Rio, Kyoto, Brussels and Chicago: Reconciling principles related to international air transport emissions

by Chris Lyle, July 2012

The Rio+20 UN Conference on Sustainable Development in June 2012 was notable for its lack of ambition and goals, particularly when compared with the original United Nations Conference on Environment and Development (UNCED) in 1992. UNCED was associated with the creation of the UNFCCC in the same year, which led in turn in 1997 to the UNFCCC's Kyoto Protocol with its binding commitments, for industrialised countries, to the reduction of GHG emissions.

Rio+20 did however reaffirm UNCED principles including, against the recorded objections of Japan and the United States, particular reference to that of 'common but differentiated responsibilities' of States (CBDR, Principle 7) which also appears in the UNFCCC (Article 3.1).

The traditional application of CBDR in the UNFCCC has been to establish different requirements "according to the level of economic development and different contributions to global environmental degradation" of different groups of countries, in the form of distinction between Annex I (industrialised) and non-Annex I countries. However, the Convention does not preclude alternative forms of differentiation in future agreements and there is reported movement within the UNFCCC process to modify the present distinction. But there is little doubt that application of CBDR will be retained in some shape or form for the foreseeable future.

In accordance with Article 2.2 of the Kyoto Protocol, Annex I Parties are required to pursue limitation or reduction of GHGs from international aviation through ICAO. In practice, not just the 39 ratifying UNFCCC Annex I States but all 191 contracting States of ICAO are involved in the process, a primary reason being that the Chicago Convention includes provisions calling for uniform application by a country to the aircraft of all States. ICAO can come up with its own ideas on the application of CBDR, but these would have to be consistent with its own provisions and accepted by the UNFCCC.

Given desired continuing growth in air transport, it is by now widely recognised that some form of market-based measures (MBMs) for air transport emissions will be necessary to complement the operational and technical elements, in a 'basket' of measures, although their global form has yet to be determined. In the light of limited progress by ICAO and recognition by its Assembly in 2004 that one approach to dealing with MBMs would be for States to incorporate emissions from international aviation into their emissions trading schemes (ETS) consistent with the UNFCCC process, the European Union decided to include international aviation in its existing EU ETS with effect from 1 January 2012.

Once a decision had been taken to include flights to and from EU territory, which make up the bulk of the emissions concerned, the application to non-EU as well EU carriers was in practice necessary to meet the Chicago provisions on equal application, with their aim of avoiding a competitive disadvantage. The EU action has been politicised as unilateral and extraterritorial but deemed legal by the European Court of Justice and generally consistent with WTO and GATS provisions by an eminent lawyer at Cambridge University (*see article*). At present, there is a standoff between European and other States, with China and India in particular instructing their airlines not to participate in the scheme.

There is no substantive acceptance of CBDR in the European ETS – the scheme includes a *de minimis* provision under which commercial operators with a low level of aviation activity in Europe are excluded from its scope but this has a negligible effect for non-EU carriers, being limited to carriers performing fewer than 243 flights to and from EU airports in three consecutive four-month periods, or emitting less than 10,000 tonnes of CO2 in a year.

International aviation, along with shipping, was isolated out from other sectors in Kyoto essentially because its operational nature would not readily fit in with national GHG inventories and commitments. This has provided focus and application of specific expertise in a context of understanding of the industry, if inevitably with a penchant towards its protection. But there is a substantial downside.

Air transport taken in isolation is presently unsustainable from an environmental perspective, being directly responsible for 2% of global man-made CO2 emissions and just 1% of GDP, a ratio of 2:1, but its value lies in delivering economic and social goods and services. For example, travel and tourism together, encompassing the air transport component,

represent globally about 5% both of global CO2 emissions and of GDP, a ratio of 1:1. Thus air transport in isolation may not easily become sustainable, but travel and tourism together, in which air transport plays a crucial role, may not only be sustainable but actually a driver of green growth.

Isolated consideration of air transport may well signify inadequate assessment of social and economic effects. Imposition of air transport levies in originating markets impacts not just airlines but can have a greater, and widely varying, effect on destination economies. Imposition of market-based measures only on airlines with principal place of business in major markets still impacts the economies of destination markets to which these airlines fly, whether or not airlines from destination markets are exempted.

Differing circumstances

In finding an appropriate instrument to reduce international aviation emissions while minimising the economic and administrative impact on the industry and society, it is clear that a 'one size fits all' global model would need to include some elements of differentiation to reflect the widely differing circumstances of States. As stated in the Rio+20 declaration: "We underscore the special challenges facing the most vulnerable countries and in particular African countries, least developed countries, landlocked developing countries and small island developing States, as well as the specific challenges facing the middle-income countries."

The concept of *de minimis* application of globally-agreed MBMs was included in ICAO Assembly Resolution A37-19 in 2010 (*see Commentary article*). ICAO is reportedly now considering approaches to CBDR including one differentiating on the basis of specific air routes. A concept along these lines was proposed in several earlier *GreenAir* Commentaries by myself and is worth revisiting in the current context.

In summary, prioritising countries by route or route group irrespective of the origin of airlines and traffic would address broader economic impact issues, reconcile ICAO and UNFCCC provisions, and build on implementation principles already available in the UNWTO/ICAO joint study on 'Essential Service and Tourism Development Routes'.

Under such a concept, a complete **exemption** from MBMs for a specified period prior to phase-in would apply to all flights to and from LDCs, LLDCs and SIDS (excluding land-contiguous SIDS such as Bahrain and Singapore). This would be a total of 86 countries but a small proportion of the world's traffic. Carbon leakage would in practice be minimal because there would be additional costs and inconvenience with very limited benefit to airlines diverting to the countries concerned *en route* elsewhere – there is not a single airport in any of these countries in the world's top 150 by passenger ranking. Consideration could also be given to including additional sub-Saharan developing countries.

There would be **phase-in** application to routes to/from other developing countries with traffic below some *de minimis* contribution threshold of their airlines, say 0.5% of global tonne-kilometres performed, and, with different parameters, to other non-Annex I States, or modified classification as determined by the UNFCCC. This level of application would need to be carefully fenced to avoid carbon leakage. For example, multiple stage flights might need to be considered throughout according to the origin and destination of the flight, to avoid a flight between other countries taking in a developing country and qualifying for a reduction for the entire flight. In practise, any discrimination effect would probably be no more than that already embedded in the European ETS 'last point of departure' application. Any residual fuel bunkering effect should by definition benefit developing countries by adding air capacity to their territories.

Finally, all other routes – between developed countries – would be subject from the outset to **full** MBM assessment.

All airlines, regardless, would be required to report all emissions, including those exempted from the MBM.

An overall objective of this MBM approach, as suggested by Martinus van Schalkwyk, Minister of Tourism for South Africa, would be a 'zero net incidence' for developing countries, through differentiated targets, financial transfer mechanisms, and/or reductions in emissions levies or requirements for emissions permits.

Representatives of the European Commission have publicly opposed the concept of route application of MBMs but the Commission has frequently reiterated that it will apply EU ETS exemptions for airlines of States which have equivalent

measures to the scheme in place, which becomes in effect a route group application. However, the lawyers may still have a field day with "equivalent" vs Chicago Article 11's "without distinction as to nationality" and Article15's "uniform"!

Other key factors

Of course CBDR is just one element in the search for a global agreement. In addition to the overall framework, other key factors to be determined include:

- **Treatment of revenues:** ICAO and industry are insisting that any revenues earned from MBMs are recycled not only to environmental mitigation but also to air transport. The UNFCCC sees revenues going to where they can produce the most effective climate change mitigation. There is no mandatory earmarking at all of revenues raised by the EU ETS, although some EU States, notably Germany, have chosen to apply them towards mitigating climate change. Aviation wants to have its cake and eat it: an 'open' regime to offset costs and a 'closed' one on revenues. Some revenues would presumably be used for administration of an international aviation MBM scheme.

- **Governance:** Fundamental to administration and enforcement of a global sectoral scheme would be effective performance monitoring, appropriate indicators, targets, reporting methods and auditing processes. As for reporting, while provision of statistics is a requirement under the Chicago Convention (Article 67), submission of data to ICAO directly by States and their airlines is by no means universal. ICAO is only now introducing a requirement for collection of fuel consumption data and has no collection *per se* for CO2 or any other GHGs, although a number of CO2 assessment models are on tap and it has developed a Carbon Calculator. It would therefore seem that the UNFCCC would be the better vehicle for data compilation, where it already includes national GHG reporting. Furthermore, it is States that are ultimately members of the UNFCCC and of ICAO and it is difficult to conceive what action might be taken against a target-failing or miscreant aviation sector unless air carriers are individually identified and linked back with the State of their principal place of business. In this regard, the legal authority of ICAO decisions is limited, and notably so on economic matters, deriving from their moral or political value in expressing a collective view of States. This would suggest a changed relationship with the UNFCCC, which should also recognise that the evolving ICAO framework addresses all States not just Annex I countries. Ultimately an additional protocol may be required, with recognition of ICAO continuing as the lead technical advisory agency on international aviation.

- **Carbon market access**: International aviation is presently unable to benefit from application of the Kyoto provisions regarding Joint Implementation (JI, Article 6), the Clean Development Mechanism (CDM, Article 12) and Emissions Trading (ET, Article 17). There are of course existing voluntary carbon trading markets other than those of Kyoto – for example the Chicago Climate Exchange and its affiliates in Europe, Australia, Canada, China and India – on which airlines are free to trade. So access to the relevant Kyoto mechanisms is not essential, even if it would be advantageous for both the industry and global comity. Resolution of these issues might form part of revised UNFCCC/Kyoto provisions.

State of play

After nearly 15 years of limited progress on the MBM aspect of its Kyoto mandate, using a variety of organisational mechanisms, urgency was imposed by ICAO's Assembly Resolution A37-19 in 2010. Early in 2012 the ICAO Council decided to take a direct, hands-on approach through an Ad hoc Working Group. This Group, while building on the earlier experience and results gained, decided to take a fresh look by examining six options for a global MBM scheme. The Group dropped options including a global departure levy or a global carbon levy without detailed evaluation – although in many markets these would be the preferred approach for industry since while the impact on emissions may not be precise, the price is a known quantity not subject to the wide fluctuations of the carbon market. In June 2012 the Council agreed to limit further consideration to three options (*see article*): global mandatory offsetting; global mandatory offsetting complemented by a revenue generation mechanism; and global emissions trading (cap-and-trade system).

This is sudden and considerable progress by ICAO in a six-month period, but the further challenges are formidable. For example, economic and environmental impact studies have yet to be undertaken of any of the options. These will necessarily have to encompass a range of scenarios for each option along with a range of scenarios for CBDR under each option.

If cap-and-trade is not the selected option, can the solution be made to tally readily with the EU ETS or will that be retained in some form under mutual agreement? Will Europe be prepared to make modifications to its ETS without a clear commitment from other countries to the global MBM scheme? Under what conditions will other countries, and notably at present China and India, be prepared to accept a modified EU ETS? And will other countries actually commit to a global MBM system in practice? The United States signed but did not ratify the Kyoto Protocol and, along with Japan, is strongly opposed to CBDR, with Canada ratifying Kyoto but subsequently reneging on its commitments.

More generally, environmental economic policy in recent years in both the ICAO Council and the Assembly has moved from a traditional consensus adoption to majority decision-making with associated reservations (those making the reservations not being bound by the provisions concerned). Will the Assembly next year be able to return to the consensus necessary to form the basis of a global GHG mitigation framework? The time frame is now very short.

Some perspective

Rio+20 emphasised "that climate change is one of the greatest challenges of our time" and expressed "profound alarm that emissions of greenhouse gases continue to rise globally". The Conference underscored "that combating climate change requires urgent and ambitious action, in accordance with the principles and provisions of the UNFCCC".

ICAO continues to do a formidable job with its UNFCCC mandate on the technical and operational front, and in propounding and disseminating the action plans of States, but continues to face an uphill task on MBMs. If it is to succeed, ICAO will need to place greater emphasis on broader social and economic implications and work directly and transparently with the public and private sector institutions concerned with these implications.

As stated in the January 2012 report of the UN Secretary-General's High-Level Panel on Global Sustainability: "We must overcome the legacy of fragmented institutions established around single issue silos." Flying solo is not an option.

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This article was published in GreenAir Online, July 2012