## A real deal – how aviation can contribute to success in Paris

Fri 28 Aug 2015 – Huang Yue's *GreenAir* recent Commentary article highlights a key issue for agreeing a global market-based measure (GMBM) to tackle aviation emissions: "… those who emitted more in the past will shoulder more offsetting responsibilities." How this can be achieved is subject to discussion, but few could argue with the principle that the aviation industries of those developing countries now enjoying the sorts of growth rates that airlines from developed countries saw 20 and 30 years ago should not be penalised. How responsibility for the growth of emissions above the 2020 baseline should be apportioned is therefore an important question, writes *Andrew Murphy*. A GMBM without differentiation could see legacy carriers from mature markets assigned relatively small offsetting obligations compared to a developing country airline in a major growth phase.

There are a number of ways to fairly resolve this issue while adhering to the Chicago Convention's requirement of non-discrimination between airlines. Huang Yue's article outlines a number of options, including the Chinese proposal based on historic emissions. All proposals have merit, but Transport & Environment believes a measure based on differentiation by route group is the easiest to implement and presents the best chance to reach agreement.

Such an approach can well accommodate calls to recognise historical responsibility. The route-based approach can assign routes with large historical emissions greater responsibility to surrender emissions units. The transatlantic is the obvious place to start. Routes assigned greater emissions intensity also need to make up for those assigned less, in order that the 2020 carbon-neutral growth (CNG2020) baseline is respected – a fundamental requirement.

Given the range of options available, and the importance of the differentiation issue to all 190+ ICAO Parties, it is worrying that 12 months before the ICAO Assembly there appears to be little information on this issue that is available either publicly or to many ICAO States. Compare this to the ongoing UNFCCC process, where at the Lima COP a draft of the agreement was published a year before it is was due to be ratified in Paris. That text is now undergoing substantial revisions, but they are revisions involving all 196 Parties and they are taking place with public scrutiny. That is how confidence can be built in the difficult world of climate negotiations.

Timelines and transparency are not the only evidence of a difference of approach between ICAO and the work of the UNFCCC and its Parties. In fact, since ICAO's 2010 Assembly settled on the aspirational goal of carbon-neutral growth from 2020, there has been a sea change in the global approach to reducing emissions. Countries as diverse as Djibouti, the Marshall Islands, China and the United States are now submitting INDCs (Intended Nationally Determined Contributions) that outline their contributions to reducing overall GHG emissions sufficiently to keep global warming within 2 degrees C – the agreed UNFCCC target to avoid catastrophic climate change.

Degrees of promised effort vary and the process is certainly still far away from ensuring the 2-degree increase is avoided, but commitments are open and subject to scrutiny by all other UNFCCC parties and the general public. Moreover the world's two biggest emitters, China and the US, have signed an agreement that will see Chinese emissions peak and US emissions decline to an agreed time path – a clear sign that while differentiation is essential, it is not a roadblock to progress.

The UNFCCC process is driven by the stark awareness that if the world wants to keep a temperature increase under 2 degrees C, the overall carbon budget allows us to emit no more than one trillion tonnes of carbon (1,000 PgC). As of 2011, 515 PgC have already been emitted and at current rates we will exhaust the remaining budget (485 PgC) by 2045. So emissions must peak now and then start to decline sharply, including from international aviation.

While offsetting and emissions trading have an important role to play in resolving aviation's climate impacts, they do not solve the problem that the sector will continue to consume a growing share of the remaining global carbon budget. Its emissions are projected to grow 270% by 2050. Offsetting is therefore only an effective response if it is complemented with measures to reduce emissions within the sector – such as effective

efficiency standards and, ultimately, demand management through, for example, ending subsidies to the sector.

ICAO's 2013 Assembly resolution on climate change (A38-18) did commit to explore the feasibility of a long-term aspirational goal beyond 2020 but work is yet to start – perhaps because of the absence of the sort of scrutiny that INDC commitments are now being subject to under the UNFCCC. Paris needs to set out the overall level of ambition for international aviation, together with a timeline, because without forthright action to limit and reduce aviation (and shipping) emissions, the 2-degree target will not be realised whatever national efforts might produce.

ICAO needs to agree a long-term reduction target and develop a pathway to achieve it. Its commitment to a 2% annual fleet wide improvement in efficiency needs to be measured and ongoing results made public. Technical and operational reductions from the 'basket of measures' need to be regularly quantified. There is still (just) time for the historical emitters, who together with their manufacturers and carriers heavily influence the work to develop ICAO's CO2 standard, to lock in future in-sector reductions that are so critical to slowing absolute emissions growth. That means adopting the highest stringency level under consideration for new aircraft types and effectively regulating emissions from new in-production aircraft that will dominate deliveries until at least 2030. Without these steps, the historical emitters will have done the sector – and humanity – a lasting disservice.

Paris also needs to recognise that mitigation of domestic aviation emissions, which account for about one third of global emissions, is important and needs to be prioritised and incorporated into INDC plans. New Zealand moved first with an upstream emissions trading scheme (ETS) in 2010. The EU's ETS covered domestic and intra EU aviation from 2012. Meanwhile, China is preparing to introduce carbon trading on domestic routes.

A number of INDCs reference the need to reduce domestic aviation emissions, such as those from Canada and Japan. US domestic aviation emissions, however, exceed all other countries' domestic emissions combined, and account for about 20% of global aviation emissions. Indeed North American domestic aviation emissions almost equate to all the international emissions of ICAO's 195 members bar its top 11. Paris needs to address all aviation emissions, domestic and international.

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Paris COP: The elephants in the room (graphic: T&E):