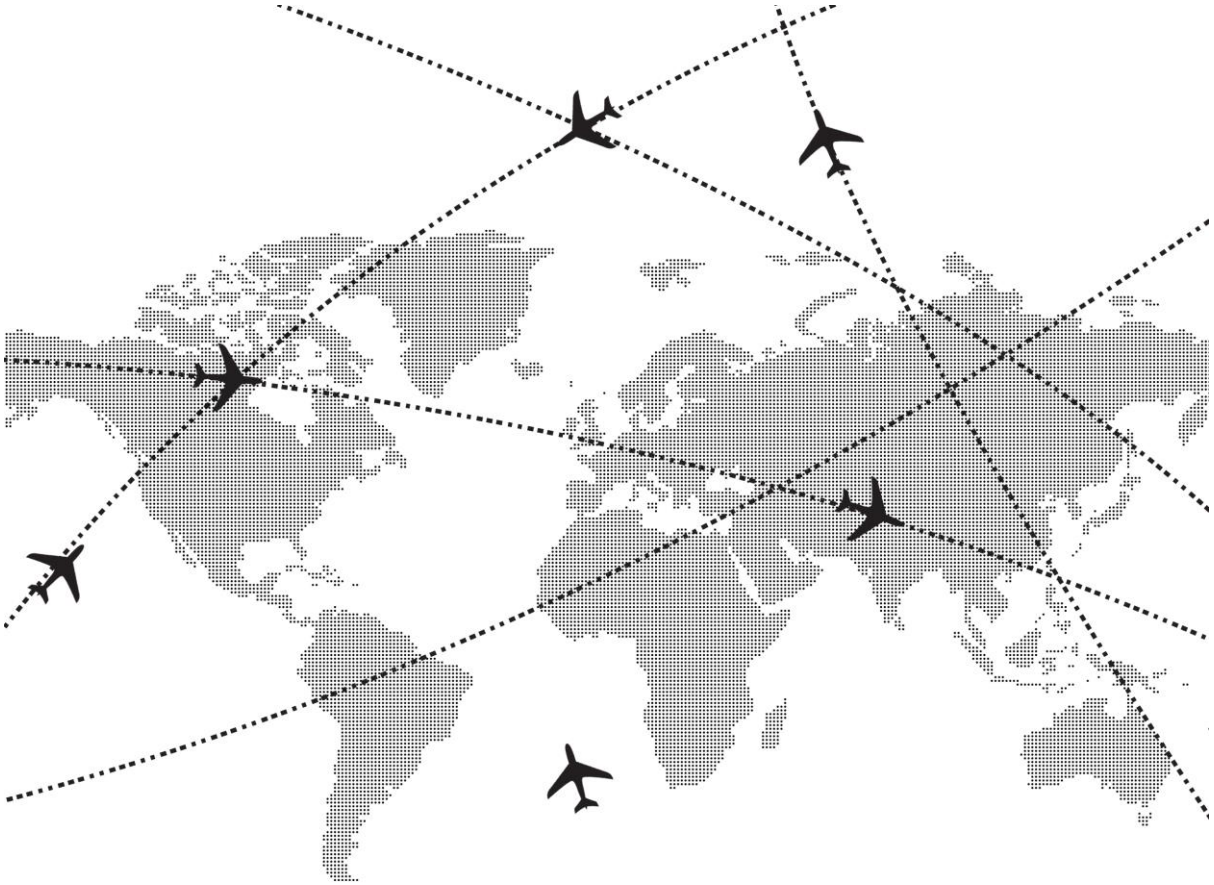

Global Deal or No Deal?

Your free guide to ICAO's 38th Triennial Assembly

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Introduction

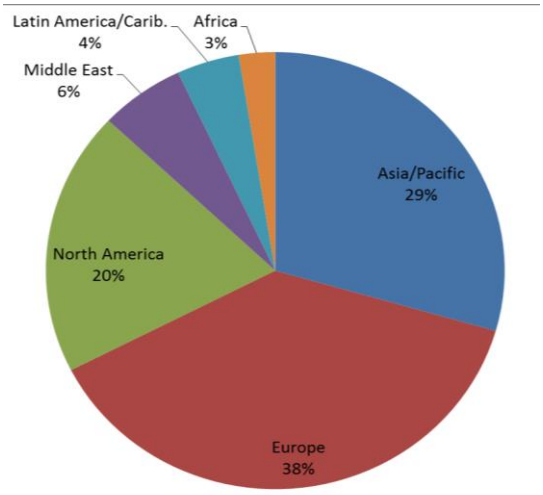
ICAO's 38th triennial Assembly meets in Montreal from 24 September to 4 October 2013. The Organisation is facing its biggest test so far to fulfil a 16-year old obligation under the Kyoto Protocol to limit and reduce greenhouse gas emissions from international aviation. Having turned down the option of implementing a global emissions trading system in 2004, this Assembly is being asked nearly a decade later to commit to a process towards an as yet vaguely defined global measure with unclear environmental impacts which would not take effect until 2020. In return, Europe would have to emasculate immediately its own aviation trading scheme which covers a third of global emissions. Divisions within the Organisation's membership about what course of action to take continue to run deep. Time was available but preparations have been lacking; key issues and choices have not been seriously discussed. If there is a deal this year, then it really only signals the start of all the hard work since debate has mostly been about whether, not how, a global market-based measure could work. Early action is imperative when it comes to reducing the warming impact of CO2, so a global market-based measure can and should be advanced to begin in 2016. International aviation is lightly taxed and an environmental charge is long overdue. Any global measure can be adjusted to account for developing country concerns and in any case won't unduly impact domestic aviation industries which are not affected by ICAO decisions. This guide intends to take you through the context and history of the issues and advise on the road ahead.

1. Context

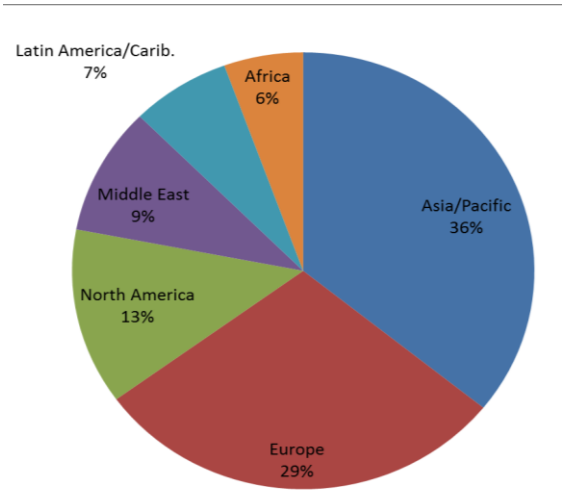
1.1 Aviation's impact on climate change

Aviation emissions account for about 5% of cumulative global warming[1] and some 2% of worldwide annual CO_2 emissions. If global aviation was a country its emissions would be ranked 7th between Germany and South Korea on CO_2 alone. Air travel itself continues to show robust and sustained growth of 4-5% a year with particularly strong trends in China, the emerging economies of East and South Asia and the Middle East. Traffic in the mature markets of North America and Europe is growing less strongly but governments everywhere, taking their lead from industry and ICAO, have expressed no intention to impede aviation's expansion.

Emissions from aviation are also growing, but less strongly – around 2-3% a year - as efficiencies (better and larger aircraft, technologies, operational approaches and more efficient air traffic control systems) take hold. So measures to address aviation's climate change impact by dampening growth or restricting market forces in any way have been definitively taken off the table. The cure has to come from somewhere else! Scientists say that the longevity of CO_2 in the atmosphere – up to 1,000 years – means that the warming impact on the climate of aviation emissions will continue to grow relative to other sources possibly rising from its current 5% level even up to around 15% of the allowable carbon emitted to keep warming below the UN's 2 degree target. So the problem will get worse even before we start to try and make it better. Europe, Asia and North America are the regions with the largest emissions. By 2050 Asian emissions will dominate.



What was: Cumulative International RevenueTonneKilometre by Region 1974-2009
(ICAO, States' Ranking of Cumulative International Aviation Traffic, 2009)



What will be: Cumulative fuel burn by region 2020 to 2050 (ICAO, MDG fuel trends assessment, 2012)

[1] http://elib.dlr.de/59761/1/lee.pdf

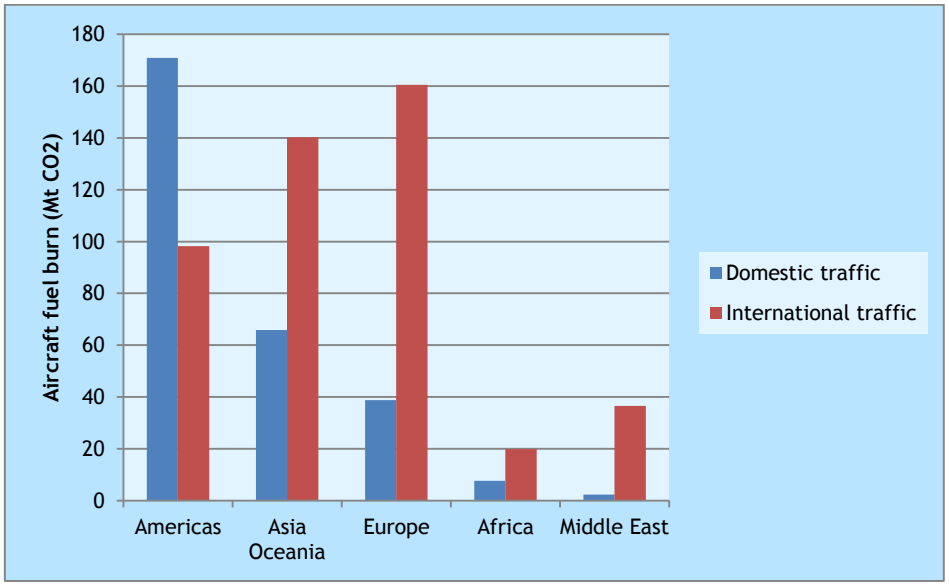
1.2 Global inaction and industry response

Industry and ICAO have taken the view for many years that new and better aircraft, technology and operational improvements together with the arrival of drop-in alternative fuels, primarily biofuels, will be enough to arrest this growth in emissions thus ensuring that aviation itself can continue to grow unconstrained. Under pressure however from its unfulfilled commitments under Kyoto to limit and reduce emissions, and from rising expectations in the run up to Copenhagen, this approach softened somewhat. Industry and ICAO changed tack. In 2010 ICAO agreed to develop a CO_2 standard to incentivise better fuel efficiency of new aircraft types - having rejected such a course back in 2001. It also committed to achieve an annual fleet-wide fuel efficiency improvement of 2% by 2020 and the same target, but aspirational, beyond to 2050. These drew on a pre-Copenhagen declaration by the aviation industry body, IATA, calling for so-called 'carbon neutral growth' from 2020. This meant that emissions, already having doubled since the Kyoto baseline in 1990, could continue growing unabated to be capped annually at the 2020 level with all future emissions beyond the 2020 level being abated through technology, operations and biofuels and possibly market based measures. IATA's four pillar strategy also promised a 50% cut in net CO_2 emissions by 2050 largely driven by massive infusions of biofuels. Both IATA and ICAO were cautious about market-based measures with industry seeing such action as no more than a short term backstop if other measures lagged.

1.3 Regional frustrations and action

Reflecting this caution, ICAO's 2010 triennial Assembly agreed to study the feasibility of such action having concluded back in 2004 that a global aviation emissions trading scheme was too much of a mouthful. Significantly, the 2004 Assembly had concluded that states or regions were themselves free to pursue market-based measures such as emissions trading and indeed ICAO even drew up guidelines that states or regions might follow.

This was the signal for a Europe, frustrated by ICAO inaction, to move. Hence, the birth of the EU's market-based mechanism: the proposal (2006) and adoption (2008) of a law that includes, from 2012, aviation in the EU's Emission Trading System (EU ETS). In 2010 European aviation CO_2 emissions totalled 21% of global aviation CO2 emissions. Historically (1974-2009) Europe has also been by far the largest emitter (38% of the cumulative global RTK – proxy for emissions). – fully justifying early action.



Source: IEA, 2012a; IEA, 2012b

There had already been major differences at ICAO's triennial Assembly in 2007 when the United States led a non-European push against Europe's plan to include third country registered airlines in its regional scheme without these countries' explicit permission. "Mutual agreement" must apply to the EU ETS was their demand in the Assembly's resolution – a principle unprecedented in other ICAO policy areas like safety and security and effectively requiring unanimous consent of everyone affected if the principle of non-discrimination is to be respected too. Unsurprisingly 42 European states filed a reservation regarding this provision and carried on with their plans. The issue flared up again at the 2010 Assembly with some milder wording about the need for consultations eventually replacing the explicit demand for mutual agreement in the text.

1.4 US position: the 'coalition of the unwilling'

But the pressure started piling on when officials in the US FAA managed to wrest control of US international aviation policy-making and orchestrated a "coalition of the unwilling" against the ETS. Its first meeting in New Delhi brought together India, China, the other BRICs and various developing countries to denounce the impending European legislation as illegal extraterritorial overreach[2]. US carriers, represented by high-powered lobbyists in their trade association Airlines for America (A4A), had already used their pervasive influence on the Hill to help defeat US climate legislation, which would have regulated both US domestic and international aviation emissions by attaching CO_2 permits to all aviation fuel at the refinery level – an approach in this respect remarkably similar to that of the EU ETS.

The resistance of American industry to these measures was based on more than climate change scepticism and thin margins. After all, in Europe's case the EU ETS's generous allocation of free CO_2 allowances provides huge opportunities for windfall profits[3]. Protected by law from foreign takeovers, the A4A carriers, with noticeably older, less efficient fleets, have been intent on preventing higher costs and shielding members from stronger foreign competition. The strategy has been clothed in a good story about the sovereignty breaches of the Europeans. Even so, the A4A's legal challenge to the EU ETS failed in the European Court of Justice[4]. And neither the US nor other states opposing Europe's move have as yet taken the dispute to the ultimate arbitrator – the ICAO Council under Article 84 of the Chicago Convention.

All this despite the fact that US domestic aviation emissions dwarf all the rest of the world's domestic aviation emissions combined. CO_2 emissions from North American aviation are almost a third of global aviation emissions. The average American burns three times as much kerosene annually as his European counterpart.

1.5 Stopping the Clock

A4A lobbying, fuelled by almost $10mn in the 2011/12 Congress session alone[5], had proved so successful that in September 2012 the Thune Bill was passed unanimously in the Senate, giving the Administration the power it needed to prevent US carriers from complying with the EU ETS. And in Europe, pressure on Airbus from Beijing about future aircraft orders resulted in interventions from London, Paris and Berlin for Brussels to do something. As a result of this industry and international pressure, the European Commission announced, in a matter of weeks, a deferral by one year of the requirement for flights from and to the EU to surrender emissions permits. This 'stop the clock' law was created to give time for ICAO to agree the global solution that had eluded it for 15 years.

2. Where we are now?

2.1 State of play

And so the rest is history. In December 2012 the ICAO Council duly convened its High Level Group – the third such failed attempt in five years - to investigate the political issues properly and come up with sensible solutions. It met only three times, with little resources or in-depth preparation, let alone agreement. All the hot questions as to what global action ICAO should initiate reverted back to ICAO's Council. ICAO has various committees as well as a triennial Assembly but the 36-strong Council which meets quarterly, has been carefully nurtured over the years to call all the shots. Its influence on climate change issues however now seems to be clearly slipping. Failure by the Assembly to endorse the major elements of the draft resolution finalised at a special Council session on 4 September would be a major international rebuff.

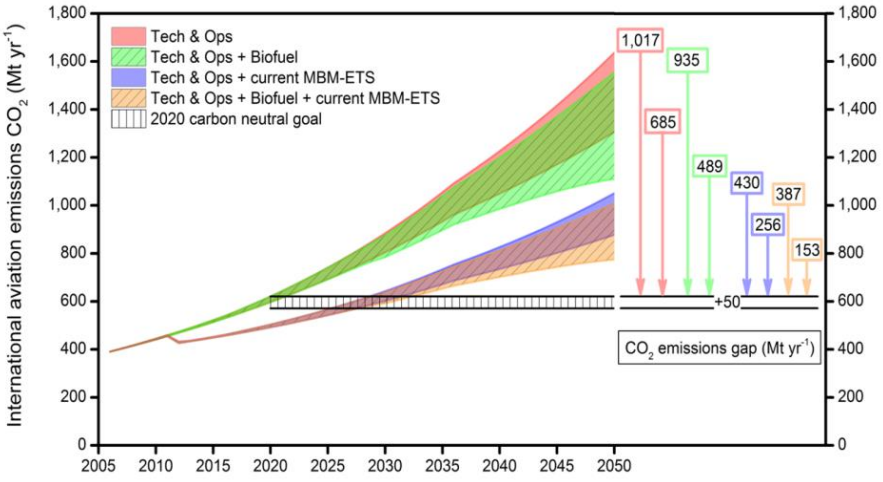
By stopping the clock and handing the torch to ICAO, Europe was very publicly putting the onus squarely on the international community to come up with a global solution. Previous Assembly environmental resolutions in 2007 and 2010 had already suffered from heavily qualified and serious reservations by dozens of the 191 member states. The question over whether ICAO should agree to develop a global MBM is the central issue at this Assembly. Consensus will be difficult – evidenced by the dissenting views attached to the clean text that was forwarded by Council to the Assembly.

2.2 Why we need a Global MBM now

Recent scientific analysis has shown that any forecast of emissions reductions resulting from technical and operational measures and from biofuels – whether cautious or optimistic – will not

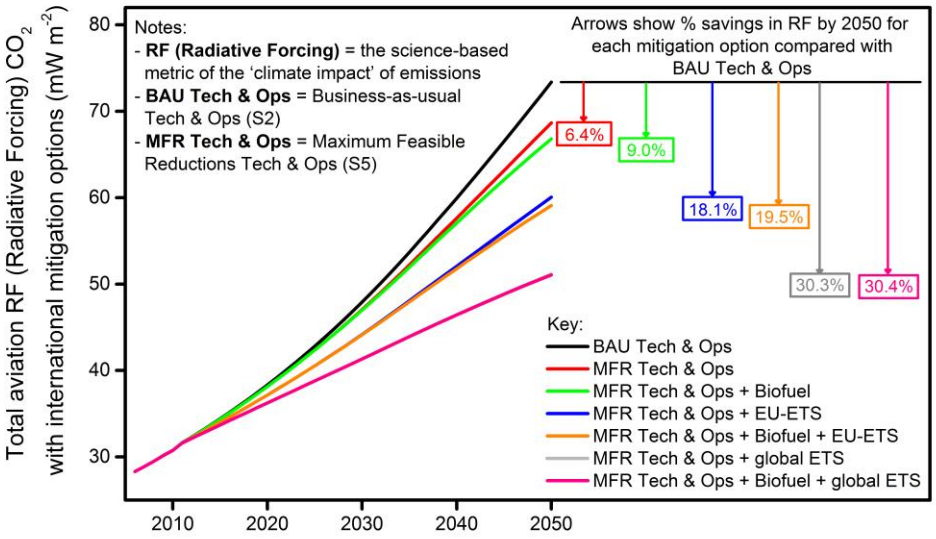
[2] http://www.transportenvironment.org/sites/te/files/media/2011%2011%20briefing%20icao%20council.pdf
[3] http://www.bnef.com/WhitePapers/download/51
[4] http://curia.europa.eu/jcms/upload/docs/application/pdf/2011-12/cp110139en.pdf
[5] http://www.flyingclean.com/history_global_efforts_cut_international_climate_pollution_airplanes

reduce CO_2 emissions in 2050 sufficiently to achieve carbon neutral growth at 2020 levels. The “gap” would need to be filled by a market-based measure.



Source: David Lee, Manchester Metropolitan University, 2013

Even more recent research has looked at the radiative forcing and global temperature impact of various emissions reduction scenarios out to 2050. Maximum feasible reductions from technology, operations and biofuels would reduce the warming effect by 6% in 2050, whereas a global ETS starting in 2012 would reduce aviation’s warming effect by about 31%. The conclusion drawn is that timing is everything and early reductions which can be achieved via an MBM count the most. The following graph shows the reduction in global warming impacts of aviation mitigation options in 2050, assuming maximum feasible reductions.



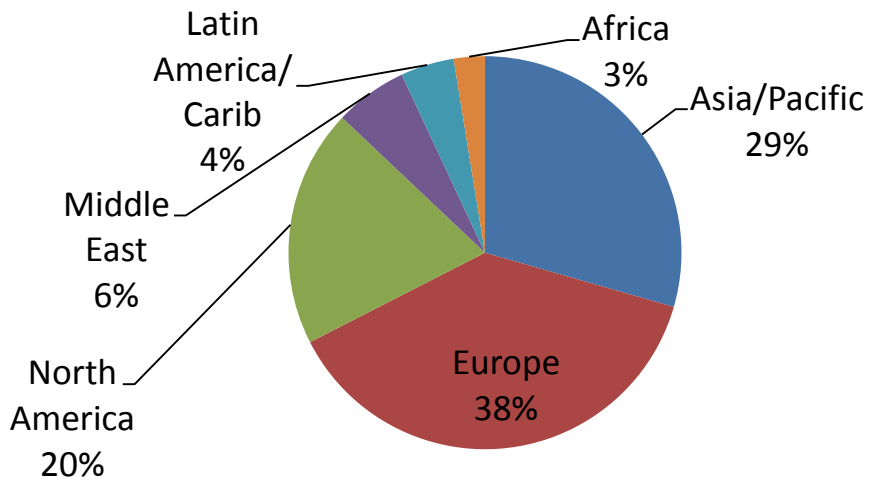
Source: David Lee, Manchester Metropolitan University, 2013

2.3 Responsibility for developing countries

The BRICs and many developing countries want to delay any decision and action on this question until 2016 and probably beyond. For their young and fast growing aviation sectors, ”historical responsibility” in the context of commercial international aviation, an industry which has really only been around since the 1970s, implies being allowed many more years yet to catch up to the US’ and Europe’s mature markets. International aviation is a cutthroat business already largely dominated by a relatively small number of mega-carriers. But state sponsored Middle Eastern operators as well as the earlier spectacular gains of Asian carriers, show what can be achieved. Chinese, Indian, Brazilian, South African and other carriers argue they need more time to draw equal. In the meantime it is argued that pricing aviation carbon will burden this sprint for network strength and global market share ICAO however is built on the principle of non-discrimination where there is seemingly no room for unequal treatment. A carbon neutral growth regulation also raises the real prospect of fast growing carriers facing a disadvantage by having to pay for carbon on a higher proportion of their output than mature market carriers with much lower growth. Ideas are around but little really substantive debate has yet been had on these central and thorny issues of SCRC. Europe’s offer to exempt all carriers with less than 1% of global airline activity from a global market-based measure won sufficient support

from African states to see the “mutual agreement” stipulation suitably toned down at the 2010 Assembly. But the issue has now returned with a slightly different call, again from Africa, for routes from the EU to those developing countries with less than 1% of global aviation activity to be exempt from the EU ETS.

The ‘de minimis’ issue was studied for the Council by consultants in 2012, but the conclusions were dropped as they pointed to significant market distortions. Little further analysis was done. Now a new de minimis proposal put forward on the very eve of Assembly has delegations scrambling.



Historical international aviation emissions, (% cumulative RTK 1974-2009 as proxy). Source: ICAO 2010 Assembly

2.4 Powerful external influences

The aviation industry exercises enormous behind the scenes influence at ICAO. IATA, the industry body representing the vast majority of mainly legacy carriers has for years resisted all attempts to price aviation carbon. Low cost carriers, generally significantly more efficient, largely stay away from ICAO and aren’t represented there, even though, for example, low cost carriers now account for well over 40% of intra EU traffic.

To some extent Europe’s decision to stop the clock called IATA’s bluff. Having focussed on building opposition to the EU ETS, IATA suddenly realised that getting some progress going in ICAO was now critical to its whole anti-ETS strategy. IATA CEOs finally endorsed – in majority - the idea of developing a global market-based measure in Cape Town last June - though perhaps only to be applied in the short term of course. A4A continues to argue that MBMs are only a gap filler and that sometime around 2030 technological and operational innovations, along with biofuels, will render them unnecessary.

2.5 The draft resolution

IATA’s Cape Town resolution calls for the 2013 Assembly to agree to implement a global MBM in 2020 based on the target of carbon neutral growth from 2020 and comprising solely of purchasing carbon offsets. IATA is dead against proceeds from an aviation MBM being used for funding climate change actions, despite recommendation from, amongst others, the IMF[6] that the sector is undertaxed and would make a good source for the $100bn needed for the Green Climate Fund for developing countries pledged in 2020.

It should not be a surprise that ICAO is repeating IATA’s anti-revenue generation line in the Assembly resolution while insisting that all revenues generated by an MBM remain in the sector. This contradicts the purpose of an MBM – to put a price on airline fuel use – and it takes away one of the greatest motivations to adopt it, namely feeding the Green Climate Fund to pave the way for an overarching climate deal in Paris in 2015.

IATA continues to claim it is pressing strongly for a commitment to an MBM being adopted at this Assembly. The consequences for industry at this point of a no vote are not clear. Sceptics would say a 3-year delay was the plan all along, especially if the EU ETS could be stopped in its tracks in the meantime. On the other hand a further 3 years of uncertainty and controversy cannot be good for any business sector. Should developing countries at the UNFCCC indeed act in 2015 to take on mitigation targets and responsibilities, aviation would under this scenario be left politically stranded; one of the

[6] http://www.imf.org/external/np/g20/pdf/110411a.pdf

largest and fastest growing emitters remaining unregulated and divided while small developing countries were being required to sign up to a collective mitigation effort.

2.6 The Framework

Another key element of the draft Assembly resolution on environmental issues refers to the MBM Framework. The 2010 Assembly called for Council to develop a Framework to be agreed in 2013 which would set the rules for national and regional schemes like the EU ETS. Once again the US delegation set the direction for others in the High Level Group earlier this year when it stepped back from the vociferous anti EU ETS line of the A4A and proposed that states or groups of states could regulate all carriers flying within their national or regional airspace, although such a move would not necessarily constitute a "safe haven" from other objectors – presumably a reference to the likes of India. The Americans followed up in writing essentially saying to the Europeans that the US would follow this line if the EU followed their line. And so were sown the seeds of the US rewriting EU climate policy.

2.7 ICAO: The right structure?

ICAO has so far failed to deliver actions to address aviation climate change. Hopes are, however, high for progress at this Assembly. No one denies the political complexities, but it would seem that ICAO's structure and sometimes lacklustre processes have been a factor. With a more robust committee-based process equipped with adequate resources and transparent procedures, things might have been different.

The issues are complex and hard to resolve amongst the whole membership when it meets only once every three years. Ad hoc high level groups often involving outsiders or newcomers to the process have not resolved the issues. Transport Ministries predominate in ICAO. They are not specialists on climate change questions. Rather, they see their role most often as the guardians of aviation's future; and indeed the Chicago Convention charges ICAO with the 'safe and orderly' development of aviation, with sustainability or environmental issues not mentioned. Expert Groups have been convened to operate largely behind closed doors, leaving many member states outside the process. Council, aided by a defensive Secretariat, controls the information.

3. Options on ICAO's table

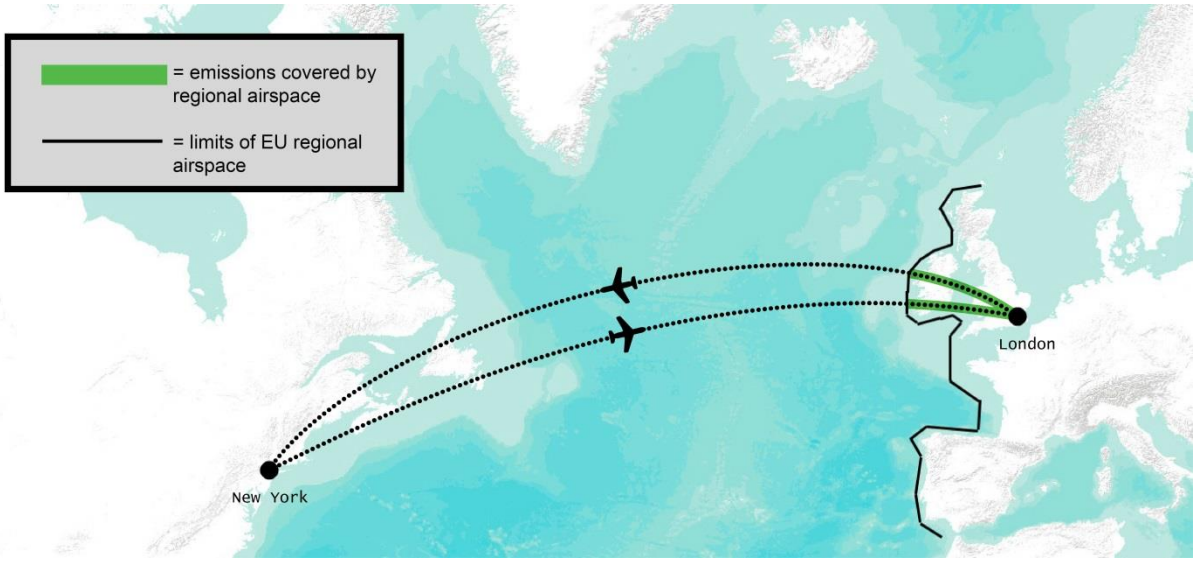
3.1 Airspace

The US airspace suggestion met with hardly serious yet nevertheless potent endorsements from the likes of Singapore and the Gulf States. Were they to apply an airspace regime themselves, emissions would be regulated for barely a few minutes of flight. In the case of Singapore, the airborne regulation would hardly last 60 seconds, suggesting that the developing world's second largest aviation emitter historically (just behind China but with only 0.4% of its population and a GDP per capita IMF ranking of #3 globally) believes it is politically quite safe in ICAO to take such a self-serving and environmentally meaningless approach.

The EU backed by a few friends such as Australia stuck to the environmentally sensible line that for regional schemes, whole flight emissions for departing flights only should be regulated. That would leave the option open for the country at the other end of the line to do the same at some point. The Council was left with strongly divided opinions once again and toyed with the idea of dropping the Framework commitment altogether. But Europe insisted; the whole point of stopping the clock was really to secure Framework guarantees from ICAO to enable the clock to be restarted harmoniously. Mid July brought a startling development: EU member states meeting in secret agreed to change the EU Framework position at ICAO. The Commission proposal, worked out with the Airbus countries beforehand, meant the EU would now accept to restrict the ETS to EU regional airspace provided ICAO agreed to a more robust line on a global MBM. Europe argued that ICAO should agree in 2013 to adopt a global MBM in 2016 after using the intervening years to work out all the details. The measure would start in 2020 and be based on carbon neutral growth, a provision that in itself constituted a massive climb down from Europe's Copenhagen call for an aviation reduction target of 10% below 2005 levels. NGOs branded the move a sell-out to foreign powers and industry.

If all countries implemented an airspace measure under the Framework, 78% of global emissions would remain unregulated. Yet after 16 years of negotiations, and indeed two generations and billions of tonnes of CO_2 emissions, it seems extraordinary that ICAO states seem ready now merely to conclude what they had already agreed in the 1944 Chicago Convention's bedrock Article 1;

The contracting States recognize that every State has complete and exclusive sovereignty over the airspace above its territory.



Portion of flight emissions from London – New York that would be covered by the proposed 'airspace' method

The Assembly draft Resolution now has a paragraph recognising that states/regions can act in advance of ICAO and implement MBMs based on national or regional airspace. But several hooks have been added. Any move beyond airspace would require mutual agreement and such a regional MBM should exempt all routes to developing countries with less than 1% of global airline activity. Such terms would effectively slash the original scope of the EU ETS by over 65% - probably much more if all the African routes were exempt. As to the feasibility of implementation, IATA claims airspace is unworkable; therefore don't try it. Emissions could still however be calculated in a rather straightforward way, based on whole flights and then reduced according to some agreed percentage of each outbound route flown in EU airspace.

Even if the Assembly endorses this massive EU concession, some still say they would not be happy. Indian opposition is implacable, and a Chinese delegation, this time seemingly bypassing Airbus, recently visited Brussels and made it abundantly clear that Chinese carriers would not comply with the stop the clock requirements to submit allowances for the various intra-EU flights executed by Chinese carriers during 2012. On the eve of the Assembly, A4A and IATA motives also became clear. IATA called for the Assembly to make no pronouncement on the future of regional measures – for the simple reason that they believe (and will fight to ensure) that these have no future.

3.2 Global MBM

States will now gather in Montreal on 24 September with divided views and conflicting objectives. Europe, the demandeur of ICAO agreeing an effective global deal, is in an invidious position having conceded on the airspace question before the critical decision on a global MBM has been secured and before the European Parliament has even been consulted on the whole question. As fortune would have it, rotation has the EU Chairing the Assembly, so the French delegate will be obliged to show some level of equanimity between all the positions. The US having ventured very little, seems to have little to lose (in then Senator Kerry's own words; "the truth is we dragged our feet. The USA has been one of the principal foot-draggers in this entire [emissions control] effort"[7]). Washington is now under pressure to speak positively in favour of agreeing a global deal at this Assembly. The ICAO Council believes that with the likes of the EU and US on board the global deal train, opposition from the BRICs and others can be sidelined. Time will tell. And in any case, any 2013 Resolution is only a commitment to act and to study all the many loose ends that have not been attended to over the past 3 years. If there is a deal this year, then it really only signals the start of all the hard work since discussions have really mostly been about whether, not how, a global measure could work.

4. Technology and standards

4.1 CO_2 standard for new aircraft

ICAO has an environment committee, CAEP, reporting to Council which sets environmental standards on noise, NOx and is now developing the new CO_2 standard as well as one in parallel on PM emissions around airports. It comprises "independent" experts nominated by their member states but its remit has been strictly limited to "technical" issues. CAEP includes industry "observers" who

[7] http://cnsnews.com/news/article/sen-kerry-blames-us-dispute-over-eu-airlinecarbon-tax-we-dragged-our-feet

invariably outnumber all the rest put together and do a lot more than observe. They dominate the talking and all the technical analysis – courtesy of seemingly endless resources. It is no surprise then that CAEP's environmental standards, such as NOx and noise, have been developed over time to ensure that they don't really push industry to do anything more than it planned to do anyway; they merely codify the status quo.

Rather contrary to all this, ICAO prescribed that the CO_2 standard as an integral element in its "basket of technical measures" to reduce emissions should actually trigger additional emissions cuts beyond the business-as-usual historical trend of improving fuel efficiency of jet aircraft resulting from technology and design innovations. Since the first jets were introduced in the early 60s, the fuel efficiency of modern aircraft at entry into service has improved about 65% which means they are about as fuel efficient today – flying much faster, further and heavier – than the much slower, range limited, piston aircraft they replaced half a century ago[8].

To have to go beyond this historical trend of improving fuel efficiency could mean that the CO_2 standard might actually have a technology forcing effect. Not only might this impact manufacturers' prerogatives, fundamental new aircraft design characteristics of critical interest to airlines such as design speed or maximum range might be affected as these design elements can have a huge impact on lower fuel burn, lower emissions and lower operating costs. So with manufacturers and airlines through IATA joined at the hip, industry has been busy taking care of these threats to their worlds by ensuring the member state "experts" concluded that the standard would not restrict aircraft speed or range because such changes to "transport capability neutrality" would not be credited. Moreover stringency requirements in the standard, to take effect in 2020 or 2023, would not require technologies more advanced than those available on aircraft in 2016 four to seven years earlier.

4.2 Technology Forcing or Following?

Improving fuel efficiency at the fleet, aircraft, operations and manufacturer level is a key element in ICAO's "basket of measures" to address climate change. But ICAO's 2010 commitment to develop a CO_2 standard for new aircraft types was initially regarded as more a US-inspired attempt to deflect tougher calls to price aviation carbon. After all, ICAO resolutions already recognise the significant strides in efficiency achieved over the years. Manufacturers claim that the pace cannot be forced artificially as that would have safety implications. Europe was indeed lukewarm to the whole idea of a CO_2 standard, calling rather for an MBM and preferring that CAEP focus instead on tougher aircraft noise standards. In the end CAEP pursued both standards in parallel. The new Chapter 14 noise standard was recommended by CAEP and agreed by Council earlier this year. Different regional needs to address noise meant that the "global" standard favoured those with the lowest level of ambition resulting in a stringency level that will have absolutely minimal benefit for those living around airports – new aircraft are already quieter than what the new standard requires.

After more than three years of very difficult negotiations in a CAEP technical working group, it remains unclear whether the CO_2 standard will have any incremental impact on the fuel efficiency of new aircraft coming to market in say 10 year's time. These new aircraft types will all be better than their predecessors by virtue of having incorporated the latest measures to improve fuel efficiency. These measures are currently showing efficiency improvements of 0.5% to 0.6% per year. Without them, new aircraft wouldn't sell and nor could their vast billions in development costs be justified. While new aircraft will naturally become more efficient, a group of independent fuel experts commissioned by CAEP found that these market forces could go significantly further if they were supplemented by medium to strong regulatory pressure. How much further would depend on the level of stringency. What seems clear then is that an effective CO_2 standard cannot reflect the technology following approach adopted with noise.

4.3 Airport infrastructure and emissions

One obvious way to improve the industry's efficiency is to use ever larger aircraft on heavily trafficked routes. But large aircraft like the 747-800 and the A380 need ever wider wings to become and stay airborne. This means expensive infrastructure modifications at large hub airports – better separation of taxiways and gates to avoid collisions. All this costs money. If these investments aren't continually made and ICAO sticks to its current recommended wingspan limitation of 80m at airports, then aircraft like the A380, will suffer an eventual fleet-wide fuel burn penalty, generating 1.5MT of excess CO_2 each year. It will be important to maintain incentives for manufacturers to seek economies of scale as slots at key airports becomes scarcer and air routes become more congested.

[8] http://www.transportenvironment.org/publications/fuel-efficiency-commercial-aircraft-overview-historical-and-future-trends

5. What can be done?

This is a time for level heads. The moderates in ICAO, Europe - and yes North America, Australasia, Japan, Hong Kong and South-East Asian and Middle East carriers - largely understand that aviation cannot prosper unless sustainable solutions are found.

A global MBM by no means solves everything. One based solely on offsetting could in fact make the problem worse. Without exception, carbon credit systems, for example from the Clean Development Mechanism, award credits for reductions over a certain baseline development. Inevitably the question arises what that 'baseline' development actually is. A wind farm – to name a relatively benign example - can in principle only generate carbon credits if it is 100% certain it would not have been built without them – otherwise the credits are just hot air. And such certainty simply does not exist, no matter how much bureaucracy is thrown at proving so-called 'additionality.' We do not even want to mention here the existence of voluntary, i.e. not officially accredited, offsets.

But to turn down the opportunity to work towards the best global regime possible while condemning Europe to shrink the ETS to airspace would represent the worst of outcomes. Success will need a full, transparent and appropriately funded multi-year work program. This will require ICAO to change the way it works; a good challenge for the new Council President. Transport Ministries in contracting states will need to take a more even-handed approach to their carriers. Industry will need to drop its double game and realise that an effective market based measure that reduces emissions – not one relying on purchasing 40 cents-a-tonne questionable offsets – is good economics; emissions reductions in other (cheaper) sectors can do the job far quicker and more economically. An effective global MBM is industry's key to sustainability while technical and operational solutions mature. Yet industry opposition probably continues to represent the greatest obstacle to addressing aviation's climate change impacts.

6. What environmental NGOs want

- Global action to address emissions from aviation is already 16 years overdue. It is therefore imperative that ICAO agree at this 38th Assembly to implement a global MBM which should take effect in 2016. To achieve this, the next two years should develop all required details and a special Assembly agree its provisions in 2015.
- Preferably offsets would not feature in any global MBM; if they do, the strictest possible quality criteria must apply;
- Revenues generated from such an MBM should be used for purposes such as the Green Climate Fund;
- Issues such as the choice of MBM, MRV and implementation details, and quality criteria for access to any offsets required, should be discussed and agreed in an open committee based system where Observers have full access;
- SCRC can be accommodated through route-based de minimis provisions to developing countries with very low levels of aviation activity;
- A CO_2 standard for new aircraft types should form a central element of the ICAO basket of measures but it should deliver emissions reductions beyond what would have been achieved without the standard.
- ICAO should encourage states or regions to take action in advance of the any global measure. Such regional action could be based on departing flights or 50% of inbound and 50% of outbound flights. Again revenues should be used for climate change purposes.
- Environmental NGOs endorse an accelerated plan of action by industry to develop technological and operational solutions backed by ambitious targets agreed in ICAO.
- Governments must accelerate reforms and improvements to air traffic control systems. Progress is seriously lagging causing unnecessary emissions;
- NGOs are not opposed to industry pursuing alternative fuels, provided these eventual fuel sources are produced sustainably after land-use changes effects are fully accounted for and there is no impact on food production. Emissions reductions from such alternative fuels and the accountable carbon should be based on a full life-cycle analysis of emissions.
- Post Assembly ICAO should undertake a full review of its structure, procedures and decision-making process on climate change issues to ensure much improved transparency and effective process.

This document was prepared by Transport & Environment (T&E), the leading EU level campaigners for sustainable aviation. T&E is a founding member of ICSA, the International Coailition for Sustainable Aviation, which, as an accredited ICAO Observer, represents environmental NGOs and civil society at ICAO. For more information please see:

http://www.transportenvironment.org/what-we-do/aviation