

Ruwantissa Abeyratne

Strategic Issues in Air Transport

Legal, Economic and Technical Aspects

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Preface

Currently, and arguably throughout the twenty-first century, along with new issues that might emerge in air transport, there are four strategic issues that will continue to apply to air transport: safety; security; environmental protection; and sustainable development.

Of these, safety, security and environmental protection were heavily discussed at the 37th Session of the Assembly convened by the International Civil Aviation Organization (ICAO) in Montreal from 28 September to 8 October 2011. The Assembly was attended by a record 1,588 participants from 176 Member States and 40 international organizations involved in civil aviation, achieved important advancements in aviation safety and aviation security assuring even greater safety performance in the already safest and most secure mode of mass transport in the world.

Reaffirming ICAO's its leadership role, the meeting adopted a comprehensive resolution to reduce the impact of aviation emissions on climate change. The agreement provides a roadmap for action through 2050 for the 190 Member States of the Organization. Solidifying its global influence, the Organization signed numerous international agreements, including cooperation agreements with regional civil aviation organizations and bodies from all regions of the world.

The Assembly endorsed a proactive safety strategy based on the sharing of critical safety information among governments and industry stakeholders. It also endorsed ICAO's plan to establish a multi-disciplinary approach to address the critical issue of runway safety. This will bring together representatives from airlines, airports, air navigation service providers and regulatory authorities. Following a successful diplomatic Conference in Beijing in August 2010, the Assembly built on this achievement by recognizing the need to strengthen aviation security worldwide. In a Declaration, unanimously adopted by participants, international commitment was reaffirmed to enhance aviation security collaboratively and proactively through screening technologies to detect prohibited articles, strengthening international standards, improving security information-sharing and providing capacity-building assistance to States in need. The Assembly also put its full support behind a comprehensive, new ICAO aviation security strategy.

The Resolution adopted by the Assembly on climate change makes ICAO the first United Nations Agency to lead a sector in the establishment of a globally harmonized agreement for addressing its CO₂ emissions. The resolution was adopted with some States expressing reservations and calling upon the ICAO Council to continue its work on specific aspects of the agreement. This remarkable accomplishment came only 2 months before negotiations are again undertaken by these very same States at the 16th Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC) meeting scheduled for December in Mexico.

Against this backdrop, this book addresses these four issues and the various complex areas that they present.

Montreal

Ruwantissa Abeyratne

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Chapter 1

Strategic Issues and Regulation

The genesis of regulation of strategic issues lies in the Assembly of the International Civil Aviation Organization (ICAO)¹ and the 37th Session of the Assembly, held in Montreal from 28 September to 8 October 2010, was a signal event in this regard. Many strategic issues which were addressed at the Assembly and were part of Resolutions adopted therein had earlier been the focus of ICAO events, meetings and conferences as the discussion below will elaborate.

1.1 Prelude to the Assembly

A hive of activity at ICAO in the first half of 2010 reflected the culmination of an energetic and active triennium (2008–2010) during which the Organization endeavoured to attain global recognition as a performance and results-driven and values-based Organization. This period also brought to bear ICAO's transition from being mostly a document spewing international body over the past several decades to becoming one which also implemented its policies and assisted its member States² as a priority in the areas of safety, security, environmental protection and sustainable development of air transport. In particular, the activities of the first half of 2010, as a countdown to the 37th session of the Assembly, were a fitting precursor to the Assembly which made useful inroads into these three areas.

¹ ICAO is the specialized agency of the United Nations handling issues of international civil aviation. ICAO was established by the Convention on International Civil Aviation, signed at Chicago on 7 December 1944 (Chicago Convention). One of the overarching objectives of ICAO, as contained in Article 43 of the Convention is to foster the planning and development of international air transport so as to meet the needs of the peoples for safe, regular, efficient and economical air transport. ICAO has 190 member States, who become members of ICAO by ratifying or otherwise issuing notice of adherence to the Chicago Convention. See ICAO Doc 7300/9 Ninth Edition 2008.

² See Abeyratne (2009).

1.1.1 Safety

From 29 March to 1 April, ICAO held a High-level Safety Conference which was attended by 551 participants, including Ministers and Directors General of Civil Aviation from 117 Member States as well as representatives from 32 international organizations. The Conference called on ICAO to facilitate the collection, analysis and dissemination of safety information provided by States and industry partners and resulted in a strong mandate for the Organization to create a strategy to further reduce the global accident rate through the sharing of safety-related information among Member States and the air transport industry.

A comprehensive systems approach (CSA) was continued with regard to the Universal Safety Oversight Programme (USOAP). In the first 6 months of 2010, 14 States received CSA audits, bringing the total number of completed safety oversight audits to 159. Under the direction of the Assembly and the Council of ICAO, development began of a continuous monitoring approach (CMA) for the continuation of the USOAP beyond 2010. Consistent with safety management principles, ICAO's Integrated Safety Trend Analysis and Reporting System (iSTARS) continued being developed throughout 2010. iSTARS offers analysis capability for monitoring the achievement of global safety objectives through the assessment of numerous criteria.

The ICAO Online Aircraft Safety Information System (OASIS) which contains pertinent information concerning all aircraft habitually involved in international civil aviation, including registration, ownership and control, in accordance with Article 21 of the Convention on International Civil Aviation³ was developed with the capability to establish unique identifiers for aircraft using two fields of data that, when combined, uniquely identify all aircraft entered into the database, regardless of their current registration marks. This repository of information will contain a history of aircraft ownership and control will thus be available.

In 2010 ICAO commenced establishing an international register of Air Operator Certificates (AOCs) to facilitate the surveillance of foreign operators. The project will take place in two development phases. On another front, ICAO continued its close collaboration with IATA on work related to training and qualifications initiatives (ITQI). Work progressed specifically on the development of guidance

³ *Convention on International Civil Aviation*, signed at Chicago on 7 December 1944 (hereafter referred to as the Chicago Convention), ICAO Doc 7300/9, 2006. Article 21 provides that each contracting State undertakes to supply to any other contracting State or to the International Civil Aviation Organization, on demand, information concerning the registration and ownership of any particular aircraft registered in that State. In addition, each contracting State is required to furnish reports to ICAO, under such regulations as the latter may prescribe, giving such pertinent data as can be made available concerning the ownership and control of aircraft registered in that State and habitually engaged in international air navigation. The data thus obtained by ICAO is made available by it on request to the other contracting States.

material for inclusion in the Procedures for Air Navigation Services – Training⁴ on competency-based training and assessment of maintenance personnel, evidence-based training for flight crew, and instructor and examiner qualifications. A symposium on the next generation of aviation professionals (NGAP) was held in March 2010. The theme was *Looking beyond the economic crisis: mobilizing the aviation community to recruit, educate, train and retain the next generation of aviation professionals*.⁵

Also in 2010, A new dangerous goods training programme was launched. The programme consists of a training manual and a course which will assist States in complying with the broad principles governing the international transport of dangerous goods by air outlined in Annex 18 to the Chicago Convention which addresses issues related to the safe transport of dangerous goods by air and detailed in the *Technical Instructions for the Safe Transport of Dangerous Goods by Air*.⁶ Also, with a view to promoting performance based navigation (PBN), and assisting States in their PBN implementation ICAO planned PBN airspace design workshops, PBN operational approval courses and continuous descent operations workshops.

1.1.2 Security

In response to the attempted sabotage of Northwest Airlines Flight 253 on 25 December 2009,⁷ ICAO used the AVSEC Point of Contact (PoC) Network to communicate information and recommendations to participating States, numbering 99 as of 31 May 2010. States were encouraged to conduct risk assessments and implement appropriate screening measures in light of the incident, and were reminded of the need for cooperation in all matters related to aviation security. The twenty-first meeting of the AVSEC Panel was held at ICAO Headquarters from 22 to 26 March 2010. The Panel considered the threat and risk environment in light of the attempted sabotage of 25 December 2009 and issued a number of recommendations. Provisions in Annex 17 to the Chicago Convention on Security were updated and strengthened, and are expected to become applicable in 2011, following formal consultation with Member States and approval by the Council.

⁴ *PANS-TRG*, Doc 9868.

⁵ The event attracted 403 participants from 71 States and 14 international organizations. Especially noteworthy was the participation of over 80 students involved in aviation-related university and college programmes. Following the symposium, the NGAP Task Force focused its work on the development of competencies for flight crew, air traffic management professionals and maintenance personnel.

⁶ Doc 9284.

⁷ For a discussion of this incident, See Abeyratne(2010a).

The sixth meeting of the Facilitation Panel, held at ICAO Headquarters from 10 to 14 May 2010, recommended the introduction of a new Standard in Annex 9 on facilitation of air transport, obliging all States to adhere to internationally recognized requirements for the transmission of advance passenger information (API) data. The Facilitation Panel also agreed on a new set of guidelines for the passenger name record (PNR) data exchange that will serve to help States implement their national PNR programmes. It also agreed to commence work, on an urgent basis, on the development of new guidelines for advanced data exchange programmes in coordination with the World Customs Organization and IATA.

1.1.3 Environmental Protection

The eighth meeting of the Committee on Aviation Environmental Protection (CAEP/8) was held from 1 to 12 February. The meeting was attended by 184 participants nominated by 22 Member States and 13 international organizations. The meeting dealt with various alternatives for reducing and limiting the environmental impact of aviation. Standards, policies and guidance material on measures to address aircraft noise and engine emissions were developed, including technological improvements; operating procedures; proper organization of air traffic; appropriate airport and land-use planning; and the use of market based options.

ICAO held its third Environmental Colloquium from 11 to 14 May 2010 in Montréal. The objective of the Colloquium was to provide the most up-to-date information that will form the basis for discussions and high-level decisions at the 37th Session of the Assembly. A tutorial was arranged on the first day to familiarize the participants with vocabulary and concepts used in the description, measurement, regulation, and management of aviation greenhouse gas (GHG) emissions. The Colloquium addressed the latest developments on the assessment of aviation emissions and highlighted various solutions to address related environmental impacts. It also focused on related key developments emanating from the ICAO High-level Meeting on International Aviation and Climate Change held in October 2009, the ICAO Conference on Aviation and Alternative Fuels held in Rio de Janeiro in November 2009, the United Nations Framework Convention on Climate Change (UNFCCC) 15th Conference of Parties (COP/15) held in Copenhagen in December 2009 and CAEP/8. The Colloquium had wide regional participation from representatives of ICAO's Member States, international organizations, aviation industries and academic/research institutions.

1.1.4 Law

ICAO held the Diplomatic Conference on Aviation Security in Beijing, China, from 30 August to 10 September 2010. Seventy-six States and four international

organizations participated in the Conference. The Conference adopted the *Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation* (Beijing Convention) and the *Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of Aircraft* (Beijing Protocol). These treaties criminalize, *inter alia*, the act of using civil aircraft as a weapon, and of using dangerous materials to attack aircraft or other targets on the ground. The unlawful transport of biological, chemical and nuclear weapons and their related material has been made punishable. Moreover, the criminal liability of directors and organizers of an offence under the treaties is specifically covered. Making a threat to commit an offence under the treaties may also trigger criminal liability, when the circumstances indicate that the threat is credible. Each of the two treaties requires 22 ratifications to bring it into force. As of 1 October 2010, the Convention had been signed by 20 States and the Protocol by 21 States.

1.2 The Assembly

1.2.1 Safety

One of the first areas in safety that the Assembly considered was safety management systems and safety data. As a first step, the Assembly considered a report on the evolution of ICAO's proactive safety management approach. This report provided an overview of ICAO's safety analysis strategy, including the eventual integration of operational data generated through future implementation of the State safety programme (SSP) and safety management systems (SMS). Also discussed were ICAO's leadership role in SMS; the development of common safety metrics, analysis methods and interoperable database systems to support safety performance measurement and ensure effective sharing of safety information among States; common methods and processes related to SMS implementation, acceptance, performance measurement and oversight; the need to educate senior management regarding their respective roles in support of SMS implementation and to develop skills within States and aviation organizations to support safety risk management activities, in particular, the ability to investigate safety related events of low consequence; the need for a definition of global safety metrics necessary to support a harmonized approach to safety analysis and cited The Civil Air Navigation Services Organisation (CANSO)'s work in development of leading and lagging safety indicators; and the need for the development of an international standard for SMS terms and definitions, risk forecasting techniques and computer systems to support proactive safety analysis. The Assembly also considered the need for the development of a new Annex to the Chicago Convention which addressed safety management.

The Assembly adopted a Resolution on global planning for safety and sustainability which recognized *inter alia*: the importance of a global framework to support the Strategic Objectives of ICAO; the importance of regional and

national plans and initiatives based on the global framework for effective implementation; and that further progress in improving global safety and efficiency of civil aviation is best achieved through a cooperative, collaborative and coordinated approach in partnership with all stakeholders under the leadership of ICAO. The Resolution calls upon ICAO to implement and keep current the Global Aviation Safety Plan (GASP) and the Global Air Navigation Plan (GANP) to support the relevant Strategic Objectives of the Organization; calls upon States and invites other stakeholders to cooperate in the development and implementation of regional, subregional and national plans based on the framework of the global plans; instructs the Council to provide a report on the implementation and evolution of the global plans to future regular sessions of the Assembly; and instructs the Secretary General to promote, make available and effectively communicate the GANP, GASP and its associated Global Aviation Safety Roadmap (GASR) global plans.

Another Resolution adopted by the Assembly pertained to the Global Aviation Safety Plan of ICAO which reaffirmed that the primary objective of the Organization continues to be the improvement of safety and an associated reduction in the number of accidents and related fatalities within the international civil aviation system. It also recognized that safety is a shared responsibility involving ICAO, Contracting States and all other stakeholders. The Resolution urges contracting States to support the GASP objectives by: implementing the State Safety Programme (SSP); expeditiously implementing safety management systems across the aviation industry to complement the existing regulatory framework; sharing operational safety intelligence among States and relevant aviation stakeholders; ensuring that the travelling public has access to easily understandable safety-related information to enable informed decisions; creating an environment in which the reporting and sharing of information is encouraged and facilitated and in which remedial action is undertaken in a timely fashion when deficiencies are reported; and reporting accident and incident data as required to ICAO.

Inter alia, the Resolution also urges contracting States, regional safety oversight organizations and international organizations concerned to work with all stakeholders to implement the GASP objectives and GASR methodology objectives and to implement these methodologies to reduce the number and rate of aircraft accidents. Contracting States are called upon to demonstrate the political will necessary for taking remedial actions to address deficiencies including those identified by Universal Safety Oversight Audit Programme (USOAP) audits and through the application of GASP objectives and the ICAO regional planning process and to fully exercise safety oversight of their operators in full compliance with applicable Standards and Recommended Practices (SARPs), and assure themselves that foreign operators flying in their territory receive adequate oversight from their own State and take appropriate action when necessary to preserve safety. For this purpose, States should develop sustainable safety solutions to fully exercise their safety oversight responsibilities. This can be achieved by sharing resources, utilizing internal and/or external resources, such as regional and sub-regional safety oversight organizations and the expertise of other States.

On the subject of runway safety, the Assembly discussed ICAO's Runway Safety Programme and adopted a Resolution which recognizes that runway accidents constitute a large portion of all accidents and have resulted in a great number of fatalities and that runway excursions are the highest single occurrence category of all accidents over the last 10 years for all commercial and general aviation operations of fixed-wing aircraft above 5,700 kg certified maximum take-off mass. It also recognizes that there are several areas of technological development underway in the aviation industry that shows great promise in the prevention and mitigation of runway accidents and serious incidents. It urges States to take measures to enhance runway safety, including the establishment of runway safety programmes using a multidisciplinary approach, that include at least regulators, aircraft operators, air navigation services providers, aerodrome operators and aircraft manufacturers to prevent and mitigate the effects of runway excursions, runway incursions and other occurrences related to runway safety; and resolves that ICAO shall actively pursue runway safety using a multidisciplinary approach. States are invited by this Resolution to monitor runway safety events and related precursors as part of the safety data collection and processing system established under their State Safety Programmes.

A Resolution was also adopted on the development of an up-to-date consolidated statement of continuing ICAO policies and practices related to a global Air Traffic Management (ATM) system and communications, navigation and surveillance/air traffic management (CNS/ATM) systems. This Resolution calls upon States and regional safety oversight organizations (RSOOs) to establish a framework for joint planning and cooperation at the sub-regional level for joint development of CNS/ATM systems. Another Resolution, on development of an up-to-date consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation, contains Appendices on such areas as coordination and cooperation of civil and military air traffic⁸; the provision of adequate aerodromes; and cooperation among Contracting States in investigations of certain aircraft accidents. On cooperation in the use of civil and military airspace, the Resolution requires the common use by civil and military aviation of airspace and of certain facilities and services to be arranged so as to ensure the safety, regularity and efficiency of civil aviation as well as to ensure the requirements of military air traffic are met; and that the regulations and procedures established by Contracting States to govern the operation of their state aircraft over the high seas ensure that these operations do not compromise the safety, regularity and efficiency of international civil air traffic and that, to the extent practicable, these operations comply with the rules of the air in Annex 2 to the Chicago convention on Rules of the Air. The Secretary General is required to provide guidance on best practices for civil/military coordination and cooperation; and Contracting States may include, when appropriate, representatives of military authorities in their delegations to ICAO meetings. A significant

⁸ For more information and a discussion on this subject, see Abeyratne (2010b).

pronouncement of the Resolution is that ICAO serves as an international forum that plays a role in facilitating improved civil/military cooperation, collaboration and the sharing of best practices, and in providing the necessary follow-up activities that build on the success of the Global Air Traffic Management Forum on Civil/Military Cooperation (2009) with the support of civil/military partners.

Another Resolution – on performance based navigation global goals – urges all States to implement Area Navigation (RNAV)⁹ and Required Navigation Performance (RNP)¹⁰ air traffic services (ATS) routes and approach procedures in accordance with the ICAO PBN concept laid down in the *Performance-based Navigation (PBN) Manual*,¹¹ while another – on ICAO global planning for safety and sustainability – instructs the Council to amend the GANP to include a framework that will allow ICAO to easily analyze the impact of States' air navigation modernization plans on the global system and then take appropriate action as needed to ensure global harmonization. It also calls upon States, planning and implementation regional groups (PIRGs) and the aviation industry to utilize the guidance provided in the GANP for planning and implementation activities and urges Contracting States, industry and financing institutions to provide the necessary support for coordinated implementation of the GANP, avoiding duplication of effort. The Resolution also calls upon States that are developing new generation plans for their own air navigation modernization to share their plans in a timely manner with ICAO to ensure global compatibility and harmonization, and instructs the Council to ensure that the GANP is continuously maintained up to date in light of further operational and technical developments, in close collaboration with States and other stakeholders.

A significant guideline issued to the Council by the Assembly through this Resolution is to organize a Twelfth Air Navigation Conference in 2012, with a

⁹ Area Navigation (RNAV) can be defined as a method of navigation that permits aircraft operation on any desired course within the coverage of station-referenced navigation signals or within the limits of a self contained system capability, or a combination of these. RNAV was developed to provide more lateral freedom and thus more complete use of available airspace. This method of navigation does not require a track directly to or from any specific radio navigation aid, and has three principal applications: a route structure can be organized between any given departure and arrival point to reduce flight distance and traffic separation; aircraft can be flown into terminal areas on varied pre-programmed arrival and departure paths to expedite traffic flow; and instrument approaches can be developed and certified at certain airports, without local instrument landing aids at that airport.

¹⁰ Required navigation performance (RNP) is a type of performance based navigation (PBN) that allows an aircraft to fly a specific path between two 3-dimensionally defined points in space. RNAV and RNP systems are fundamentally similar. The key difference between them is the requirement for on-board performance monitoring and alerting. A navigation specification that includes a requirement for on-board navigation performance monitoring and alerting is referred to as an RNP specification. One not having such a requirement is referred to as an RNAV specification.

¹¹ Doc 9613.

view to developing longer-term planning for ICAO based on an update of the GANP.

The prevention of communicable diseases through air travel was another topical issue discussed by the Assembly. It adopted a Resolution which, in the backdrop of Article 14¹² to the Chicago Convention, urges Contracting States and regional safety oversight organizations to ensure that the public health sector and the aviation sector collaborate to develop a national preparedness plan for aviation which addresses public health emergencies of international concern and which is integrated with the general national preparedness plan. It also urges Contracting States to develop a national preparedness plan for aviation that is in compliance with the World Health Organization International Health Regulations (2005) and which are based on scientific principles and on the guidelines from ICAO and the World Health Organization. Contracting States, and regional safety oversight organizations as appropriate are also urged to establish requirements for the involvement of stakeholders such as airport operators, aircraft operators and air navigation service providers in the development of a national preparedness plan for aviation; and Contracting States are requested to join and participate in the Cooperative Arrangement for the Prevention of Spread of Communicable Disease through Air Travel (CAPSCA) project, where available, to ensure that its goals are achieved, unless equivalent measures are already in place.

On a regional basis, the Assembly adopted two resolutions – one on *A Comprehensive Regional Implementation Plan for Aviation Safety in Africa* and the other on *Regional Safety Oversight Organizations (RSOOs)*. In the former, the Assembly *inter alia* urges Contracting States of the AFI Region to commit to and accelerate the establishment of regional safety oversight organizations and regional accident investigation agencies, where required, and strengthen cooperation across the region in order to make the optimum use of available resources; and instructs the Council to notify States, industry and donors of the priority projects arising from the gap analysis. Other requirements of this resolution are that States, industry and donors implement priority projects identified by the gap analysis, performed in accordance with the Global Aviation Safety Plan (GASP); States, industry and donors make contributions in cash and kind towards the implementation of the AFI Plan and the Council recognize all such contributions; African States, ICAO and AFCAC jointly address deficiencies identified through the safety oversight audits and implement the recommendations made by the ICAO/AFCAC joint meeting on aviation safety in Africa; the Council monitor the implementation of the

¹² Article 14 provides: “Each contracting State agrees to take effective measures to prevent the spread by means of air navigation of cholera, typhus (epidemic), smallpox, yellow fever, plague, and such other communicable diseases as the contracting States shall from time to time decide to designate, and to that end contracting States will keep in close consultation with the agencies concerned with international regulations relating to sanitary measures applicable to aircraft. Such consultation shall be without prejudice to the application of any existing inter-national convention on this subject to which the contracting States may be parties”.

recommendations of the joint ICAO/AFCAC meeting on aviation safety in Africa; the Council ensure a stronger ICAO leadership role in coordinating activities, initiatives and implementation strategies aimed specifically at implementing priority projects to achieve sustainable improvement of flight safety in the AFI Region and to allocate resources to the relevant Regional Offices accordingly; and monitor and measure the status of implementation in the AFI Region throughout the triennium and to report to the next ordinary session of the Assembly on the progress made.

The Resolution on RSOOs directs the Council of ICAO to promote the concept of regional cooperation for the purpose of enhancing safety and safety oversight, including the establishment of regional safety oversight organizations and to continue to partner with Contracting States, industry and other stakeholders for coordinating and facilitating the provision of financial and technical assistance to States and sub-regional and regional safety and safety oversight bodies, including regional safety oversight organizations, in order to enhance safety and strengthen safety oversight capabilities. It also directs the Council to continue the analysis of relevant safety-critical information for determining effective means of providing assistance to States and sub-regional and regional safety and safety oversight bodies, including regional safety oversight organizations; and to continue implementing an Implementation Support and Development – Safety (ISD-Safety) Programme to provide assistance to States and sub-regional and regional safety and safety oversight bodies, including regional safety oversight organizations. Contracting States are urged to develop and further strengthen regional and sub-regional cooperation in order to promote the highest degree of aviation safety, and encouraged to foster the creation of regional or sub-regional partnerships to collaborate in the development of solutions to common problems to build State safety oversight capability, and to participate in, or provide tangible support for, the strengthening and furtherance of sub-regional and regional aviation safety and safety oversight bodies, including regional safety oversight organizations.

The Assembly also adopted a resolution on proficiency in the English language used for radiotelephony communications which *inter alia* urges Contracting States that have not complied with the language proficiency requirement by the applicability date to post their language proficiency implementation plans including their interim measures to mitigate risk, as required, for pilots, air traffic controllers and aeronautical station operators involved in international operations on the ICAO website as outlined in accordance with the associated practices below and ICAO guidance material.

1.2.2 Security

In considering ICAO's security policy, the Assembly adopted a consolidated statement on the continuing ICAO policies related to the safeguarding of international civil aviation against acts of unlawful interference which strongly condemns

all acts of unlawful interference against civil aviation wherever and by whomsoever and for whatever reason they are perpetrated. The Resolution notes with abhorrence acts and attempted acts of unlawful interference aimed at the destruction in flight of civil aircraft in commercial service including any misuse of civil aircraft as a weapon of destruction and the death of persons on board and on the ground and reaffirms that aviation security must continue to be treated as a matter of highest priority and appropriate resources should be made available by ICAO and its Member States. It calls upon all Contracting States to confirm their resolute support for the established policy of ICAO by applying the most effective security measures, individually and in cooperation with one another, to prevent acts of unlawful interference and to punish the perpetrators, planners, sponsors, and financiers of conspirators in any such acts.

The Assembly makes reference in the Resolution to legal instruments pertaining to aviation security¹³ and calls upon Contracting States to give special attention to the adoption of adequate measures against persons committing, planning, sponsoring, financing or facilitating acts of unlawful seizure of aircraft, acts of sabotage or attempted sabotage or other acts or attempted acts of unlawful interference against civil aviation, and in particular to include in their legislation rules for the severe punishment of such persons. It also calls upon Contracting States to take adequate measures relating to the extradition or prosecution of persons committing acts of unlawful seizure of aircraft, acts of sabotage or attempted sabotage or other acts or attempted acts of unlawful interference against civil aviation by adopting appropriate provisions in law or treaty for that purpose or by strengthening existing arrangements and by concluding appropriate agreements for the suppression of such acts which would provide for the extradition of persons committing criminal attacks on international civil aviation.

On the subject of technical security measures, the Assembly urges all States on an individual basis and in cooperation with other States to take all possible measures for the prevention of acts of unlawful interference, in particular, those required or recommended in Annex 17 to the *Chicago Convention* as well as those recommended by the Council. It also urges Contracting States to intensify their efforts for the implementation of existing Standards and Recommended Practices (SARPs), and procedures relating to aviation security, to monitor such implementation, to take all necessary steps to prevent acts of unlawful interference against international civil aviation and to give appropriate attention to the guidance

¹³ *Convention on Offences and Certain Other Acts Committed on Board Aircraft* (Tokyo, 1963), the *Convention for the Suppression of Unlawful Seizure of Aircraft* (The Hague, 1970), the *Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation* (Montréal, 1971), the *Protocol for the Suppression of Unlawful Acts of Violence at Airports Serving International Civil Aviation, Supplementary to the Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation* (Montréal, 1988), the *Convention on the Marking of Plastic Explosives for the Purpose of Detection* (Montréal, 1991), the *Convention for the Suppression of Unlawful Acts Relating to International Civil Aviation* (Beijing, 2010), the *Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of Aircraft* (Beijing, 2010).

material contained in the ICAO *Security Manual for Safeguarding Civil Aviation Against Acts of Unlawful Interference*¹⁴ and available on the ICAO restricted website. Finally, it encourages Contracting States to promote aviation security as a fundamental component of national, social and economic priorities, planning and operations.

On the subject of unlawful interference the Assembly, while recognizing *inter alia* that acts of unlawful interference continue seriously to compromise the safety, regularity and efficiency of international civil aviation, urges Contracting States to cooperate for the purpose of providing a joint response in connection with an act of unlawful interference, as well as utilizing, if necessary, the experience and capabilities of the State of the operator, the State of manufacture and the State of registration of an aircraft which has been subjected to an act of unlawful interference, while taking measures in their territory to free the passengers and crew members of that aircraft.

It also condemns any failure by a Contracting State to fulfil its obligations to return without delay an aircraft which is being illegally detained and to submit to competent authorities or extradite without delay the case of any person accused of an act of unlawful interference with civil aviation, along with the reporting of false threats to civil aviation and *calls* upon Contracting States to prosecute the perpetrators of such acts in order to prevent the disruption of civil aviation operations. Finally, it calls upon Contracting States to continue to assist in the investigation of such acts and in the apprehension and prosecution of those responsible.

On the ICAO Universal Security Audit Programme, the Assembly adopted a resolution which urges all Member States to give full support to ICAO by: accepting the audit missions as scheduled by the Organization, in coordination with relevant States; facilitating the work of the audit teams; preparing and submitting to ICAO the required pre-audit documentation; and preparing and submitting an appropriate corrective action plan to address deficiencies identified during the audit, as well as other post-audit documentation. The Resolution also urges all Member States, if requested by another State, to share the results of the audit carried out by ICAO and the corrective actions taken by the audited State, as appropriate and consistent with their sovereignty. It requests that the Council report to the next ordinary session of the Assembly on the overall implementation of the USAP, including its decision with regard to the study to assess the feasibility of extending the CMA to the USAP after the conclusion of the current audit cycle in 2013.

The Assembly also adopted a *Declaration on Aviation Security* which urges Contracting States to *inter alia*, strengthen and promote the effective application of ICAO Standards and Recommended Practices, with particular focus on Annex 17 – *Security*, and develop strategies to address current and emerging threats; strengthen security screening procedures, enhance human factors and utilize modern

¹⁴ Doc 8973.

technologies to detect prohibited articles and support research and development of technology for the detection of explosives, weapons and prohibited articles in order to prevent acts of unlawful interference; develop enhanced security measures to protect airport facilities and improve in-flight security, with appropriate enhancements in technology and training; and develop and implement strengthened and harmonized measures and best practices for air cargo security, taking into account the need to protect the entire air cargo supply chain.

1.2.3 Environmental Protection

The most topical and arguably contentious issue at the Assembly was climate change and, it must be mentioned that it was an achievement for ICAO member States to adopt a Resolution at the Assembly, *albeit* in the midst of some reservations recorded by States. On this issue, the Assembly noted that, if the global community were to stabilize greenhouse gas emissions in the atmosphere and maintain it at a level that would prevent dangerous anthropogenic interference with the climate, the increase in global temperature would have to be maintained below 2°C. In order to achieve this target, deep cuts in global emissions would be needed, and all sectors of the economy were being looked to for their contribution – including international aviation, which is well known as representing a significant and growing source of emissions.

The Assembly considered a proposal¹⁵ from the Secretary General of ICAO which suggested that the Assembly adopt a resolution that required ICAO to exercise continuous leadership on environmental issues relating to international civil aviation, including greenhouse gas emissions; to continue to study policy options to limit or reduce the environmental impact of aircraft engine emissions and to develop concrete proposals and provide advice as soon as possible to the Conference of the Parties of the UNFCCC, encompassing technical solutions and market-based measures, and taking into account potential implications of such measures for developing as well as developed countries; and to continue to cooperate with organizations involved in policy-making in this field, notably with the UNFCCC. This was an unusual step – for a proposal to come from the Chief Executive of the ICAO Secretariat rather than from the Council of ICAO which reports to the Assembly – and reflected unequivocally that the Council had unprecedentedly failed to reach consensus on a comprehensive approach to aviation and climate change. The underlying reason for this impasse was that developing States could not agree to ambitious emissions reductions suggested by developed States.

The proposed resolution, which was subsequently adopted by the Assembly, also suggested *inter alia* that States and relevant organizations work through ICAO to

¹⁵ A37-WP/262 EX/53.

achieve a global annual average fuel efficiency improvement of 2% until 2020 and an aspirational global fuel efficiency improvement rate of 2% per annum from 2021 to 2050, calculated on the basis of volume of fuel used per revenue tonne kilometre performed. Also suggested was the fact that ICAO and its member States with relevant organizations work together to strive to achieve a collective medium term global aspirational goal of keeping the global net carbon emissions from international aviation from 2020 at the same level, taking into account the special circumstances and respective capabilities of developing countries, the maturity of aviation markets and the sustainable growth of the international aviation industry. In this regard the proposed resolution suggested that the Council of ICAO consider a *de-minimis* exception for States which do not have substantial international aviation activity levels, in the submission of action plans and regular reports on aviation CO₂ emissions to ICAO. It also invited the Assembly to recognize that in the short term, voluntary carbon offsetting schemes constitute a practical way to offset CO₂ emissions, and invited States to encourage their operators wishing to take early actions to use carbon offsetting, particularly through the use of credits generated from internationally recognized schemes such as the Clean Development Mechanism (CDM).¹⁶

In addition to the 2% annual improvement in fuel efficiency discussed above, the 37th Session of the Assembly also considered a proposal that the feasibility of more ambitious medium and long term goals, including carbon neutral growth and emissions reductions be further explored. There was also a proposal by three States that a more ambitious goal be set – of carbon neutral growth by 2020 compared to 2005 levels. In response, a developing State took the position that ICAO should be guided by the principle of common but differentiated responsibilities (CBDR) under the UNFCCC; the next task for ICAO is to assist States to achieve the goal of 2% annual fuel efficiency improvement; the goal of carbon neutral growth is not realistic and not fair for developing States; and no States should be allowed to take unilateral actions on market-based measures, which drew some support from other developing States.

The main argument of the developing States at the Assembly was that since the larger quantity of GHG emissions was caused by developed States and that developing States should not be called upon to pay for ambitious emissions reduction levels at the same level as developed States. Furthermore developing States claimed that stabilizing the climate should be based on the principles of equity and common but differentiated responsibilities and those obligations under the framework of UNFCCC. They concluded that any measure taken should not unduly curb the development of aviation in developing States.

¹⁶ The Clean Development Mechanism (CDM) allows a developed country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO₂, which can be counted towards meeting Kyoto targets. See http://www.icao.int/icao/fr/env2010/ClimateChange/Finance_f.htm.

The challenge faced by the Assembly during its discussions was to achieve consensus on establishing guiding principles when designing new and implementing existing market based measures for international aviation, and to engage in constructive bilateral and/or multilateral consultations and negotiations with other States to reach an agreement on issues such as carbon neutral growth and market based measures; as well as on a *de minimis* threshold of international aviation activity, consistent with 1% of total revenue ton kilometres to market based measures as follow:

- a) Commercial aircraft operators of States below the threshold should qualify for exemption for application of MBMs that are established on national, regional and global levels; and
- b) States and regions implementing MBMs may wish to also consider an exemption for other small aircraft operators.

It is significant therefore that, notwithstanding the divergence of views between States on the abovementioned issues, and reservations of some developing States, the Assembly was successful in adopting a Resolution which paves the way forward to more understanding and progress in the years to come.

1.2.4 Law

The Assembly adopted a Resolution on the Beijing Diplomatic Conference and the Convention and Protocol that ensued which recalls its Resolution A36-26, Appendix C, relating to the ratification of instruments which have been developed and adopted under the auspices of the Organization; and recognizes the importance of broadening and strengthening the global aviation security regime to meet new and emerging threats. On this basis, the Resolution urges all States to support and encourage the universal adoption of the *Convention on the Suppression of Unlawful Acts Relating to International Civil Aviation* (Beijing Convention of 2010) and the *Protocol Supplementary to the Convention for the Suppression of Unlawful Seizure of Aircraft* (Beijing Protocol of 2010). It urges all States to sign and ratify the Beijing Convention and Beijing Protocol of 2010 as soon as possible; and directs the Secretary General to provide assistance, as appropriate, with the ratification process if so requested by a Member State.

In retrospect, the 37th Session of the Assembly will be remembered as a forum at which ICAO's leadership role in international civil aviation as the only global forum that can assist States was reiterated in the key areas of safety, security and environmental protection. The Assembly also implicitly recognized that ICAO stands at the threshold of a renewed vision under a new leadership inspired by innovative thinking, and that the Organization is at the defining crossroads of its continuing path towards achieving its aims and objectives as set out in the Chicago Convention. New leadership and new thinking have been catalysts in this process, and, through a fog of rhetoric which in the past tended to obfuscate the role of the