Action and partnership on aviation emissions

Dr Fang Liu is the Secretary General of the International Civil Aviation Organization (ICAO).

Air transport operators have been intensely and successfully working to reduce civil aviation carbon emissions since aircraft first took flight, with fuel cost imperatives being the largest driver of many efficiency performance improvements.

Today, greater awareness of the need for urgent climate action and increasing recognition of the critical role which aviation connectivity plays in sustainable socio-economic development have provided the global air transport community with further motivation to adopt forward-looking emissions reduction targets, consistent with the needs of both environmentally responsible and sustainable air transport and the near- and long-term needs of society.

These considerations have been especially front of mind post-2015, when the adoption of the Agenda 2030 Sustainable Development Goals (SDGs) and the Paris Agreement made at COP/21, the Paris Climate Conference, set the focus of aviation’s next important climate change challenge, a global-market based Measure (MBM) for international flight emissions, squarely on the International Civil Aviation Organization (ICAO) and its Member States.

But what these dual achievements through the United Nations also served to stress was that truly sustainable development is dependent on three pillars, all balanced: economic development, social development and environment protection. Given aviation’s fundamental role in fostering global peace and prosperity, our sector must therefore pursue balanced strategies supporting today’s much-needed social, economic and environmental outcomes.

It was my honour to highlight this important role of international civil aviation at the UN Sustainable Development Summit last September, where Agenda 2030 was adopted. Of its 17 Sustainable Development Goals (SDGs), ICAO’s Strategic Objectives contributes to 13, and our environmental protection work supports 10. This includes SDG 7, Access to renewable energy and SDG 13, Take urgent action to combat climate change and its impacts.

What that experience helped to consolidate for me was that aviation’s role in addressing the world’s challenges has never been more important, and that our global community
must work more closely together than ever before to ensure that reliable access to safe, secure and environmentally-responsible air transport is made as universally accessible as possible in the years ahead.

Skyway’s readers already familiar with ICAO’s ongoing No Country Left Behind initiative will be fully aware that ICAO views the effective implementation of our global standards and policies as instrumental to this process and its objectives.

Access to safe and secure air transport is not a privilege but a responsibility, and one which States must earn by organising and resourcing effective civil aviation oversight. But many States do not have those resources and capabilities readily available, and under No Country Left Behind, ICAO seeks to foster partnership and investment to address these needs for assistance and capacity-building.

We are seeing great interest and support for our aviation development activities from our Member States, both in terms of voluntary contributions and requests for assistance, and notably the level of enthusiasm and participation demonstrated at our first ever ICAO World Aviation Forum (IWAF) last year. The second IWAF will take place this year on 26 September, the day before the ICAO Assembly, and we expect that this momentum towards more intensive partnerships for sustainable aviation development will continue to build, well into the future.

All of these activities have been given greater impetus in light of the growth which our sector is now undergoing, with flight and passenger volumes projected to double by 2030. Aviation’s current global economic impact (direct and indirect) is estimated at $2.7 trillion or roughly 3.5% of world GDP, and this too will grow as aviation grows, as will the current 62 million jobs it sustains globally.

The economic factors are critical to ICAO’s planning, but once again they must be balanced with strong social commitments and concrete environmental action to support balanced and truly sustainable growth and development.

A comprehensive approach to aviation and the environment

According to the Intergovernmental Panel on Climate Change (IPCC), aviation accounts for approximately 2% of global anthropogenic (human-made) CO₂ emissions and international aviation is responsible for approximately 1.3%. The most recent estimates by ICAO anticipate aviation fuel consumption growing 2.8 to 3.9% times by 2040, compared to 2010 levels.

ICAO and its States have been pursuing a basket of measures to address aviation’s noise and fuel emissions, including technological innovation, more efficient operational procedures, sustainable alternative fuels and market-based measures. These actions support the aspirational targets agreed by ICAO’s Member States at our 38th Assembly in 2013, which identified fuel efficiency improvements at a rate of 2% per year for international aviation through 2050, as well as the goal of carbon neutral growth for global air transport from 2020.

Once again, cooperation, partnerships and innovation are key to aviation’s success in limiting its environmental impacts, and to how our sector can multiply its actions on emissions reductions.

It is important to recognise that these goals and objectives are technically feasible. Fuel efficiency for aviation continues to improve and today’s commercial aircraft are 80% less polluting and 75% quieter than the first passenger jets. This is largely the result of technological innovations, but also the more efficient air navigation management and refined operational procedures which EUROCONTROL is helping to deliver, the increasing deployment of sustainable alternative fuels, and ICAO’s work supporting improved global awareness and capacity-building for aviation emissions reduction, notably through the Action Plans we have assisted our Member States in developing.

The recommendation of the first Global CO₂ Certification Standard for aircraft by ICAO’s Committee on Aviation Environmental Protection also represents some new and significant progress. And the continued implementation of our Global Air Navigation Plan over the next decade will further enhance the efficiency of air traffic management systems and reduce emissions.

Expectations for the global aviation MBM at ICAO’s 39th Assembly

TAKEN TOGETHER, THIS PROGRESS is already helping international aviation to exceed the 2% per year efficiency improvement goal which has been established. Projections still point to a gap in our overall carbon-neutral growth target, however, and to address that ICAO has been working hard to achieve consensus on a global-market based measure, or global MBM, for international flight emissions.

ICAO’s 36-State Governing Council established a dedicated Environment Advisory Group (EAG) in 2014 to begin ironing out the basic MBM design framework, and we have consulted widely with our 191 Member States, industry groups and civil society in the intervening months.

Most recently we held a high-level meeting on the subject at our Montréal Headquarters where all 191 ICAO Member States were invited to attend. And thanks to the series of global outreach events we organised under the Global Aviation Dialogues (GLADs) banner, these participants arrived very well-informed.

Several main areas of agreement were achieved. In the first place States have recognised the need for the scheme to take into account each participant’s...
special circumstances and respective capabilities while minimising possible distortions to the market, and they intend for it to be administratively simple and cost effective, route-based (to ensure a level playing field) and informed by transparent and objective aviation metrics.

States have also highlighted the need to ensure the quality and effectiveness of the system, and ICAO is developing robust monitoring, reporting and verification (MRV) procedures and criteria for the definition of emissions units.

It was also agreed that every State should have an opportunity to voluntarily participate in the scheme and we called for the provision of assistance and capacity building, especially in developing States, to better ensure that No Country is Left Behind.

**Partnerships key to environmental success**

**ICAO HAS ALREADY GAINED** significant experience in establishing partnerships to strengthen the national capabilities of our Member States. We are currently involved in a capacity-building project financed by the European Union and are collaborating with the United Nations Development Programme (UNDP) on a targeted CO₂ mitigation project financed by the Global Environment Facility (GEF).

The ICAO-European Union joint assistance project, Capacity Building for CO₂ Mitigation from International Aviation, is a €6.5-million initiative to assist 14 States from Africa and the Caribbean in the development of their action plans on international aviation CO₂ emissions reduction activities. It also aids them in setting-up MRV systems for the establishment of CO₂ emissions inventories from international aviation. The project is moving towards the implementation of mitigation measures in pilot States, such as the installation of solar systems in airports, improvements to air traffic management (ATM) systems and procedures and feasibility studies on alternative fuels for aviation.

ICAO’s partnership project with the United Nations Development Programme (UNDP) and the Global Environment Fund (GEF), Transforming the global aviation sector: Emission reduction from international aviation, is a $1.9-million joint assistance project which includes the implementation of pilot renewable energy projects Jamaica.

Both of these projects will be helpful toward the development of further pilot projects and support materials for other States, thus multiplying the associated environmental benefits.

**A strong environmental record and a sustainable future ahead**

**ICAO AND THE GLOBAL** aviation community have a proven track record of overcoming significant political and technical challenges in order to secure the common good of the peoples we serve. We have consistently drawn on our strengths, cooperation and consensus, for over 70 years, to create a safe and efficient network that connects every country on earth, and we have done so on the basis of an exemplary environmental track record when compared to other major industrial sectors.

International aviation emissions are not included in the Paris Agreement agreed at the COP/21 meeting last December, so the peoples of the world are expecting ICAO to deliver environmental action. These expectations are driven by passionate hopes and firm expectations, and we must work together to ensure our shared success and common future.

Prior to her appointment as Secretary General, Dr Liu served for eight years as the Director of ICAO’s Bureau of Administration and Services (ADB).

During her tenure, she contributed extensively to ICAO’s Senior Management Group and also participated in the High-Level Committee on Management within the United Nations common system. Prior to joining ICAO, Dr Liu served at the General Administration of Civil Aviation of China (CAAC), where over the course of twenty years she successively held the posts of Legal Counsel, Deputy Director, Director and Deputy Director General, Department of International Affairs and Cooperation. Dr Liu earned a PhD in international law at Wuhan University, China, and a Master’s degree in air and space law at Leiden University, the Netherlands.