

ASSEMBLY 38th SESSION

Montréal, 24 September–4 October 2013

TECHNICAL COMMISSION

Report



*Approved by the Technical Commission of the Assembly
and published by authority of the Secretary General*

INTERNATIONAL CIVIL AVIATION ORGANIZATION

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INTERNATIONAL CIVIL AVIATION ORGANIZATION

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REPORT OF THE TECHNICAL COMMISSION TO THE ASSEMBLY

General

1. The Technical Commission held seven meetings between 26 September and 1 October 2013.
2. Mr. Azharuddin A. Rahman (Malaysia) was elected Chairman at the Second Plenary Meeting of the Assembly. The Commission, at its first meeting, elected as First Vice-Chairman Mr. Piotr Olowski (Poland) on a nomination by Turkey and seconded by Bahamas. Also based on a nomination by Turkey, seconded by Bahamas, the Commission elected as Second Vice-Chairman, Gral. Div. Ae. Luis Coimbra Busch (Bolivia).
3. Representatives from some 170 Contracting States and 45 Observer Delegations attended one or more meetings of the Commission.
4. The Secretary of the Commission was Ms. N. Graham, Director of the Air Navigation Bureau. Messrs. M. Elamiri, Deputy Director, Safety Management and Monitoring, and V. Galotti, Deputy Director, Safety Standardization and Infrastructure, served as Deputy Secretaries. The Commission was assisted by Mrs. D. Cooper and also by:

Mr. Y. Wang, Chief Aerodromes Section (AGA)
Mr. M. Costa, Chief, Accident Investigation Section (AIG)
Mr. M. Hoummady, Chief Aviation Safety Training Section (AST)
Mr. C. Dalton, Chief, Air Traffic Management Section (ATM)
Mr. H. Gourджи, Chief, Continuous Monitoring and Oversight Section (CMO)
Dr. K. Rooney, Chief, Dangerous Goods Section (DGS)
Mr. R. Macfarlane, Chief, Integrated Infrastructure Management Section (IIM)
Mr. M. Fox, Chief, Flight Operations Section (OPS)
Mr. M. Vreedenburgh, Chief, Implementation Support and Development – Safety Section (ISD/SAF)
Mr. J. Illson, Chief, Integrated Safety Management Section (ISM)
Dr. A. Evans, Chief, Aviation Medicine Section (MED)
Mr. G. Brock, Chief, Meteorology Section (MET)
Mr. Y. Fattah, Chief, State Aviation Safety Tools Unit (SAST)

and other members of the Secretariat.

Agenda and working arrangements

5. The Assembly had agreed to the suspension of minutes for the Technical Commission of the 38th Session of the Assembly.
6. The following agenda items were considered by the Commission:
 - Agenda Item 26: Annual Reports of the Council to the Assembly for 2010, 2011 and 2012
 - Agenda Item 27: Aviation Safety – Policy
 - Agenda Item 28: Aviation Safety – Standardization
 - Agenda Item 29: Aviation Safety – Monitoring and Analysis

- Agenda Item 30: Aviation Safety – Implementation Support
- Agenda Item 31: Aviation Safety – Emerging Issues
- Agenda Item 32: Air Navigation – Policy
- Agenda Item 33: Air Navigation – Standardization
- Agenda Item 34: Air Navigation – Monitoring and Analysis
- Agenda Item 35: Air Navigation – Implementation Support
- Agenda Item 36: Air Navigation – Emerging Issues
- Agenda Item 37: Progress on Implementation of the Comprehensive Regional Implementation Plan for Aviation Safety in Africa (AFI Plan)
- Agenda Item 38: Other issues to be considered by the Technical Commission

7. The documents and working papers associated with the work of the Commission are listed by agenda item in the appendix to this report.

8. The action taken by the Commission in respect of each item is reported on separately in the paragraphs which follow. The material is arranged according to the numerical sequence of the agenda items considered by the Commission.

Agenda Item 26: Annual Reports of the Council to the Assembly for 2010, 2011 and 2012

26.1 The Technical Commission reviewed those parts of the Annual Reports of the Council to the Assembly for 2010, 2011 and 2012 and the supplementary report covering the first six months of 2013 (Docs 9952, 9975 and 10001 and Supplement) falling within its field of competence.

26.2 The Commission noted, without comment, the work accomplished in the air navigation field during the past three years, as indicated under the Safety and Environmental Protection and Sustainable Development of Air Transport Strategic Objectives and expressed its gratitude.

Agenda Item 27: Aviation Safety — Policy

27.1 The Commission reviewed A38-WP/92, presented by the Council, containing a comprehensive strategy for aviation safety. The paper presented the first edition of the revised Global Aviation Safety Plan (GASP) for endorsement by the Assembly. The updated GASP maintains continuity with the version accepted by the Council in 2007, and is restructured to incorporate near-, mid- and long-term objectives supported by four high-level safety performance enablers.

27.2 The Commission reviewed A38-WP/249, presented by the Dominican Republic, citing the need for globally harmonized strategic planning processes, including the prioritization of both efficiency and safety goals. The paper called for endorsement of the GASP and the Global Air Navigation Plan (GANP), as well as establishment of a regional prioritization framework for the GANP block upgrades.

27.3 The Commission reviewed A38-WP/213, presented by the Members of the African Civil Aviation Commission, providing a report of outcomes from the July 2012 Ministerial Conference on Aviation Safety. The paper indicated that African States support endorsement of the GASP by the Assembly and called for all States to achieve the near-term targets by 2017. The paper also urged ICAO

to develop roadmaps in relation to GASP implementation and urged African States to implement the targets aligned with the GASP.

27.4 All delegates who took the floor supported the endorsement of the GASP. The role of the regional aviation safety groups (RASGs) and regional safety oversight organizations (RSOOs) in facilitating the implementation of the GASP at the regional level was highlighted, as well the need to now develop regional roadmaps.

27.5 Recognizing the need to harmonize implementation and strategic planning, support was expressed for A38-WP/249 which called for the endorsement of the GASP and GANP, as well as the regional prioritization framework for the GANP block upgrades. Furthermore, many delegates took the floor in support of A38-WP/213, which stressed the need for continued collaboration with ICAO and aviation stakeholders in Africa.

27.6 The Commission, having reviewed A38-WP/92, A38-WP/249 and A38-WP/213, agreed to recommend that the Assembly endorse the first edition of the revised *Global Aviation Safety Plan* (GASP, Doc 10004), its objectives and supporting safety initiatives. The Commission agreed to recommend amendments to existing Resolutions A37-4 and A37-12 to reflect the coordinated global strategic direction in the safety and air navigation fields.

27.7 The Commission reviewed A38-WP/98, presented by the United States, citing the benefits of government and industry collaboration including the work of RASGs to address safety risks at the regional level. The paper indicated the need to improve the reporting of safety issues as well as the importance of developing appropriate protections to the sources of such information as a means to promote the effective and efficient exchange of safety information. The paper supported the principles of the first edition of the revised GASP and encouraged the collaborative development of amendments in the future.

27.8 The Commission reviewed A38-WP/84, presented by Lithuania on behalf of the European Union and its Member States, other Member States of the European Civil Aviation Conference, and EUROCONTROL. This paper provided a regional perspective to safety management, inviting the Assembly to ensure that the benefits afforded through regional cooperation and regional safety oversight organizations (RSOOs) are adequately reflected in ICAO's activities, in particular in the Continuous Monitoring Approach (CMA) and Annex 19 on safety management.

27.9 The Commission reviewed A38-WP/191, Revision No. 1, presented by the Civil Air Navigation Services Organisation (CANSO), regarding the GASP and its evolution. In addition to the importance of the GASP's safety performance enablers, the paper underscored the value of initiatives by industry stakeholders. The paper proposed that a mechanism for stakeholder coordination and a compilation of safety initiatives be established to allow for the development of planning and decision-making tools as well as roadmaps to assist RASGs, States, and industry in aligning their priorities and the allocation of their resources within the framework of the GASP.

27.10 There was broad support expressed for A38-WP/84, A38-WP/98 and A38-WP/191, Revision No. 1, which call for enhanced regional cooperation and the development of guidance material to facilitate the implementation of the GASP. One delegate expressed concerns over the frequency of amendments to the GASP and proposed that the global plans be revised once per triennium. States then expressed the need for ICAO to define a process to amend the GASP in the future, allowing for an appropriate level of participation by States and international organizations.

27.11 The Commission, having reviewed A38-WP/84, agreed to propose amendments to existing Resolution A37-8 (refer to the report on Agenda Item 30 for the amended text of Resolution A37-8). The Commission further agreed to reiterate and reinforce the benefits of regional cooperation and RSOOs as they pertain to the implementation of the ICAO CMA and Annex 19 provisions.

27.12 The Commission, having reviewed A38-WP/191, Revision No. 1, and based on the discussion, agreed to support the development and use of industry best practices and establish a mechanism for stakeholder involvement as well as future amendments to the GASP. The proposal for the development of planning and decision-making tools to assist RASGs, States, and industry in aligning their priorities and the allocation of their resources within the framework of the GASP as well as the compilation of an inventory of safety initiatives and lessons learned are to be referred to the Council for consideration.

27.13 The Commission, having reviewed A38-WP/92, A38-WP/84, A38-WP/98 and A38-WP/191, Revision No. 1, agreed that the focus of the High-level Safety Conference, announced by ICAO and planned for January 2015, would, inter alia, include the determination of recommendations for amendments to the GASP, to be developed through a consultative process with States and international organizations.

27.14 The Commission reviewed A38-WP/173, presented by Australia regarding ICAO's current and future work on the appropriate use and protection of safety information. The paper reported on the work of the multidisciplinary Safety Information Protection Task Force (SIP TF), which was established to provide recommendations for new or enhanced ICAO provisions related to the protection of safety information. The paper noted the importance of ensuring that the work undertaken by the SIP TF be considered by appropriate ICAO bodies in the development of new or amended provisions and guidance materials. The paper further recommended amendments to Resolutions A37-2 and A37-3 to reflect the work successfully delivered by the SIP TF.

27.15 The Commission reviewed A38-WP/223, presented by Brazil, providing the Brazilian approach to safety information protection. The paper suggested two strategic actions already implemented in Brazil for consideration by other States, including amendments to aeronautical legislation and educational programmes for judges and public prosecutors regarding the judiciary's role in the context of aviation safety. The paper requested that the Assembly endorse a proposal for ICAO to develop additional guidance material related to the protection of safety information to support such educational initiatives.

27.16 The Commission reviewed A38-WP/280, Revision No. 1, presented by the Republic of Korea, regarding the implementation of safeguards for informants under a voluntary reporting system. The paper suggests that ICAO develop recommendations for States to include non-punitive principles in their legislation rather than as administrative guidelines. The paper further requests the development of guidelines on the formation and facilitation of just culture, in addition to a standardized list of issues that would be subject to mandatory or voluntary incident reporting.

27.17 The Commission reviewed A38-WP/102, presented by the United States and Brazil, regarding the protection of safety information sources. The paper discussed the need to ensure protections for safety data sources and encouraged the development of guidance towards implementing legal protections to enable successful safety management principles.

27.18 The Commission reviewed A38-WP/296, presented by the International Transport Workers Federation (ITF), regarding the implementation of a just culture in reporting systems. The paper requests that the Assembly recognize the valuable contribution a just culture will make to aviation safety

and asks ICAO to monitor and review the implementation of just culture and non-punitive reporting systems. The paper further requests that ICAO identify any barriers to the implementation of non-punitive reporting systems and provide guidance to States that have not yet introduced such systems.

27.19 The Commission, having reviewed A38-WP/102, A38-WP/173, A38-WP/223, A38-WP/280, Revision No. 1, and A38-WP/296 agreed to propose amendments to Resolutions A37-2 and A37-3 to reflect the SIP TF's delivery of its findings and recommendations, which should inform further work undertaken by the appropriate ICAO bodies on this matter, notably the further development of Annex 19. The Assembly further recognized the value of additional guidance material, which could be used to inform aviation safety experts as well as judicial authorities on the need to ensure that there is a balance between the protection and use of safety information.

27.20 In relation to the initiatives associated with the protection of the sources of information from voluntary incident reporting systems and the promotion of safety culture, the Commission agreed to refer these to the Council for its consideration and further development of SARPs and supporting documentation.

27.21 Information paper A38-WP/80 was provided by the Secretariat.

27.22 In light of the discussion, the Commission agreed to submit, for adoption by the Plenary the following resolutions:

Resolution 27/1: Protection of certain accident and incident records

Whereas the primary objective of the Organization continues to be that of ensuring the safety of international civil aviation worldwide;

Whereas it is essential that cognizance be taken that it is not the purpose of the investigation of accidents and incidents to apportion blame or liability;

Recognizing that it is essential that all relevant information be made available to the accident investigators to facilitate the establishment of the causes and/or contributing factors of accidents and incidents in order to enable preventative action to be taken;

Recognizing that the prevention of accidents is essential to safeguard the continued confidence in air transport;

Recognizing that public attention will continue to focus on States' investigative actions, including calls for access to accident and incident records;

Recognizing that the protection of certain accident and incident records from inappropriate use is essential to ensure the continued availability of all relevant information to accident investigators in future investigations;

Recognizing that the use of information, derived from accident investigations, for disciplinary, civil, administrative and criminal proceedings is generally not a means to maintain or improve aviation safety;

Recognizing that the measures taken so far to ensure the protection of certain accident and incident records may not be sufficient, and *noting* the issuance by ICAO of legal and other guidance to assist States in this regard;

Recognizing that the legal guidance in Attachment E to Annex 13, and in Attachment B to Annex 19, will continue to assist many States in the development and implementation of means to protect certain accident and incident records from inappropriate use;

Considering that a balance needs to be struck between the need for the protection of safety information and the need for the proper administration of justice, and that protection should be to a level commensurate with the nature of the information each source generates, as well as with the purpose of disclosure of such information;

Mindful that the accident investigation authorities and the civil aviation authorities acknowledged the need for further study by ICAO on the protection of safety information; and

Recognizing the Safety Information Protection Task Force established pursuant to recommendations of the High-level Safety Conference 2010 and in response to Resolution A37-2, has promulgated for consideration a number of findings and recommendations with respect to the appropriate use and protection of safety information:

The Assembly:

1. *Urges* Contracting States to continue to examine and if necessary adjust their laws, regulations and policies to protect certain accident and incident records in compliance with paragraph 5.12 of Annex 13, in order to mitigate impediments to accident and incident investigations, in consideration of the legal guidance for the protection of information from safety data collection and processing systems issued by ICAO;
2. *Instructs* the Council, taking into account the findings and recommendations of the Safety Information Protection Task Force and further work informed by those findings and recommendations, to take such steps as may be necessary to ensure meaningful progress toward the development of new and/or amended provisions in Annex 13, other Annexes as appropriate and related guidance material before the next ordinary session of the Assembly; and
3. *Declares* that this resolution supersedes Resolution A37-2.

Resolution 27/2: Protecting information from safety data collection and processing systems in order to maintain and improve aviation safety

Whereas the primary objective of the Organization continues to be that of ensuring the safety of international civil aviation worldwide;

Recognizing the importance of the free communication of safety information amongst the stakeholders of the aviation system;

Recognizing that the protection of safety information from inappropriate use is essential to ensure the continued availability of all relevant safety information, to enable proper and timely preventive actions to be taken;

Concerned by a trend for safety information to be used for disciplinary and punitive enforcement actions and to be admitted as evidence in judicial proceedings;

Noting the importance of a balanced environment in which disciplinary action is not taken as consequence

of actions by operational personnel that are commensurate with their experience and training, but where gross negligence or willful violations are not tolerated;

Mindful that the use of safety information for other than safety-related purposes may inhibit the provision of such information, with an adverse effect on aviation safety;

Considering that a balance needs to be struck between the need for the protection of safety information and the need for the proper administration of justice, and that protection should be to a level commensurate with the nature of the information each source generates, as well as with the purpose of disclosure of such information;

Recognizing that technological advances have made possible new safety data collection, processing and exchange systems, resulting in multiple sources of safety information that are essential in order to maintain and improve aviation safety;

Noting that existing international laws, as well as national laws, and regulations, policies and practices in many States, may not adequately address the manner in which safety information is protected from inappropriate use;

Noting the issuance and continuing development by ICAO of legal guidance aimed at assisting States to enact national laws and regulations, and to introduce supportive policies and practices, to protect information gathered from safety data collection and processing systems, while allowing for the proper administration of justice;

Recognizing that the legal guidance in Attachment E to Annex 13, and in Attachment B to Annex 19, will continue to assist many States in the development and implementation of means to protect information gathered from safety data collection and processing systems;

Mindful that the civil aviation authorities acknowledged the need for continuing study by ICAO on the protection of safety information; and

Recognizing the Safety Information Protection Task Force, established pursuant to recommendations of the High-level Safety Conference 2010 and in response to Resolution A37-3, has promulgated for consideration a number of findings and recommendations with respect to the appropriate use and protection of safety information:

The Assembly:

1. *Urges* all Contracting States to continue to examine their existing legislation and adjust as necessary, or enact laws and regulations and introduce supportive policies and practices, to protect information gathered from all relevant safety data collection and processing systems based, to the extent possible, on the legal and other guidance developed by ICAO;

2. *Urges* the Council to cooperate with Contracting States and appropriate international organizations regarding the development and implementation of guidance, taking into account the findings and recommendations of the Safety Information Protection Task Force and further work informed by those findings and recommendations, to support the establishment of effective safety-reporting systems, and the achievement of a balanced environment where valuable information derived from all relevant safety data collection and processing systems is readily accessible for the purposes of maintaining and improving aviation safety, while respecting principles of administration of justice and freedom of information;

3. *Instructs* the Council to take appropriate steps to ensure that ICAO Standards and Recommended Practices in Annex 19, other Annexes as appropriate and guidance materials on the protection of information gathered from safety data collection and processing systems (SDCPS) are enhanced, taking into account the findings and recommendations of the Safety Information Protection Task Force and further work informed by those findings and recommendations, with a view to ensuring and sustaining the availability of safety information required for the management, maintenance and improvement of safety, taking into account the necessary interaction between safety and judicial authorities in the context of open reporting culture; and
4. *Declares* that this resolution supersedes Resolution A37-3.

Agenda Item 28: Aviation Safety — Standardization

28.1 Under this agenda item, the Commission reviewed A38-WP/82, presented by the Council, providing an update on the adoption and roll-out of the new ICAO Annex on Safety Management. The paper highlights the importance of safety management at the State level and supports the future evolution of safety management provisions. States are encouraged to actively participate in the regional aviation safety groups (RASGs), which will identify activities in support of the Annex 19 roll-out plan and will report on the implementation of safety management provisions at the regional level.

28.2 The Commission reviewed A38-WP/200, presented by China, highlighting their experience in implementing safety management systems (SMS) for air operators and air traffic control units and the initiation of SMS for aerodromes using SMS auditing procedures and tools. The paper recommended that globally harmonized SMS performance auditing criteria be established to guide States in monitoring the effectiveness of SMS implementation and that States continue to monitor the actual performance of SMS to ensure that the expected results are achieved.

28.3 The Commission reviewed A38-WP/329, presented by the Russian Federation, which invited the Assembly to recommend that the Council expedite the development and adoption of a unified method of processing safety recommendations and measures. Furthermore, the paper proposed the elevation of Recommended Practices 6.11 and 6.12 in ICAO Annex 13 — *Aircraft Accident and Incident Investigation* to the status of Standards, taking into account the provisions of Annex 19 related to State safety assurance.

28.4 The Commission reviewed A38-WP/96, presented by the United States, proposing the integration of the eight critical elements of a State safety oversight system and the eleven elements of the State Safety Programme (SSP), and the reflection of this integration in the Universal Safety Oversight Audit Programme (USOAP) continuous monitoring approach (CMA) activities. In addition, the paper supported the development of criteria to facilitate the acceptance of SMS across States.

28.5 The Commission reviewed A38-WP/199, presented by Venezuela (Bolivarian Republic of), proposing the development of guidance material and seminars/workshops to address the implementation of SMS for small service providers. A second paper presented by Venezuela (Bolivarian Republic of), A38-WP/255, identified the need for additional workshops to address the development of harmonized safety indicators and common targets for agreement by States and regions as well as design indicators for universally acceptable levels of safety for the purposes of SSP.

28.6 The Commission reviewed A38-WP/77, presented by Lithuania on behalf of the European Union (EU) and its Member States, other Members of the European Civil Aviation Conference, and by EUROCONTROL, as introduced by the United Kingdom. This paper supported a phased approach to implementation of safety management and the sharing of experiences and best practice at the regional level, as a means to ensure that the benefits of Annex 19 are available to States having safety oversight systems with varying levels of maturity.

28.7 The Commission reviewed A38-WP/206, Revision No. 1, presented by the Civil Air Navigation Services Organisation (CANSO), emphasizing the importance of safety culture and the need to integrate these principles in successive stages of development for Standards and Recommended Practices (SARPs) and guidance material, as well as for the implementation of SMS.

28.8 The Commission commended the work of the Safety Management Panel and broad support was expressed for Annex 19 and the phased approach to implementation provided in the Global Aviation Safety Plan (GASP) which prioritizes the implementation of fundamental safety oversight systems within each State as a prerequisite to the implementation of SSP (ref. Agenda Item 27).

28.9 Delegates emphasized the development of seminars and workshops along with additional tools and guidance material to support the implementation of safety management, as a matter of urgency and priority. The role of the RASGs and regional safety oversight organizations (RSOOs) in identifying the needs of each region, facilitating the sharing of experiences and reporting progress at the regional level was noted.

28.10 The Commission agreed on the integration of the eight critical elements of a State safety oversight system and the eleven elements of the SSP to create one framework. Several States expressed the need to ensure that the eight critical elements are retained and that the merged framework be fully aligned with the GASP. This will therefore be referred to the Council for further consideration.

28.11 The Technical Commission noted the adoption of Annex 19 and the work already underway to further develop safety management provisions, including consideration of the relationship between the critical elements of a State safety oversight system and the State safety programme. The Commission also noted the related Annex 19 implementation strategy and encouraged States to actively participate in the RASGs and RSOOs, where unnecessary duplication of efforts should be avoided.

28.12 While ICAO safety management training materials are currently undergoing revision, requests for the development of workshops and seminars will be referred to the Council for consideration.

28.13 The Commission, having reviewed A38-WP/329, presented by the Russian Federation, noted the support expressed. This paper referred to Recommendations 1.6/5 and 1.6/6 (stemming from AIG/08) which have been progressed accordingly. Recommendation 1.6/5, in particular, is addressed in Appendix 6 of the Second Edition of the *Manual of Aircraft Accident and Incident Investigation*, Part IV — *Reporting* (Doc 9756, unedited version published June 2013). Recommendation 1.6/6 has been progressed by the EU and the ensuing taxonomies for safety recommendations will be incorporated into the ADREP taxonomy in due course. Appendix 6 (referenced above) also addresses the recommendation to expedite the development and adoption of a unified method to formalize safety recommendations and measures.

28.14 The Commission also discussed the proposal to elevate Recommended Practices 6.11 and 6.12 in Annex 13 to the status of Standards as well as to clarify the link between these provisions and the

Annex 19 provisions related to State safety assurance and agreed to forward it to Council for consideration.

28.15 Information papers were also presented by Canada (A38-WP/365), the Dominican Republic (A38-WP/141), the United States (A38-WP/95), the Agency for Air Navigation Safety in Africa and Madagascar (ASECNA) (A38-WP/248) and the Secretariat (A38-WP/80).

Agenda Item 29: Aviation Safety — Monitoring and Analysis

29.1 The Commission reviewed A38-WP/50, presented by the Council, and noted the progress achieved in the overall implementation of the ICAO Universal Safety Oversight Audit Programme (USOAP) including activities completed during the two-year transition phase to a continuous monitoring approach (CMA) and full implementation of the USOAP CMA in January 2013. The Commission supported the continued activities of the USOAP CMA and urged the continuing cooperation of States in the implementation of USOAP CMA. The Commission also endorsed the decision of the Council on the sharing of unresolved significant safety concerns (SSCs) with the public commencing in January 2014.

29.2 The Commission reviewed A38-WP/150, presented by the Dominican Republic, regarding the first phase of implementation of Annex 19 and agreed that it was important that guidelines be developed for USOAP auditors regarding the implementation of Standards and Recommended Practices (SARPs) related to safety management. Of the three options proposed in A38-WP/150, the Secretariat advised that option c) should be accepted. In reviewing A38-WP/209, presented by Venezuela, it was further agreed that guidance material should be developed specifying the technical features of the CMA online framework and providing clear guidance on its operation and use.

29.3 The Commission reviewed A38-WP/205, presented by Singapore, and noted Singapore's experience in the implementation of CMA and agreed that Member States should continue to support the USOAP CMA and establish systems and processes that will provide the necessary focus on their obligations.

29.4 IATA presented A38-WP/110 providing an update on the enhanced IATA Operational Safety Audit (IOSA). The Commission expressed its support for the IOSA programme and recommended that ICAO continue its support of IOSA and the additional elements under Enhanced IOSA as a complementary source of information for State safety oversight activities.

29.5 In reviewing A38-WP/304, presented by Colombia, the Commission noted that it was important to separate the functions of regulator and service provider and agreed that the distinction should be appropriately reflected in the new CMA protocol questions regarding air navigation services related to Annex 19 – *Safety Management*.

29.6 The Commission reviewed A38-WP/147, presented by Brazil on behalf of members of the Latin American Safety Oversight Cooperation System (SRVSOP), with support from Member States of the Latin American Civil Aviation Commission (LACAC), which discussed the need to develop a global dangerous goods reporting system. The Commission expressed its appreciation for the input on the dangerous goods global incident/accident reporting system and the initiatives for dangerous goods awareness that had been undertaken. It acknowledged that the Secretariat was working with the Dangerous Goods Panel on such a system and would take the input from A38-WP/147 and from the European Coordination Centre for Aviation Incident Reporting Systems (ECCAIRS) into account. The

Commission recommended that ICAO be urged to continue its work in developing a global dangerous goods reporting system.

29.7 The Commission reviewed A38-WP/91, presented by the Council, on a strategic plan for the evolution of electronic tools for the global aviation community. The progress made in the development of electronic tools was noted along with the need to continue to evolve to address the needs of Member States and stakeholders and to support the planning and implementation of the global strategies, including the Global Aviation Safety Plan (GASP) and the Global Air Navigation Plan (GANP). The Commission recommended that the Assembly urge States to use available electronic tools when providing aviation data to ICAO and to provide continued support and actively participate in the development of electronic tools by providing feedback and sharing relevant knowledge and experience.

29.8 The Commission reviewed A38-WP/309, presented by Jamaica, which proposed the development of Standards and guidance material for the certification of air navigation service providers (ANSPs). The proposal was supported by the Dominican Republic and Brazil. The Secretariat highlighted that the certification of ANSPs was an intensive resource issue that had been discussed in the past. It would have significant budgetary consequences for both ICAO and Member States. In this regard, the Commission recommended that the Council be requested to consider whether Standards and guidance material for the certification of air navigation service providers (ANSPs) should be developed at this time, taking into account the budgetary issues that would result.

29.9 The Commission noted the issues and challenges related to safety data analysis and the use of electronic safety tools as presented by the Republic of Korea in A38-WP/284. Furthermore, the Commission recognized that the move from CSA to CMA and the successful implementation of the proactive safety management framework still pose difficulties and an administrative burden to Member States. It was agreed that it would be useful for ICAO to develop further guidelines for Member States and to continue to improve functionalities of electronic tools and explore ways to facilitate the exchange of data between electronic safety tools developed by Member States and ICAO.

29.10 In reviewing A38-WP/137 and Corrigendum No. 1, presented by Singapore, it was agreed that development and implementation of safety data sharing and analysis programmes and systems at the regional level should be encouraged with a view to regional data and analyses being shared globally. The Commission accepted the proposal that regional aviation safety groups (RASGs) should be encouraged to develop and implement regional safety data sharing and analysis programmes and systems. It was further agreed that a framework should be developed that facilitates the sharing and analysis of safety data through and across regional systems, and provides the means to adequately protect the resulting safety information.

29.11 The Commission reviewed A38-WP/111, presented by the United States, and agreed that there was a need for a system for safety performance indicators that takes into account the correlation of outcome and process measures to assess the capability to manage risk in the air transportation system. In this regard, the Commission recommended that the Council consider the development of a methodology for defining safety performance indicators. The Commission noted a proposal for a safety measurement method that is based on a foundation of three tiers of system behaviour: high-level safety outcomes, service provider behaviours, and regulatory agency activities.

29.12 In reviewing A38-WP/85 and Corrigendum No. 1, presented by Lithuania on behalf of EU, ECAC and EUROCONTROL, the Commission recognized that there was a need, complementary to the sharing of safety data, for a consolidated and industry-wide approach to safety knowledge

management, building on the foundations of State Safety Programmes and operators' Safety Management System, and on the structure of new ICAO Annex 19.

29.13 Information papers were provided by Indonesia (A38-WP/228), Lithuania on behalf of EU and its Member States, other Member States of ECAC and EUROCONTROL (A38-WP/78), Venezuela (Bolivarian Republic of) (A38-WP/239) and Vietnam (A38-WP/342).

Agenda Item 30: Aviation Safety — Implementation Support

Enhancement of safety oversight through the implementation in partnership with all stakeholders

30.1 The Commission reviewed A38-WP/66, presented by the Council, highlighting the assistance activities undertaken by ICAO since the 37th Session of the Assembly which had led to the achievement of safety improvements in States and the identification of priorities and safety targets to be implemented on a State and regional basis. A38-WP/66 also presented a draft resolution to supersede Resolution A37/8: Regional cooperation and assistance to resolve safety-related deficiencies. The Commission agreed to emphasize within the resolution the importance of cooperation and assistance.

30.2 The Commission reviewed A38-WPs/231 and 259, presented by the Latin American Civil Aviation Commission (LACAC), and noted the initiatives to address safety risks at the regional level through the regional aviation safety groups (RASGs) to prevent accident and/or major incidents resulting from runway safety-related issues, controlled flight into terrain (CFIT) and loss of control in flight (LOC-I) as well as initiatives to encourage States to support the RASGs in their respective regions. In A38-WP/259 States were urged to support the regional efforts in South America for the safe and orderly development of civil aviation through the setting of goals for 2016 in the areas of safety and air navigation. In A38-WP/215, the African Civil Aviation Commission (AFCAC) focused on the work of regional bodies within the AFI Region to strengthen safety oversight capabilities and resolve significant safety concerns (SSCs). Information papers were provided by CASSOS (A38-WP/328), IAC (A38-WP/120) and UEMOA (A38-WP/303).

30.3 The Commission reviewed A38-WP/155, presented by Indonesia, A38-WP/352, presented by Viet Nam, and A38-WP/101 and Corrigendum No. 1, presented by the United States, all focusing on the need for aviation safety inspectors, each describing different aspects. The Commission recognized that many States find the hiring, training and retaining of qualified aviation safety inspectors to be challenging and that incorporating the development of inspector competencies into the work of the Next Generation of Aviation Professionals programme would help to enhance aviation safety globally. A38-WP/101, which was widely supported, requested that the Council direct the Secretariat to work on developing provisions and guidance on overall competencies for Government safety inspectors, for which the Secretariat informed that work is already underway, and the Commission noted more work needs to be done.

30.4 The Commission was advised that in order for ICAO to continue work on coordinating regional cooperation and provision of assistance to States, all stakeholders, including States, regional bodies, financial institutions and industry, should actively engage in supporting those States in need. This was the focus of the draft resolution presented in A38-WP/66 which the Commission agreed should be amended to take into consideration suggestions made in A38-WP/84, presented under Agenda Item 27 by Lithuania on behalf of the European Union and its Member States and the other Member States of the European Civil Aviation Conference and by EUROCONTROL.

30.5 In light of the discussion, the Commission agreed to submit, for adoption by the Plenary, the following resolution:

Resolution 30/1: Regional cooperation and assistance to resolve safety deficiencies, establishing priorities and setting measurable targets

Whereas a primary objective of the Organization continues to be that of ensuring the safety of international civil aviation worldwide;

Whereas ensuring the safety of international civil aviation is also the responsibility of Contracting States both collectively and individually;

Whereas in accordance with Article 37 of the *Convention on International Civil Aviation* each Contracting State undertakes to collaborate in securing the highest practicable degree of uniformity in regulation, standards, procedures and organization in relation to aircraft, personnel, airports, airways and auxiliary services in all matters in which uniformity will facilitate and improve air navigation;

Whereas the improvement of the safety of international civil aviation on a worldwide basis requires the active collaboration of all stakeholders;

Whereas the Convention and its Annexes provide the legal and operational framework for Contracting States to build a civil aviation safety system based on mutual trust and recognition, requiring that all Contracting States implement the SARPs as far as practicable and adequately perform safety oversight;

Whereas the results of the audits and ICAO Coordinated Validation Missions (ICVMs) conducted under the Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP-CMA) indicate that several Contracting States have not yet been able to establish a satisfactory national safety oversight system and some Contracting States have been identified as having significant safety concerns (SSCs);

Whereas ICAO plays a leadership role in facilitating the implementation of SARPs and the rectification of safety-related deficiencies by coordinating support and harnessing resources among aviation safety partners;

Recognizing that the ICAO Plans of Action developed for individual Contracting States serve as platforms to provide, in coordination with other stakeholders, direct assistance and guidance to those States in resolving their SSCs as well as addressing low effective implementation (EI) of critical elements;

Whereas ICAO has a Policy on Regional Cooperation which is committed to render assistance, advice and any other form of support, to the extent possible, in the technical and policy aspects of international civil aviation to Contracting States in carrying out their responsibilities pertaining to the *Convention on International Civil Aviation* and ICAO Strategic Objectives, inter alia by promoting regional cooperation through close partnerships with regional organizations and regional civil aviation bodies;

Recognizing that not all Contracting States have the requisite human, technical and financial resources to adequately perform safety oversight;

Recognizing that the establishment of subregional and regional aviation safety and safety oversight bodies, including regional safety oversight organizations (RSOOs), has great potential to assist States in complying with their obligations under the Chicago Convention through economies of scale and

harmonization on a larger scale resulting from the collaboration among Contracting States in establishing and operating a common safety oversight system;

Recalling that Contracting States are responsible for implementing ICAO Standards and may, in this respect, decide on a voluntary basis to delegate certain functions to RSOOs, and that, when applicable, the word “States” should be read to include RSOOs;

Acknowledging the recognition given in Annex 19 to RSOOs and their role in discharging delegated State safety management functions on behalf of States;

Recognizing that the assistance available to Contracting States experiencing difficulties in correcting deficiencies identified through the safety oversight audits, particularly with priority given to those States with SSCs, would be greatly enhanced by coordination amongst all Contracting States, ICAO and other concerned parties in civil aviation operations; and

Recognizing that established regional aviation safety groups (RASGs) have the objective of establishing objectives, priorities and indicators and the setting of measurable targets to address safety-related deficiencies in each region while ensuring consistency of action and coordination of efforts.

The Assembly:

1. *Directs* the Council, in partnership with all aviation safety partners, to implement a comprehensive assistance programme that will help Contracting States to correct deficiencies identified through USOAP-CMA, with priority given to the resolution of SSCs;
2. *Directs* the Council to promote the concepts of regional cooperation, including the strengthening of RSOOs and RASGs, as well as the establishment of objectives, priorities and indicators and the setting of measurable targets to address SSCs and safety-related deficiencies;
3. *Directs* the Council to continue to partner with Contracting States, industry and other aviation safety partners for coordinating and facilitating the provision of financial and technical assistance to States and subregional and regional safety and safety oversight bodies, including RSOOs and RASGs, in order to enhance safety and strengthen safety oversight capabilities;
4. *Directs* the Council to continue the analysis of relevant safety-critical information for determining effective means of providing assistance to States and subregional and regional safety and safety oversight bodies, including RSOOs and RASGs;
5. *Directs* the Secretary General to continue to foster coordination and cooperation between ICAO, RASGs, RSOOs and other organizations with aviation safety-related activities in order to reduce the burden on States caused by repetitive audits or inspections and to decrease the duplication of monitoring activities;
6. *Urges* Contracting States to give the highest priority to the resolution of SSCs in order to ensure that there are no immediate safety risks to international civil aviation and that the minimum requirements established by the Standards set forth in the ICAO Annexes are met;
7. *Urges* Contracting States to utilize the Flight Procedures Programme, where available, for PBN implementation;

8. *Urges* Contracting States to develop and further strengthen regional and subregional cooperation in order to promote the highest degree of aviation safety;
9. *Calls upon* all Contracting States and relevant aviation safety partners, wherever possible, to assist requesting States with financial and technical resources to ensure the immediate resolution of identified SSCs and the longer-term sustainability of the State safety oversight system;
10. *Encourages* Contracting States to establish partnerships with other States, industry, financial institutions and other aviation safety partners to strengthen safety oversight capabilities, in order to better discharge State responsibilities and foster a safer international civil aviation system;
11. *Encourages* Contracting States to foster the creation of regional or subregional 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 subregional and regional aviation safety and safety oversight bodies, including RSOOs;
12. *Requests* the Secretary General to play a leading role in coordinating efforts to assist States to resolve SSCs through the development of ICAO Plans of Action and/or specific project proposals and to assist States to obtain the necessary financial resources to fund such assistance projects;
13. *Requests* the Council to report to the next ordinary session of the Assembly on the overall implementation of the comprehensive assistance programme; and
14. *Declares* that this resolution supersedes Resolution A37-8.

Benefits of ICAO Online Air Operator Certificate (AOC) Register

30.6 The Commission reviewed A38-WP/90, presented by the Council, on the benefits of the online air operator certificate (AOC) register that was first launched by ICAO in December 2012. It was noted that while participation in the register would require the allocation of resources, the benefits to States from the register might outweigh the costs. The Commission recalled that the AOC register had been developed by ICAO following a proposal made during the 36th Session of the ICAO Assembly to develop an online register that would provide transparency to States of the validity and currency of AOCs and the compliance integrity of the State of the Operator and facilitate the authorization process for States' AOC holders to operate into other States by providing a centralized repository of air operator information. The Commission recognized that the provision of timely and accurate data from larger operator States would present some initial challenges and that additional work would be required to streamline the data entry process. The Commission agreed with the actions proposed in A38-WP/90 and supported A38-WP/126, presented by IATA.

30.7 The Commission also reviewed A38-WP/125, Revision No. 1, presented by IATA which outlined the growing increase in the documentation required by States to authorize operations by airlines registered in other States. The Commission recognized that non-harmonized requirements added significant cost and administrative burden. The Commission agreed that, as had been urged by the 36th Session of the Assembly, States should be encouraged to recognize as valid AOCs and associated operation specifications issued by other States which meet the requirements of Annex 6 — *Operation of Aircraft*.

Approval of Flight Simulation Training Devices

30.8 A38-WP/142, also presented by IATA, outlined the need for States to establish systems to recognize the approvals by other States of flight simulation training devices (FSTD) based on guidance provided in ICAO Doc 9625, *Manual of Criteria for the Qualification of Flight Simulation Training Devices*, Volume I – *Aeroplanes* (3rd Edition) and Volume II — *Helicopters* (1st Edition). The Commission noted that the absence of recognition of FSTD approvals by the States where they are operated has resulted in increased costs and administrative burden to civil aviation authorities, significant costs to the industry and decreased availability of training devices. The Commission also noted that assistance to States in the establishment of systems to recognize the approval of FSTDs, based on guidance in Doc 9625, could be supported through the International Pilot Training Consortium (IPTC), comprised of IATA, ICAO, IFALPA and the Royal Aeronautical Society.

30.9 In view of the discussion, the Commission submitted, for adoption by the Plenary, the following resolution:

Resolution 30/2: Recognition of approval of flight simulation training devices (FSTD)

Whereas ICAO published *Doc 9625 — Manual of Criteria for the Qualification of Flight Simulation Training Devices, Volume I – Aeroplanes*, (3rd Edition) and *Volume II — Helicopters* (1st Edition) to provide the means for the authorities of other States to accept, without repetitive evaluations, the qualifications granted by the State that conducted the initial and recurrent evaluations of a flight simulation training device (FSTD);

Recognizing that despite an internationally agreed mechanism for harmonization provided for in Doc 9625, the absence of recognition of FSTD qualifications is fostering multiple evaluations and causing high costs to States and the industry;

Recognizing that there has been slow progress towards implementation of systems to recognize the approval of FSTDs based on guidance contained in Doc 9625;

The Assembly:

1. *Urges* Contracting States to establish systems to recognize the approval of FSTDs based on guidance provided in using Doc 9625.
2. *Directs* the Council to continue to support Contracting States in the establishment of systems to recognize the approval of FSTDs; and
3. *Urges* Contracting States to assist each other in the establishment of systems to recognize the approval of FSTDs.

Improvement of Public Health Preparedness Planning for Aviation

30.10 The Commission reviewed A38-WP/35, presented by the Council, and A38-WP/229, presented by Dominican Republic, and emphasized the significant benefits to States and its support for ICAO to continue the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA) programme and encouraged States and international organizations to contribute to CAPSCA financially and/or in kind. The Commission recognized ICAO's collaboration with the World Health Organization (WHO) and other partners in implementing the programme.

Regional cooperation on State Safety Programmes and Accident and Incident Investigations

30.11 The Commission reviewed A38-WP/196 and WP/323, presented by Argentina and Japan, respectively, and agreed that States having some experience in implementing State Safety Programmes (SSPs) should share information and collaborate through the RASGs, RSOOs, Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs) or other appropriate regional fora to facilitate the implementation of SSPs.

30.12 A38-WP/339, presented by Colombia, addressed the interest, needs and foundations for the establishment of regional accident and incident investigation organizations (RAIOs) in the South American Region to minimize the current problems related to independence and budget that States face in performing their investigation-related duties.

30.13 The Commission noted that the establishment of RAIOs would be of utmost importance and assistance to States with limited human and financial resources to carry out their investigation duties. Among others, an RAIO would help participating States in achieving economies of scale and help to ensure the functional independence of investigations. The ICAO *Manual on Regional Accident and Incident Investigation Organization* (Doc 9946), published in March 2011, contains guidance for States on how to establish and manage an RAIO within a region or subregion. There were currently several initiatives by groups of States to establish RAIOs, and ICAO, RASGs, and RSOOs had been assisting States in that regard.

30.14 The Commission agreed that legal frameworks in States should be reviewed and, if necessary, amended in order to allow for the establishment of RAIOs as appropriate, so as to improve the level of compliance with relevant ICAO SARPs; and that regional cooperation projects should be promoted to ensure that RAIOs have sustainable technical and financial support.

30.15 Information papers were provided by El Salvador (A38-WP/232) and Viet Nam (A38-WP/343).

Agenda Item 31: Aviation Safety — Emerging Issues

31.1 The Commission reviewed A38-WP/65, presented by the Council, providing an overview of safety reporting publications issued by ICAO. Since 2011, ICAO has published annual reports of trends and issues related to the Global Aviation Safety Plan (GASP) objectives. These publications support a proactive approach to safety through periodic reporting relevant indicators and trends. As a result, ICAO has identified three high-risk accident categories including: loss of control — inflight; controlled flight into terrain (CFIT) and accidents occurring in the runway environment. Beginning in 2014, all regional aviation safety groups (RASGs) are expected to publish annual reports, providing summaries of safety trends in each region.

31.2 The Commission noted the ICAO safety reporting publications, such as the Global Aviation Safety Plan (GASP), the ICAO Safety Report, and the State of Global Aviation Safety, which assist in the definition of priorities for each triennium. It also agreed that the Council should urge Member States to provide the RASGs, whether through States or regional safety oversight organizations (RSOOs) in which they participate, with information and resources necessary to publish regional safety reports, which will increase the value of the global analyses.

31.3 The Commission reviewed A38-WP/36, presented by the Council, which contained a progress report on the development of alternatives to halogenated hydrocarbon (halon) for use in civil aviation aircraft fire protection systems. The paper included a proposed Assembly resolution, to supersede Resolution A37-9 — Halon replacement, on continuing progress towards development of viable halon replacements in civil aviation fire extinguishing systems. The resolution also invited States to determine and monitor their halon reserves and quality of halon, as well as inform ICAO regularly of their halon reserves.

31.4 A38-WP/140 was presented by the United States supporting the draft resolution as presented in A38-WP/36 and informing the Commission on the creation of a halon replacement Aviation Rulemaking Committee (ARC).

31.5 A38-WP/238, presented by International Coordinating Council of Aerospace Industries Associations (ICCAIA), emphasized the importance of further development and the establishment of a realistic target date for suitable halon replacement agents for the cargo compartment fire suppression system. ICCAIA agreed to coordinate a collaborative approach, involving all stakeholders, to develop an industry recommendation for a halon replacement timeframe for cargo compartment applications in time for the Council to report at the next Assembly in 2016, as set forth in the A38-WP/36 draft Resolution as amended by A38-WP/238.

31.6 In light of the discussion, the Commission agreed to submit, for adoption by the Plenary, the following resolution:

Resolution 31/1: Halon replacement

Recognizing the importance of aircraft fire extinguishing systems to the safety of flight;

Recognizing that halogenated hydrocarbons (halon) have been the main fire extinguishing agent used in civil aircraft fire extinguishing systems for over fifty years;

Whereas halons are no longer being produced by international agreement because their release contributes to ozone-depletion and climate change;

Recognizing that more needs to be done because the available halon supplies are decreasing and unsure and that the environmental community continues to be concerned that halon alternatives have not been developed for all fire extinguishing systems in civil aircraft;

Recognizing that the Minimum Performance Standard for each application of halon has been developed already by the International Aircraft Systems Fire Protection Working Group with participation by industry and regulatory authorities;

Recognizing that there are stringent aircraft-specific requirements for each application of halon that must be met before a replacement can be implemented;

Recognizing that the aircraft manufacturing industry has established mechanisms for stakeholder engagement in the development of common solutions for halon replacement in engine/auxiliary power-unit (APU) fire suppression applications and a realistic timeframe for such replacement in cargo compartment applications;

Recognizing that the production is prohibited by international agreement, halon is now exclusively obtained from recovery, reclaiming and recycling. Therefore, recycling of halon gas needs to be

rigorously controlled to prevent the possibility of contaminated halon being supplied to the civil aviation industry; and

Recognizing that any strategy must depend on alternatives that do not pose an unacceptable environmental or health risk as compared to the halons they are replacing;

The Assembly:

1. *Urges* States and their aviation industries to intensify development and implementation of acceptable halon alternatives for fire extinguishing and suppression systems in cargo compartments and engine/auxiliary power units, and to continue work towards improving halon alternatives for hand-held fire extinguishers;
2. *Urges* States to determine and monitor their halon reserve and quality of halon;
3. *Encourages* ICAO to continue collaboration with the International Aircraft Systems Fire Protection Working Group and the United Nations Environment Programme's Ozone Secretariat through its Technology and Economic Assessment Panel's Halons Technical Options Committee on the topic of halon alternatives for civil aviation;
4. *Encourages* States to collaborate with the Industry Consortium for engine/APU applications and the Cargo Compartment Halon Replacement Working Group established by the International Coordinating Council of Aerospace Industries Associations;
5. *Urges* States to inform ICAO regularly of their halon reserves and directs the Secretary General to report the results to the Council.;
6. *Directs* that the Council shall report to the next ordinary session of the Assembly on a timeframe for the replacement of halon in cargo compartment fire suppression systems; and
7. *Declares* that this resolution supersedes Resolution A37-9.

31.7 The Commission reviewed A38-WP/37, presented by the Council, on the implementation status of English language proficiency requirements. Given the adoption of the Standards in March 2003 and the sustained efforts and significant progress States have made to implement English language proficiency requirements, the Commission agreed that States should be encouraged to make use of the implementation tools developed by ICAO for language proficiency requirements and that the flexibility clause relating to States not compliant with the provisions by 5 March 2011 was no longer necessary.

31.8 In light of the discussion, the Commission agreed to submit, for adoption by the Plenary, the following resolution:

Resolution 31/2: Proficiency in the English language used for radiotelephony communications

Whereas to prevent accidents, ICAO introduced language provisions to ensure that air traffic personnel and pilots are proficient in conducting and comprehending radiotelephony communications in the English language, including requirements that the English language shall be available on request at all stations on the ground serving designated airports and routes used by international air services;

Recognizing that the language provisions reinforce the requirement to use ICAO standardized phraseology in all situations for which it has been specified;

Recognizing that Contracting States have made substantial efforts to comply with the language proficiency requirements;

Recognizing that some Contracting States encounter considerable difficulties in implementing the language proficiency requirements including the establishment of language training and testing capabilities;

Whereas in accordance with Article 38 of the Convention any Contracting State which finds it impracticable to comply in all respects with any international standard or procedure is obliged to give immediate notification to ICAO;

Whereas in accordance with Article 39 b) of the Convention any person holding a licence not satisfying in full the conditions laid down in the international standard relating to the class of licence or certificate held, shall have endorsed on or attached to the licence all the particulars in which this person does not satisfy such conditions; and

Whereas pursuant to Article 40 of the Convention no personnel having certificates or licences so endorsed shall participate in international navigation, except with the permission of the State or States whose territory is entered:

The Assembly:

1. *Urges* Contracting States to use ICAO standardized phraseology in all situations for which it has been specified;
2. *Directs* the Council to continue to support Contracting States in their implementation of the language proficiency requirements;
3. *Encourages* Contracting States to make use of the ICAO Aviation English Language Test Service (AELTS) to verify language testing instruments;
4. *Urges* Contracting States to make use of the ICAO Language Proficiency Requirements – Rated Speech Samples training aid;
5. *Urges* Contracting States to assist each other in their implementation of the language proficiency requirements; and
6. *Declares* that this resolution supersedes Resolution A37-10.

31.9 The Commission reviewed A38-WP/69 presented by Iran (Islamic Republic of) and was informed of recent incidents in which aircraft ACAS II (TCAS II) systems issued false resolution advisories due to the transmission of incorrect altitude by other aircraft and of the significance of this since the collision avoidance systems must act as a reliable safety net. The paper recommended the development of operational guidance to deal with this issue, a view shared by the Technical Commission.

31.10 The Commission reviewed A38-WP/263 and A38-WP/264 and Corrigenda No. 1, presented by Turkey, on improvements to flight data analysis monitoring systems and how they may be used to justify bio-mathematical fatigue models. The papers suggested that Member States consider licensing personnel involved in the analysis of flight data to achieve a greater degree of quality. The Commission noted the information presented and that the newly published *Manual on Flight Data*

Analysis Programme (FDAP) (Doc 10000) addressed the requirements to establish a flight data analysis programme, including quality assurance and training.

31.11 The Commission reviewed A38-WP/99, presented by the United States, on child safety restraints. The paper recommended establishing Recommended Practices encouraging air operators to use child restraining devices appropriate to each child's size and weight. It also called for recommendations and guidance on the use of different types of devices and future research and design for such devices. A38-WP/287, presented by ITF, also related to child restraints. The paper recommended the development of guidance for regulations related to child restraints and the elimination of exemptions for infants who presently could be carried in an adult's lap. It also called for guidance on the identification and use of such devices.

31.12 In view of the discussion, the Commission agreed on the need to develop harmonized provisions addressing child restraining devices and that the Council should be requested to develop appropriate provisions to address this issue.

31.13 The Commission reviewed A38-WP/145, presented by the United States, on post-accident testing of flight crewmembers for problematic substances. The paper indicated that, although reference was made to post-accident testing in an ICAO Recommended Practice, the lack of a common approach to post-accident testing could result in the inability of some States to properly determine the existence of or impairment from problematic substances.

31.14 The paper called for ICAO to review existing SARPs and guidance material to determine whether a specific Standard is required that would promote the expeditious testing for the problematic use of substances by any flight crew members following an aviation accident and the 39th Session of the Assembly provided with a report on this issue.

31.15 The Commission recognized that post-accident testing for problematic substances was a highly sensitive matter, involving national laws and access to personal information. However, the Commission agreed that the Council should further review this proposal in light of the views expressed.

31.16 The Commission reviewed A38-WP/220, presented by Venezuela (Bolivarian Republic of), which proposed that ICAO hold an AIG Divisional Meeting every five years with the main goal of ensuring effective coordination of regional and global activities related to accident investigations. The Commission noted that several ICAO manuals in force assist States in addressing many of the concerns listed in A38-WP/220: *Manual of Aircraft Accident and Incident Investigation* (Doc 9756); *Manual on Accident and Incident Investigation Policies and Procedures* (Doc 9962); and the *Manual on Regional Accident and Incident Investigation Organization* (Doc 9946). In addition, AIG workshops were held regularly in conjunction and in coordination with States and ICAO regional offices.

31.17 While acknowledging the importance of the points raised in A38-WP/220, the Commission noted that divisional-type meetings require the allocation of significant resources, and were planned when a substantial number of SARPs were necessary and "the task comprises a substantial number of subjects of world-wide scope which are confined to only one or a few specific air navigation fields", as per the *Directives to Divisional-type Air Navigation Meetings and Rules of Procedure for their Conduct* (Doc 8143). However, it was also acknowledged, and agreed, that it would be beneficial to have additional AIG-related meetings similar to the International Accident Investigation Forums held by Singapore in 2010 and 2013. Such meetings would serve to share lessons and best practices in investigations.

31.18 Taking due account of the aforementioned, and in light of the financial implications of holding periodic AIG Divisional Meetings, the Commission agreed that this topic required further study and should be referred to the Council for review.

31.19 The Commission reviewed A38-WP/72, presented by Lithuania on behalf of the European Union (EU) and its Member States and the other Member States of the European Civil Aviation Conference (ECAC) and by EUROCONTROL. The Commission was made aware of the numerous difficulties faced by investigation authorities during major investigations of accidents and serious incidents involving large aircraft, which were felt to be mainly due to deficient implementation of certain Annex 13 — *Aircraft Accident and Incident Investigation* provisions by some States. This adversely impacted the quality of investigations which in turn negatively impacted safety. The Commission noted that limited resources and/or different priorities in some States could lead to a serious incident not being duly investigated.

31.20 The paper proposed several actions to improve the quality of investigations. Issues on “protection of safety information” were excluded as they were already included in the work of the ICAO Safety Information Protection Task Force.

31.21 The Commission agreed with the intent of the recommendations in A38-WP/72, noting that most were either already addressed in Annex 13 or presently under development. Nonetheless, it was acknowledged that the difficulties in some investigations might stem from lack of proper implementation of relevant Annex 13 provisions in some States, and that ICAO audits under the continuous monitoring approach (CMA) would be a suitable means to address those deficiencies.

31.22 Regarding the development of guidance on the establishment of protocols or agreements between accident investigation and judicial authorities, the Commission agreed that the Council should review this proposal in the context of funds becoming available. The Commission also agreed that the Council should consider upgrading Recommendation 5.4.3 of Annex 13 to a Standard to further assist States’ accident investigation authorities to obtain unrestricted access to all evidential material during investigations.

31.23 The Commission agreed that when the State of Occurrence decides not to investigate a serious incident, the investigation should be delegated, by mutual arrangement and consent, to another State or a regional accident and incident investigation organization (RAIO). States having a particular interest in the investigation included the State of the Operator and the State of Manufacturer. The Commission noted that while such a delegation could be made, States would still be required to meet their sovereign responsibilities for an investigation under the Convention on International Civil Aviation.

31.24 The Commission further agreed that the Council should urge States to: ensure that their Accident Investigation Authority was functionally independent of any entity whose interests could conflict with its own or impair the objectivity with which it discharged its duties; and develop cooperation arrangements between their accident investigation authorities, of either a bilateral or regional character, including support to disseminate final reports of investigated accidents and incidents, as well as their electronic publication in English.

31.25 The Commission reviewed A38-WP/285, presented by the Caribbean Aviation Safety and Security Oversight System (CASSOS) Member States, which called for the development of international Standards for pilot training addressing high altitude aerodynamics and high altitude aircraft handling skill training in Annex 1 — *Personnel Licensing* and Annex 6 — *Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, Part II — International General Aviation — Aeroplanes* and

Part III — *International Operations — Helicopters*, and the inclusion of training requirements related to aircraft handling in the event of loss of airspeed indications in flight in Annex 1 and Annex 6, Parts I, II and III.

31.26 The Commission noted that proposed upset prevention and recovery training (UPRT) provisions for Annex 1, Annex 6, Part I, and the *Procedures for Air Navigation Services — Training* (PANS-TRG, Doc 9868), and the associated guidance already addressed training elements for upset training, including high altitude stalls and system malfunctions/instrument failures (including loss of airspeed indications).

31.27 The Commission reviewed A38-WP/189, presented by the Interstate Aviation Committee (IAC), which argued for a need to mitigate loss of control in flight (LOC-I) events through awareness of the angle of attack (AOA) to improve a pilot's ability to recognize and recover from a stall. The paper suggested the development of provisions related to the installation of AOA indicators and addressed their appropriate use within pilot training programmes. The Commission supported the development of guidance material addressing upset prevention and recovery training as outlined in A38-WP/38, A38-WP/285 and A38-WP/189. The Commission noted the significance of the recommendation to equip commercial aircraft with angle of attack indicators as put forth in A38-WP/189. The Commission agreed that this proposal required more detailed discussions and noted that these discussions would be advanced in the upcoming ICAO Symposium on Loss of Control Inflight (May 2014, Montréal).

31.28 The Commission considered the added risks and high implementation costs associated with high altitude stall training and aircraft handling in the event of loss of airspeed indications in flight for operators regulated under Annex 6, Parts II and III. The Commission agreed that this matter be referred to Council for further study.

31.29 The Commission reviewed A38-WP/354, presented by the Latin American Civil Aviation Commission, which contained information on advances made in technology where modified smartphone equipment was available with flight data recording functionality based on global positioning system (GPS) data for position and speed and several other functions. The equipment and the flight data analysis services were available at low cost and capable of detecting events such as hard landings and airspace violations.

31.30 The Commission was informed that during consultation with the Flight Recorder Panel regarding the use of such low-cost solutions for flight data acquisition and monitoring, concerns had been raised about the maturity of this technology which was not certified for use in aviation nor crash protected. Furthermore, issues of the protection of safety information existed regarding the inappropriate use of such safety information.

31.31 The Commission took note of this information and was of the view that the subject in question needed time to mature before consideration by States.

31.32 The Commission reviewed A38-WP/122 and Corrigenda Nos. 1 and 2, presented by IAC requesting the ICAO Council to develop a code of criteria for the certification of aerodromes. The proposal was supported by most States. One State noted that the current ICAO provisions sufficiently delineated the criteria for aerodrome certification and that if new criteria were to be developed, it was important to ensure that they were flexible enough so as not to negatively impact States and organizations and oversight entities of an airport authority. In this regard, the Commission was informed of a plan by ICAO to develop an implementation kit (iKit) that will contain detailed information, guidance and training materials on the subject. Support was voiced with offers made to contribute to the iKit.

31.33 In view of the discussion, the Commission agreed that the Council should initiate work to further examine this issue.

31.34 The Commission reviewed A38-WP/245 Revision No. 1, presented by the International Transport Workers' Federation (ITF) and the International Federation of Air Line Pilots' Associations (IFALPA) on guidelines for education and training to enable airline workers to recognize and respond to aircraft air supply system fumes. The paper invited the Assembly to note the implications for flight safety of exposure to oil fumes sourced to the aircraft air supply system. It also requested the Council to develop guidance material to improve the education and training of flight crew, cabin crew, and maintenance technicians in fume-related events. ITF and IFALPA offered to provide human resources for this effort. The Commission agreed with the intent of WP/245. Regarding the development of guidance material, the Commission agreed that the Council should review this proposal.

31.35 Information papers were provided by the United States (A38-WP/144), ASECNA (A38-WP/261) and IAC (A38-WP/123).

Agenda Item 32: Air Navigation — Policy

32.1 Under this agenda item, the Commission acknowledged the need to endorse the Global Air Navigation Plan (GANP), and the Aviation System Block Upgrades (ASBUs) as an integral part of it, while also considering proposals to strengthen the GANP, by: better exploiting the opportunities in Resolution A37-15 for sharing work with other organizations; stating explicitly the status of the references in the GANP and the online GANP resources; agreeing on a formal process by which the GANP is to be kept up to date; the development of a standardization roadmap; making provision for the review of priorities and for regular exchanges of information with States and international organizations that are implementing major air traffic management (ATM) development plans. These and other proposals were covered in a number of working papers.

32.2 A38-WP/39, presented by the Council, A38-WP/81, presented by Lithuania on behalf of European Union (EU), European Civil Aviation Conference (ECAC) and EUROCONTROL and introduced by Portugal, and A38-WP/135, presented by the United States, explicitly called for the endorsement of the GANP as the strategic direction for global air navigation, while the other papers implicitly did so by suggesting ways to achieve the objectives of the GANP while also keeping them current.

32.3 The Commission reviewed A38-WP/79, presented by Lithuania on behalf of EU, ECAC and EUROCONTROL, and noted the challenge in implementation of the GANP, suggesting ICAO optimize its working arrangements to prioritize its activities in order to best support the GANP. The paper also provided a set of proposed priorities. Suggested methods to optimize the working arrangements included making the best possible use of expertise within the industry and other stakeholder groups, especially those in the regions, in accordance with Assembly Resolution A37-15. Various means of achieving this were suggested including the establishment of smaller multidisciplinary groups developing high-level Standards and Recommended Practices (SARPs) with priorities set by some sort of standardization forum.

32.4 The Commission discussed A38-WP/81, presented by Lithuania on behalf of EU, ECAC and EUROCONTROL, which requested ICAO to undertake: the development of a standardization roadmap which also considers the needs of the ASBU Blocks 2 and 3 for inclusion in the next edition of

the GANP; the establishment of the GANP maintenance process given in Appendix 1 (of the GANP); the development of an online inventory of standards in support of the GANP which would indicate their formal status and include a process to update the GANP module descriptions.

32.5 Having reviewed A38-WP/135, presented by the United States, the Commission expressed the view that critical standards needed to be prioritized in order to realize the timely benefits of the ASBUs, and offered a proposed set of priorities. The paper also encouraged ICAO to work with ICAO regional offices and Member States to implement the ASBUs that are most appropriate for each region.

32.6 A38-WP/194, presented by China, invited ICAO to: support the Asia/Pacific Seamless ATM Plan; provide guidance and assistance to the Asia/Pacific Region, particularly developing countries, to implement ASBUs; and commence work on requirements for the automation of ATM systems as already given in the Asia/Pacific Seamless ATM Plan.

32.7 The Commission discussed A38-WP/274, presented by Japan, describing the Japanese ATM modernization known as collaborative actions for renovation of air traffic systems (CARATS), which is aligned with the GANP. This paper explained the Japanese approach to CARATS which involved coordination and collaboration with all stakeholders. It also pointed out that progress will depend on determining the cost-benefit mechanisms for each element of an ASBU module and then seeking agreement on these with the affected stakeholders. In order to do this effectively, A38-WP/274 urged ICAO to provide more information on the elements that make up each ASBU module along with the method to determine costs and benefits and to monitor progress for each element.

32.8 The Commission noted that most of the work proposals were already underway; however, the need for a standardization roadmap as the basis for the work programme of ICAO was viewed as urgent. Some of the above proposals would be referred to the Council for further consideration in the future update of the GANP/ASBU.

32.9 A38-WP/218 was presented by the Russian Federation. The paper, which was supported by the Commission, expressed the need for global agreement on the principles, the standardization and the harmonized implementation of system-wide information management (SWIM). The Commission was informed that there had already been discussion within ICAO on the establishment of a SWIM expert group that could be tasked with this work. Accordingly, the Commission agreed to refer the recommendation outlined in A38-WP/218 to the Council for further consideration.

32.10 The Commission discussed and supported A38-WP/278, presented by the Interstate Aviation Committee (IAC), and A38-WP/283, presented by Russian Federation. Both papers proposed the development and standardization of a wake vortex safety system (WVSS), explaining the merits and basic components of such a system. AN-Conf/12 Recommendation 2/4 also referred to this subject. In addition to this, A38-WP/283 requested the addition of a new module to Block 1 of the ASBUs which the Commission noted should be considered for the next edition of the GANP. The Commission agreed to forward the WVSS proposal to the Council noting that any decision to develop WVSS SARPs should await economic, technical and operational impact assessments.

32.11 In reviewing A38-WP/310, presented by Airports Council International (ACI), on performance-based navigation (PBN) regarding the involvement of airports in the planning of PBN routes, the Commission supported the recommendation in paragraph 2.6 and the corresponding ACI General Assembly resolution as detailed in the appendix of the paper. ICAO will take into account matters relating to airport consultation involvement in the PBN planning.

Agenda Item 33: Air Navigation — Standardization

33.1 The Commission reviewed A38-WP/311, presented by the Russian Federation, addressing the use of multiple constellations of the global navigation satellite system (GNSS) for air navigation. The paper offered proposals for ICAO to develop a concept for the use of GNSS in a multi-constellation configuration and a policy for its application. The Commission was informed that the appropriate ICAO technical group was already at work addressing the issues related to the introduction of aircraft navigation based on multiple GNSS constellations.

33.2 The Commission discussed A38-WP/127 Revised, presented by the International Air Transport Association (IATA), addressing the issue of mandates for equipage or use of specific GNSS constellations or augmentation systems. The paper called for States to abstain from issuing mandates to use specific GNSS elements to airlines for which they are not the State of the Operator, and to allow such airlines to use any available GNSS elements, provided that the relevant navigation performance requirements are met.

33.3 The Commission recognized that the conclusions reached at the Twelfth Air Navigation Conference (AN-Conf/12) with regard to the use of multiple GNSS constellations, reflected in Recommendation 6.6 of the Conference, were still applicable to the issues raised by A38-WP/127 Revised and A38-WP/311, and consistent with the main thrust of both papers.

33.4 The Commission reviewed A38-WP/208, presented by the Russian Federation, addressing some aspects of the implementation of GNSS. Specifically, the paper called for ICAO to develop additional guidance to assist States in the assessment of GNSS accuracy, integrity, continuity and availability; and it proposed that the existing Annex 10 — *Aeronautical Telecommunications* requirements for recording and retention of GNSS data, currently formulated as a Recommended Practice, be elevated to the status of Standard. The Commission agreed that this topic required further study and that the subject should be referred to the Council for further review.

33.5 The Commission considered A38-WP/266, presented by the United Arab Emirates, which discussed plans for the implementation of inter-facility data communications in the MID Region. The issues raised in this paper suggested a need to address both the medium and long-term needs for inter-facility data communication. The Commission agreed that the matter should be referred to the Council for further review.

33.6 Information papers were provided by China (A38-WP/193) and the Russian Federation (A38-WP/207 and Corrigendum No. 1).

33.7 The Commission reviewed A38-WP/336, presented by Airports Council International (ACI), which called for the development of airport-collaborative decision-making (A-CDM) to achieve greater efficiencies, and invited the Assembly to support AN-Conf/12 Recommendation 2/1 f) and the ACI General Assembly Resolution 1 (June 2013). The paper urged States to support joint promotion of A-CDM by ICAO, ACI, Civil Air Navigation Services Organisation (CANSO) and IATA, as well as jointly supported implementations and trials. The Commission agreed that the matter should be referred to the Council for further consideration.

Agenda Item 34: Air Navigation — Monitoring and Analysis

34.1 The Commission reviewed A38-WP/87, presented by the Council, addressing air navigation performance measurement, monitoring and reporting. The paper presented the ways and means to report the progress of regional implementation through a planned online system referred to as the regional performance dashboard which will also support an annual Global Air Navigation Report.

34.2 A38-WP/87 was broadly supported. With regard to monitoring and analysis tools a number of States emphasized that there should be the possibility of using their own tools as long as these met ICAO needs. The Commission agreed that this issue should be addressed in the *Draft resolution to supersede resolution A37-4 and to incorporate and supersede resolution A37-12, Appendix B — Global Air Navigation Plan (GANP)* (Appendix B of A38-WP/39) the fifth resolving clause.

Resolution 34/1: ICAO global planning for safety and air navigation

Whereas ICAO strives to achieve the goal of a safe and orderly development of civil aviation through cooperation among Member States and other stakeholders;

Whereas to realize this goal, the Organization has established Strategic Objectives, including objectives for safety and for capacity and efficiency;

Recognizing the importance of global frameworks to support the Strategic Objectives of ICAO;

Recognizing the importance of effective implementation of regional and national plans and initiatives based on the global frameworks;

Recognizing that further progress in improving the global safety, capacity 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; and

Noting the approval on 30 July 2013 by the Council of the first edition of the Global Aviation Safety Plan (GASP) and on 29 May 2013 of the fourth edition of the Global Air Navigation Plan (GANP);

The Assembly:

1. *Endorses* the first edition of the Global Aviation Safety Plan (GASP) and the fourth edition of the Global Air Navigation Plan (GANP) as the global strategic directions for safety and air navigation, respectively;
2. *Resolves* that ICAO shall implement and keep current the GASP and the GANP to support the relevant Strategic Objectives of the Organization;
3. *Resolves* that these global plans shall be implemented and kept current in close cooperation and coordination with all concerned stakeholders;
4. *Resolves* that these global plans shall provide the frameworks in which regional, subregional and national implementation plans will be developed and implemented, thus ensuring harmonization and coordination of efforts aimed at improving international civil aviation safety, capacity and efficiency;

5. *Urges* Member States to develop sustainable solutions to fully exercise their safety oversight and air navigation responsibilities which can be achieved by sharing resources, utilizing internal and/or external resources, such as regional and sub-regional organizations and the expertise of other States;
6. *Urges* Member States to demonstrate the political will necessary for taking remedial actions to address safety and air navigation deficiencies, including those identified by Universal Safety Oversight Audit Programme (USOAP), through the application of GASP and GANP objectives and the ICAO regional planning process;
7. *Urges* Member States, the industry and financing institutions to provide the needed support for the coordinated implementation of the GASP and GANP, avoiding duplication of efforts;
8. *Calls upon* States and *invites* other stakeholders to cooperate in the development and implementation of regional, subregional and national plans based on the frameworks of the GASP and GANP;
9. *Instructs* the Council to provide a report on the implementation and evolution of the GASP and GANP to future regular sessions of the Assembly;
10. *Instructs* the Secretary General to promote, make available and effectively communicate the GASP and the GANP; and
11. *Declares* that this Assembly resolution supersedes Assembly Resolution A37-4 on ICAO global planning for safety and Assembly Resolution A37-12 on ICAO global planning for sustainability.

APPENDIX A

Global Aviation Safety Plan (GASP)

Reaffirming 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;

Recognizing that safety is a responsibility involving ICAO, Member States and all other stakeholders;

Recognizing the safety benefits that can be drawn from partnerships between States and industry;

Recognizing that the High-level Safety Conference (2010) reaffirmed the need for the ICAO safety framework to continuously evolve to ensure its sustained effectiveness and efficiency in the changing regulatory, economic and technical environment;

Noting that the expected increase in international civil aviation traffic will result in an increasing number of aircraft accidents unless the accident rate is reduced;

Recognizing the need to maintain the public's confidence in air transport by providing access to relevant safety information;

Recognizing that a proactive approach in which a strategy is established to set priorities, targets and indicators to manage safety risks is of paramount importance to the achievement of further improvements in aviation safety;

Recognizing that regional aviation safety groups have been implemented by ICAO, taking into account the needs of the various regions and building on the already existing structures and forms of cooperation;

Noting the intent to apply the safety management principles in the GASP to enhance safety by focusing action where it is most needed; and

Noting the need to assist Member States in implementing safety management principles and mitigate risks on identified operational issues;

The Assembly:

1. *Stresses* the need for continuous improvement of aviation safety through a reduction in the number of accidents and related fatalities in air transport operations in all parts of the world, particularly in States where safety records are significantly worse than the worldwide average;
2. *Stresses* that limited resources of the international aviation community should be used strategically to support States or regions whose safety oversight maturity is not at an acceptable level and where political willingness exists to improve safety oversight functions;
3. *Urges* Member States to support the Global Aviation Safety Plan (GASP) objectives by implementing the safety initiatives outlined therein;
4. *Urges* Member States, regional safety oversight organizations (RSOOs), regional aviation safety groups (RASGs) and international organizations concerned to work with all stakeholders to set priorities, targets and indicators consistent with the GASP objectives with the view to reduce the number and rate of aircraft accidents;
5. *Urges* States to fully exercise safety oversight of their operators in full compliance with applicable Standards and Recommended Practices (SARPs), and assure themselves that every foreign operator flying into their territory receives adequate oversight from its own State and take appropriate action when necessary to preserve safety; and
6. *Urges* ICAO to complete the development of safety roadmaps in support of the GASP by the end of 2014 to assist in the risk mitigation of operational issues identified.

APPENDIX B

Global Air Navigation Plan (GANP)

Whereas the enhancement of the safety, capacity and efficiency of aviation operations is a key element of the ICAO Strategic Objectives;

Having adopted Resolution A37-15, a consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation;

Recognizing the importance of GANP as an operational strategy and part of the basket of measures for environmental protection; and

Recognizing that many States and regions are developing new generation plans for their own air navigation modernization;

The Assembly:

1. *Instructs* the Council to use the guidance in the Global Air Navigation Plan (GANP) to develop and prioritize the technical work programme of ICAO in the field of air navigation;
2. *Urges* the Council to provide States with a standardization roadmap, as announced in the GANP, as a basis for the work programme of ICAO;
3. *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 which establish priorities, targets and indicators consistent with globally-harmonized objectives, taking into account operational needs;
4. *Calls* upon States to take into consideration the GANP guidelines as an efficient operational measure for environmental protection;
5. *Calls* upon States, PIRGs, and the aviation industry to provide timely information to ICAO, and to each other, regarding the implementation status of the GANP, including the lessons learned from the implementation of its provisions;
6. *Invites* PIRGs to use ICAO standardized tools or adequate regional tools to monitor and, in collaboration with ICAO, analyze the implementation status of air navigation systems;
7. *Instructs* the Council to publish the results of the analysis on the regional performance dashboards and in an annual global air navigation report including, as a minimum, the key implementation priorities and accrued environmental benefits estimated using CAEP-recognized methods; and
8. *Urges* States that are developing new generation plans for their own air navigation modernization to coordinate with ICAO and align their plans so as to ensure global compatibility and harmonization.

34.3 An information paper was provided by Viet Nam (A38-WP/347).

34.4 The Commission reviewed A38-WP/89, presented by the Council, addressing the ICAO policy on radio frequency matters. The paper recalled the regulatory framework associated with the international agreements on the allocation and use of the radio frequency spectrum laid out in the International Telecommunication Union (ITU) Radio Regulations and, in particular, the process for updating such agreements at ITU World Radiocommunication Conferences (WRC) of which the next would take place in 2015. The paper reaffirmed the need for Member States to support the ICAO position on aviation requirements for spectrum at the WRC. The paper also proposed updates to the ICAO policies on radio frequency matters contained in Assembly Resolution A36-25, taking into account Recommendation 1/12 of the Twelfth Air Navigation Conference (AN-Conf/12).

34.5 In light of the discussion, the Commission agreed to submit, for adoption by the Plenary, the following resolution:

Resolution 34/2: Support of the ICAO Policy on radio frequency spectrum matters

Whereas ICAO is the specialized agency of the United Nations responsible for the safety, regularity and efficiency of international civil aviation;

Whereas ICAO adopts international Standards and Recommended Practices (SARPs) for aeronautical communications systems and radio navigation aids;

Whereas the International Telecommunication Union (ITU) is the specialized agency of the United Nations regulating the use of the radio frequency spectrum;

Whereas the ICAO position, as approved by the Council, for ITU World Radiocommunication Conferences (WRCs) is the result of the coordination of international aviation requirements for radio frequency spectrum;

Whereas a comprehensive frequency spectrum strategy is required by aviation to support timely availability and appropriate protection of adequate spectrum;

Whereas a sustainable environment for growth and technology development is required to support safety and operational effectiveness for current and future operational systems and allow for the transition between present and future technologies;

Recognizing that the development and the implementation of the communications, navigation, and surveillance/air traffic management (CNS/ATM) systems and the safety of international civil aviation could be seriously jeopardized unless requirements for appropriate aviation safety spectrum allocations are satisfied and protection of those allocations is achieved;

Recognizing that to ensure optimal use of the frequency spectrum allocated to aviation, efficient frequency management and use of best practices are required;

Recognizing that support from ITU member administrations is required to ensure that the ICAO position is supported by the WRC and that aviation requirements are met;

Considering the urgent need to increase such support due to the growing demand for spectrum and aggressive competition from commercial telecommunications services;

Considering the increased level of ITU WRC preparation activities associated with the growing demand for bandwidth from all users of the radio frequency (RF) spectrum, as well as the increased importance of the development of regional positions by regional telecommunication bodies such as APT, ASMG, ATU, CEPT, CITELE and RCC*;

Considering Recommendations 7/3 and 7/6 of the Special Communications/Operations Divisional Meeting (1995) (SP COM/OPS/95), Recommendation 5/2 of the 11th Air Navigation Conference (2003) and Recommendation 1/12 of the 12th Air Navigation Conference (2012);

* APT: Asia-Pacific Telecommunity; ASMG: Arab Spectrum Management Group; ATU: African Telecommunications Union; CEPT: the European Conference of Postal and Telecommunications Administrations; CITELE: Comisión Interamericana de Telecomunicaciones; RCC: Regional Commonwealth in the field of Communications.

The Assembly:

1. *Urges* Contracting States, international organizations and other civil aviation stakeholders to support firmly the ICAO frequency spectrum strategy and the ICAO position at WRCs and in regional and other international activities conducted in preparation for WRCs, including by the following means:

- a) working together to deliver efficient aeronautical frequency management and “best practices” to demonstrate the effectiveness and relevance of the aviation industry in spectrum management;
- b) supporting ICAO activities relating to the aviation frequency spectrum strategy and policy through relevant expert group meetings and regional planning groups;
- c) undertaking to provide for aviation interests to be fully integrated in the development of their positions presented to regional telecommunications fora involved in the preparation of joint proposals to the WRC;
- d) including in their proposals to the WRC, to the extent possible, material consistent with the ICAO position;
- e) supporting the ICAO position and the ICAO policy statements at ITU WRCs as approved by Council and incorporated in the *Handbook on Radio Frequency Spectrum Requirements for Civil Aviation* (Doc 9718);
- f) undertaking to provide civil aviation experts to fully participate in the development of States’ and regional positions and development of aviation interests at the ITU; and
- g) ensuring, to the maximum extent possible, that their delegations to regional conferences, ITU study groups and WRCs include experts from their civil aviation authorities and other civil aviation stakeholders who are fully prepared to represent aviation interests;

2. *Requests* the Secretary General to bring to the attention of ITU the importance of adequate radio frequency spectrum allocation and protection for the safety of aviation;

3. *Instructs* the Council and the Secretary General, as a matter of high priority within the budget adopted by the Assembly, to ensure that the resources necessary to support the development and implementation of a comprehensive aviation frequency spectrum strategy as well as increased participation by ICAO in international and regional spectrum management activities are made available; and

4. *Declares* that this resolution supersedes Resolution A36-25.

34.6 The Commission considered A38-WP/363, presented by Canada which elaborated on the expected benefits from extending the use of automatic dependent surveillance – broadcast (ADS-B) to encompass oceanic, polar and other remote regions through the use of space-based reception of ADS-B data from aircraft. This innovative approach was being actively explored, with initial operational capability foreseen for 2017. The Commission noted the potential benefits of space based ADS-B and the related need for an appropriate radio regulatory allocation status of the 1090 MHz aircraft to satellite uplink.

34.7 The Commission also noted that the matter of a potential allocation to receive ADS-B by satellite had recently been brought to the attention to the ITU Radiocommunication Sector and the Air Navigation Commissions’ Aeronautical Communications Panel – Working Group F (Frequency), which is the relevant group of experts within the framework of ICAO. In terms of the ICAO Position, which had

been approved by Council following a formal review by Contracting States and relevant international organizations, it was foreseen that an update might be needed to reflect the outcome of ongoing WRC-15 preparatory studies. Such an update would include consideration of the ADS-B issue, as appropriate.

34.8 A38-WP/97, presented by the United States of America and Canada, addressed an issue related to Agenda Item 1.5 of the ITU WRC-15, which called for studies of the use of fixed-satellite service (FSS) systems for command and control (C2) links, termed control and non-payload communication (CNPC) in ITU documentation, for remotely piloted aircraft systems (RPAS), termed unmanned aircraft systems (UAS) in ITU documentation.

34.9 Noting the pressures on the limited amount of available spectrum, the Commission agreed on the need to consider innovative means of meeting the spectrum demand for C2 systems. However, if parts of the spectrum currently used for non-safety of life services were to be used, it was absolutely essential that appropriate studies be conducted to ensure that there were no unintended consequences; it would seriously undermine the overall aviation position in future World Radio Conferences, where aviation actively sought to protect safety of life services from incursion by other parties, if insufficient regard were to be paid to the same requirements from within the aviation community.

34.10 In conclusion, the Commission recommended to the Assembly that Member States and ICAO should support studies in the International Telecommunication Union Radio Communication Sector (ITU-R) to ensure that the safety of life concerns could be sufficiently addressed. The outcome of these studies would have to provide the necessary assurance that there were no undue implications for other aeronautical systems. Provided this was the case, then it could be determined what ITU regulatory actions would be required to enable use of frequency bands allocated to the fixed-satellite service (FSS) for RPAS command and control links to ensure consistency with ICAO technical and regulatory requirements for a safety service.

34.11 The Commission reviewed A38-WP/356, presented by African Civil Aviation Commission (AFCAC) on behalf of the fifty-four African States, and took note of the need for the appropriate technical and regulatory protection of the C-band 3400-4200 MHz required for the operation of FSS-based aeronautical very small aperture terminal (VSAT) networks, used in support of the air navigation service within the AFI Region as well as its neighbouring regions (MID, EUR, SAM, APAC).

34.12 The Commission agreed that ICAO Member States should support this important issue when addressed by ITU WRC-15 (WRC-15 Agenda Items 1.1 and 9.1.5) and requested that ICAO, in cooperation with the relevant stakeholders, continue addressing this issue during the on-going ITU WRC-15 preparatory studies in order to find a suitable solution for the protection of the C-band operated by aeronautical VSAT Networks.

34.13 An information paper was provided by New Zealand (A38-WP/119).

34.14 The Commission reviewed A38-WP/86, presented by the Council, in accordance with Resolution A15/9, which requires that the Assembly adopt, at each regular session for which a Technical Commission is established, a consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation. The Commission agreed to the changes proposed in Appendix A of A38-WP/86.

34.15 In light of the discussion, the Commission agreed to submit, for adoption by the Plenary, the following resolution:

Resolution 34/3: Consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation

Whereas in Resolution A15-9 the Assembly resolved to adopt in each session for which a Technical Commission is established a consolidated statement of continuing policies related specifically to air navigation up to date as at the end of that session;

Whereas a statement of continuing policies and associated practices related specifically to air navigation as they existed at the end of the 37th Session of the Assembly was adopted by the Assembly in Resolution A37-15, Appendices A to W inclusive;

Whereas the Assembly has reviewed proposals by the Council for the amendment of the statement of continuing policies and associated practices in Resolution A37-15, Appendices A to W inclusive, and has amended the statement to reflect the decisions taken during the 38th Session;

Whereas a policy or associated practice that requires continued application for a period of more than three years should be regarded as a continuing policy or associated practice;

Whereas material which is contained in regulatory or readily available authoritative ICAO documents, such as Annexes, rules of procedures and directives to air navigation meetings should normally be excluded from the consolidated statements. This pertains, in particular, to the associated practices; and

Whereas the Assembly agreed to develop a new Resolution 38-11 based on Resolution A37-15 Appendices A, D and E, as a continuing policy in respect to formulation and implementation of Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services (PANS) and notification of differences that would apply to all Annexes to the Convention and technical guidance material;

The Assembly:

1. *Resolves* that:
 - a) the Appendices attached to this resolution constitute the consolidated statement of continuing air navigation policies and associated practices of ICAO as they exist at the close of the 38th Session of the Assembly; and
 - b) the practices associated with the individual policies in the appendices constitute guidance intended to facilitate and ensure implementation of the respective policies; and
2. *Declares* that this resolution supersedes Resolution A37-15 with its Appendices, except for Appendices A, D and E which are superseded by the new Resolution A38-11.

APPENDIX A

Air navigation meetings of worldwide scope

Whereas the holding of worldwide air navigation meetings is an important function of ICAO and entails substantial expenditures of effort and money by the Contracting States and ICAO; and

Whereas it is necessary to ensure that maximum benefit is obtained from these meetings without imposing any undue burden upon the Contracting States or ICAO;

The Assembly resolves that:

1. meetings, convened by the Council, in which all Contracting States may participate on an equal basis shall be the principal means of progressing the resolution of problems of worldwide import, including the development of amendments to the Annexes and other basic documents in the air navigation field;
2. such meetings shall be convened only when justified by the number and importance of the problems to be dealt with and when there is the likelihood of constructive action on them; meetings convened on this basis may also be requested to conduct exploratory discussions on matters not mature for definite action;
3. the organization of such meetings shall be arranged so that they are best suited to carry out the assigned task and to provide proper coordination among the technical specialities involved; and
4. unless necessitated by extraordinary circumstances, not more than two such meetings shall be convened in a calendar year, and successive meetings dealing extensively with the same technical specialty shall be separated by at least twelve months.

Associated practices

1. Before deciding to refer a matter to a worldwide meeting, the Council should consider whether correspondence with States or use of machinery such as panels or air navigation study groups could dispose of it or facilitate subsequent action on it by a future meeting.
2. The agenda should be sufficiently explicit to define the task to be performed and to indicate the types of specialized expertise that will be needed at the meeting. In an agenda including more than one technical specialty the types of expertise called for should be kept to the minimum compatible with efficiency.
3. To facilitate the participation of all Contracting States, the Council should so plan the meeting programme as to keep to the minimum, consistent with efficiency, the demands upon the time of States' technical officials.
4. The planned duration of a meeting should allow adequate time for completion of the agenda, study of the report as drafted in the working languages of the meeting and approval of the report. Following the meeting, the Secretariat should make any necessary minor editorial amendments and typographical corrections to the meeting report.
5. The approved agenda and the main supporting documentation should be dispatched, normally by air, not less than ten months in advance of the convening date in the case of the agenda and not less than three months in the case of the main supporting documentation; other documentation should be dispatched as soon as possible.

APPENDIX B

Panels of the Air Navigation Commission (ANC)

Whereas panels of the Air Navigation Commission have proved a valuable medium for advancing the solution of specialized technical problems; and

Whereas it is necessary to ensure that maximum benefit is obtained from Air Navigation Commission panels without imposing any undue burden upon the Contracting States or ICAO;

The Assembly resolves that:

1. the Air Navigation Commission shall establish panels if necessary to advance the solution of specialized technical problems which cannot be solved adequately or expeditiously by the Air Navigation Commission through other established facilities;
2. the Air Navigation Commission shall ensure that the terms of reference and the work programmes of panels shall support the ICAO Strategic Objectives, be clear and concise with timelines and shall be adhered to;
3. the Air Navigation Commission shall review periodically the progress of panels and shall terminate panels as soon as the activities assigned to them have been accomplished. A panel shall be allowed to continue in existence only if its continuation is considered justified by the Air Navigation Commission; and
4. panel activity shall support a performance-based approach to SARPs development to the extent possible.

Associated practice

Reports should be clearly presented as the advice of a group of experts to the Air Navigation Commission so that they cannot be construed as representing the views of Contracting States.

APPENDIX C

Certificates of airworthiness, certificates of competency and licences of flight crews

Whereas Article 33 of the Convention does not explicitly define the purposes for which recognition is to be accorded to certificates and licences;

Whereas several interpretations exist as to whether or not there is any obligation on Contracting States to recognize certificates and licences issued or rendered valid by other Contracting States pending the coming into force of SARPs applicable to the aircraft or flight crew involved; and

Whereas with respect to certain categories of aircraft or flight crew licences, it may be many years before SARPs come into force or it may be found most practicable not to adopt SARPs for some categories or flight crew licences;

The Assembly resolves that:

1. certificates of airworthiness and certificates of competency and licences of the flight crew of an aircraft issued or rendered valid by the Contracting State in which the aircraft is registered shall be recognized as valid by other Contracting States for the purpose of flight over their territories, including landings and take-offs, subject to the provisions of Articles 32 (b) and 33 of the Convention; and

2. pending the coming into force of international Standards respecting particular categories of aircraft or flight crew, and certificates issued or rendered valid, under national regulations, by the Contracting State in which the aircraft is registered shall be recognized by other Contracting States for the purpose of flight over their territories, including landings and take-offs.

APPENDIX D

Qualified and Competent Aviation Personnel

Whereas the satisfactory implementation of SARPs and PANS is contingent upon having qualified and competent personnel;

Whereas difficulties are being experienced by Contracting States in these matters due to a lack of qualified personnel to support the existing and future air transportation system;

Whereas special effort is required to support Contracting States in meeting their human resource needs; and

Whereas learning activities conducted by ICAO are an effective means of promoting a common understanding and the uniform application of SARPs and PANS;

The Assembly resolves that:

1. ICAO shall assist Contracting States in achieving and maintaining competency of aviation personnel through the ICAO Aviation Training Programme;
2. The ICAO Aviation Training Programme shall be governed by the following principles:
 - a) qualification of aviation professionals is the responsibility of Contracting States;
 - b) the highest priority is placed on learning activities that support the implementation of SARPs;
 - c) cooperation with Contracting States and industry is essential to develop and implement learning activities to support the implementation of SARPs; and
 - d) priority shall be placed on cultivating the next generation of aviation professionals.
3. ICAO advises operators of training facilities but does not participate in the operation of such facilities; and
4. Contracting States assist each other to optimize access to learning activities for their aviation professionals.

Associated practices

1. The Council should assist Contracting States to harmonize aviation professionals' levels of competency. These efforts should be based on:
 - a) data analysis to determine priorities and needs;
 - b) identified training needs for the implementation of ICAO provisions; and

c) a competency-based approach.

APPENDIX E

Formulation and Implementation of Regional Plans including Regional Supplementary Procedures

Whereas the Council establishes Regional Plans setting forth the facilities, services and Regional Supplementary Procedures to be provided or employed by Contracting States pursuant to Article 28 of the Convention;

Whereas the Regional Plans require amendment from time to time to reflect the changing needs of international civil aviation;

Whereas ICAO has established an approach to planning of facilities and services that centres on the Global ATM Operational Concept and the Global Air Navigation Plan; and

Whereas any serious deficiencies in the implementation of Regional Plans may affect the safety, regularity and efficiency of international air operations and, therefore, should be eliminated as quickly as practicable;

The Assembly resolves that:

1. Regional Plans shall be revised when it becomes apparent that they are no longer consistent with current and foreseen requirements of international civil aviation;
2. when the nature of a required change permits, the associated amendment of the Regional Plan shall be undertaken by correspondence between ICAO and Contracting States and international organizations concerned; and
3. when amendment proposals are associated with the services and facilities provided by States and such amendment proposals:
 - a) do not represent changes to the requirements set by the Council in the Regional Plans;
 - b) do not conflict with established ICAO policy; and
 - c) do not involve issues which cannot be resolved at the regional level;

the Council may delegate authority for processing and promulgating such amendments to the regional level.

4. Regional Air Navigation (RAN) meetings, although important instruments in the determination of the facilities and services, shall be convened only to address issues which cannot be adequately addressed through the Planning and Implementation Regional Groups (PIRGs);

5. Priority shall be given in the implementation programmes of Contracting States to the provision, and continuing operation of those facilities and services, the lack of which would likely have an adverse effect on international air operations;

6. the identification and investigation of and action by ICAO on significant deficiencies in the implementation of Regional Plans shall be carried out in the minimum practicable time; and

7. Planning and Implementation Regional Groups (PIRGs), using a project management approach, shall identify problems and shortcomings in Regional Plans and in the implementation thereof, along with suggested remedial measures.

Associated practices

1. The Council should ensure that the structure and format of regional plans is aligned with the Global Air Navigation Plan and is in support of a performance-based approach to planning.

2. In assessing the urgency of any revision of the Regional Plans the Council should take into account the time needed by Contracting States to arrange for the provision of any necessary additional facilities and services.

3. The Council should ensure that implementation dates in Regional Plans involving the procurement of new types of equipment are realistically related to the ready availability of suitable equipment.

4. The Council should ensure that web based regional plans are developed, with supporting planning tools, in order to improve efficiency and expedite the amendment cycle.

5. The Council should use the Planning and Implementation Regional Groups (PIRGs) it has established throughout the regions to assist in keeping up to date the Regional Plans and any complementary documents.

APPENDIX F

Regional air navigation (RAN) meetings

Whereas RAN meetings are important instruments in the determination of the facilities and services the Contracting States are expected to provide pursuant to Article 28 of the Convention;

Whereas these meetings entail substantial expenditures of effort and money by Contracting States and ICAO;

Whereas it is necessary to ensure that maximum benefit is obtained from these meetings without imposing any undue burden on Contracting States or ICAO; and

Considering that regional air navigation planning is normally accomplished by Planning and Implementation Regional Groups (PIRGs);

The Assembly resolves that:

1. RAN meetings shall be convened only to address issues which cannot be adequately addressed through PIRGs;

2. the convening of such meetings and their agenda shall be based on the existence or expectation of specific shortcomings in the Regional Plans of the respective areas;

3. the geographical area to be considered, account being taken of the existing and planned international air transport and international general aviation operations, the technical fields to be dealt with and the languages to be used shall be decided for each such meeting;
4. the organization best suited to deal with the agenda and to ensure effective coordination among the components of the meeting shall be used for each such meeting; and
5. meetings of limited technical and/or geographical scope shall be convened when specific problems, particularly those requiring urgent solution, need to be dealt with or when convening them will reduce the frequency with which full scale RAN meetings must be held.

Associated practices

1. The Council should endeavour to hold RAN meetings at sites within the areas concerned and should encourage the Contracting States within those areas to serve as host, either individually or jointly.
2. The approved agenda and the main supporting documentation should be made available, by electronic means, not less than ten months in advance of the convening date in the case of the agenda and not less than three months in the case of the main supporting documentation.
3. The Council should ensure that adequate guidance is made available to RAN meetings on operational and technical matters relevant to their agenda.
4. Each participating Contracting State should inform itself, in advance of a meeting, on the plans of its air transport operators and its international general aviation for future operations and, similarly, on the expected traffic by other aircraft on its registry and on the overall requirements of these various categories of aviation for facilities and services.
5. The Council, taking into account the requirement to improve still further existing safety levels, should foster the establishment, for and by RAN meetings, of up-to-date planning criteria which would aim to ensure that Regional Plans satisfy the operational requirements and are economically justified.
6. The Council should develop and maintain specific and detailed directives for consideration of implementation matters at RAN meetings.

APPENDIX G

Delimitation of air traffic services (ATS) airspaces*

Whereas Annex 11 to the Convention requires a Contracting State to determine those portions of airspace over its territory within which air traffic services will be provided and, thereafter, to arrange for such services to be established and provided;

Whereas Annex 11 to the Convention also makes provision for a Contracting State to delegate its responsibility for providing air traffic services over its territory to another State by mutual agreement;

Whereas cooperative efforts between Contracting States could lead to more efficient air traffic management;

Whereas both the delegating and the providing State can reserve the right to terminate any such agreement at any time; and

Whereas Annex 11 to the Convention prescribes that those portions of the airspace over the high seas where air traffic services will be provided shall be determined on the basis of regional air navigation agreements, which are agreements approved by the Council usually on the advice of regional air navigation meetings;

The Assembly resolves, with reference to regional air navigation plans, that:

1. the limits of ATS airspaces, whether over States' territories or over the high seas, shall be established on the basis of technical and operational considerations with the aim of ensuring safety and optimizing efficiency and economy for both providers and users of the services;
2. established ATS airspaces should not be segmented for reasons other than technical, operational, safety and efficiency considerations;
3. if any ATS airspaces need to extend over the territories of two or more States, or parts thereof, agreement thereon should be negotiated between the States concerned, taking into account the need for cost-effective introduction and operation of CNS/ATM systems, and more efficient airspace management, in particular, in the upper airspace;
4. the providing State in implementing air traffic services within airspace over the territory of the delegating State shall do so in accordance with the requirements of the delegating State, which shall establish and maintain in operation such facilities and services for the use of the providing State as are mutually agreed to be necessary;
5. any delegation of responsibility by one State to another or any assignment of responsibility over the high seas shall be limited to technical and operational functions pertaining to the safety and regularity of the air traffic operating in the airspace concerned;

and, furthermore, declares that:

6. any Contracting State which delegates to another State the responsibility for providing air traffic services within airspace over its territory does so without derogation of its sovereignty; and
7. the approval by the Council of regional air navigation agreements relating to the provision by a State of air traffic services within airspace over the high seas does not imply recognition of sovereignty of that State over the airspace concerned.

Associated practices

1. Contracting States should seek the most efficient and economic delineation of ATS airspaces, the optimum location of points for transfer of responsibility and the most efficient coordination procedures in cooperation with the other States concerned and with ICAO.
2. Contracting States should consider, as necessary, establishing jointly a single air traffic services provider to be responsible for the provision of air traffic services within ATS airspace extending over the territories of two or more States or over the high seas.

3. The Council should encourage States providing air traffic services over the high seas to enter, as far as is practicable, into agreements with appropriate States providing air traffic services in adjacent airspaces, so that, in the event the required air traffic services over the high seas cannot be provided, contingency plans, which may require temporary modifications of ATS airspace limits, will be available to be put into effect with the approval of the ICAO Council until the original services are restored.

APPENDIX H

Provision of search and rescue services

Whereas in accordance with Article 25 of the Convention each Contracting State undertakes to provide such measures of assistance to aircraft in distress in its territory as it may find practicable and to collaborate in coordinated measures which may be recommended from time to time pursuant to the Convention;

Whereas Annex 12 to the Convention contains specifications relating to the establishment and provision of search and rescue services within the territories of Contracting States as well as within areas over the high seas;

Whereas Annex 12 to the Convention specifies that those portions of the high seas where search and rescue services will be provided shall be determined on the basis of regional air navigation agreements, which are agreements approved by the Council usually on the advice of regional air navigation meetings;

Whereas Annex 12 to the Convention recommends that search and rescue regions should, insofar as practicable, be coincident with corresponding flight information regions and, with respect to those areas over the high seas, maritime search and rescue regions;

Whereas Article 69 of the Convention specifies that, if the Council is of the opinion that the air navigation services of a Contracting State are not reasonably adequate for the safe operation of international air services, present or contemplated, the Council shall consult with the State directly concerned, and other States affected, with a view to finding means by which the situation may be remedied, and may make recommendations for that purpose; and

Whereas the air navigation services referred to in Article 69 of the Convention include, inter alia, search and rescue services;

The Assembly resolves that:

1. search and rescue regions, whether over States' territories or, in accordance with regional air navigation agreement, over an area greater than a State's sovereign airspace or over the high seas, shall be delimited on the basis of technical and operational considerations, including the desirability of coincident flight information regions, search and rescue regions, and, with respect to areas over the high seas, maritime search and rescue regions, with the aim of ensuring safety, and optimizing efficiency with the least overall cost;

2. States shall ensure the closest practicable cooperation between maritime and aeronautical search and rescue services where they serve the same area and, where practical, establish joint rescue coordination centres to coordinate aeronautical and maritime search and rescue operations;

3. if any search and rescue regions need to extend over the territories of two or more States, or parts thereof, agreement thereon should be negotiated between the States concerned;
 4. the providing State in implementing search and rescue services over the territory of the delegating State shall do so in accordance with the requirements of the delegating State, which shall establish and maintain in operation such facilities and services for the use of the providing State as are mutually agreed to be necessary;
 5. any delegation of responsibility by one State to another or any assignment of responsibility over the high seas shall be limited to technical and operational functions pertaining to the provision of search and rescue services in the area concerned;
 6. remedies to any inadequacies in the provision of efficient search and rescue services, including over the high seas, should be sought through negotiations with States which may be able to give operational or financial assistance in search and rescue operations, with a view to concluding agreements to that effect;
- and, furthermore, declares that:
7. any Contracting State which delegates to another State the responsibility for providing search and rescue services within its territory does so without derogation of its sovereignty; and
 8. the approval by Council of regional air navigation agreements relating to the provision by a State of search and rescue services within areas over the high seas does not imply recognition of sovereignty of that State over the area concerned.

Associated practices

1. Contracting States should, in cooperation with other States and ICAO, seek the most efficient delineation of search and rescue regions and consider, as necessary, pooling available resources or establishing jointly a single search and rescue organization to be responsible for the provision of search and rescue services within areas extending over the territories of two or more States or over the high seas.
2. The Council should encourage States whose air coverage of the search and rescue regions for which they are responsible cannot be ensured because of a lack of adequate facilities, to request assistance from other States to remedy the situation and to negotiate agreements with appropriate States regarding the assistance to be provided during search and rescue operations.

APPENDIX I

Coordination and cooperation of civil and military air traffic

Whereas the airspace is a resource common to both civil and military aviation, and given that many air navigation facilities and services are provided and used by both civil and military aviation;

Whereas the Preamble of the Convention on International Civil Aviation stipulates that signatories thereto had “agreed on certain principles and arrangements in order that international civil aviation may be developed in a safe and orderly manner and that international air transport services may be established on the basis of equality of opportunity and operated soundly and economically”;

Whereas Article 3 a) of the Convention states that “This Convention shall be applicable only to civil aircraft, and shall not be applicable to state aircraft” and Article 3 d) requires that “contracting States undertake, when issuing regulations for their state aircraft, that they will have due regard for the safety of navigation of civil aircraft”;

Recognizing that growing civil air traffic and mission-oriented military air traffic would benefit greatly from a more flexible use of airspace used for military purposes and that satisfactory solutions to the problem of cooperative access to airspace have not evolved in all areas;

Whereas the flexible use of airspace by both civil and military air traffic may be regarded as the ultimate goal, improvement in civil/military coordination and cooperation offers an immediate approach towards more effective airspace management; and

Recalling that the ICAO Global ATM Operational Concept states that all airspace should be a usable resource, any restriction on the use of any particular volume of airspace should be considered transitory, and all airspace should be managed flexibly;

The Assembly resolves that:

1. the common use by civil and military aviation of airspace and of certain facilities and services shall 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;
2. the regulations and procedures established by Contracting States to govern the operation of their state aircraft over the high seas shall 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;
3. the Secretary General shall provide guidance on best practices for civil/military coordination and cooperation;
4. Contracting States may include, when appropriate, representatives of military authorities in their delegations to ICAO meetings; and
5. ICAO serves as an international forum that plays a role in facilitating improved civil/military cooperation, collaboration and the sharing of best practices, and to provide 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.

Associated practices

1. Contracting States should as necessary initiate or improve the coordination and cooperation between their civil and military air traffic services to implement the policy in Resolving Clause 1 above.
2. When establishing the regulations and procedures mentioned in Resolving Clause 2, the State concerned should coordinate the matter with all States responsible for the provision of air traffic services over the high seas in the area in question.

3. The Council should ensure that the matter of civil and military coordination and cooperation in the use of airspace is included, when appropriate, in the agenda of divisional and regional meetings, in accordance with Resolving Clauses 3, 4 and 5 above.

APPENDIX J

The provision of adequate aerodromes

Whereas major improvements to the physical characteristics of aerodromes are required at many locations;

Whereas in certain cases these improvements will involve considerable outlay and it would be inadvisable to plan such work without taking into account future developments;

Whereas States and aerodrome authorities will continue to need to know the general trends in aerodrome requirements which succeeding generations of aircraft will most likely produce;

Whereas many serious problems can be avoided if the operating requirements of new aircraft are such as to permit them to operate economically without further demands on the physical characteristics of aerodromes;

Whereas the operation of aerodromes has many advantages, environmental considerations have imposed limitations upon the operation of aircraft at some locations. In view of the capacity problems currently experienced globally, account should be taken of the introduction into service of newer quieter aircraft;

Whereas there is a growing trend for aerodromes to be operated by autonomous entities, the obligation of States to ensure safe aerodrome facilities and services remains unaffected; and

Whereas aerodrome certification is an essential means to ensure aerodrome safety and enhance efficiency, and that the results of the ICAO Universal Safety Oversight Audit Programme (USOAP) audits suggest that the level of implementation of aerodrome certification, including safety management systems (SMS), is not yet optimal;

The Assembly resolves that:

1. the technical requirements for aerodromes shall be kept under review by ICAO;
2. there is a need for future generations of aircraft to be designed so that they are capable of being operated efficiently, and with the least possible environmental disturbance, from aerodromes used for the operation of present-day aircraft;
3. States should take necessary measures, including the allocation of adequate resources, to improve the level of implementation of aerodrome certification, including SMS at aerodromes; and
4. States should place greater emphasis on the management of aerodrome operations, with runway safety given a high priority.

Associated practices

1. In the light of the results of the continuing review mentioned in Resolving Clause 1 above, the Council, taking into account the requirement to improve still further existing safety levels and efficiency, should:
 - a) develop additional guidance material on future developments;
 - b) develop procedures for the management of aerodrome operations; and
 - c) keep Contracting States informed of developments.
2. The Council should continue to draw the attention of aircraft manufacturers and operators to the policy expressed in Resolving Clause 2.

APPENDIX K

Adequate conditions of employment for aviation ground personnel

Whereas conditions of employment that do not correspond to the qualifications and responsibilities of aviation ground services personnel constitute a major cause of difficulty in recruiting suitably qualified personnel and retaining them after completion of the training; and

Whereas this difficulty is impeding the satisfactory implementation of Regional Plans, SARPs and PANS;

The Assembly resolves that States should take the necessary steps to ensure that conditions of employment for personnel in the aviation ground services should be commensurate with the qualifications required and the responsibility carried by them.

APPENDIX L

Participation by States in the technical work of ICAO

Whereas the technical contributions of Contracting States are essential to attain satisfactory progress in the technical work of ICAO;

Whereas difficulties are from time to time experienced in obtaining prompt and adequate contributions from Contracting States to the technical work of ICAO; and

Whereas it is necessary to ensure that maximum benefit is obtained from this participation without imposing an undue burden on Contracting States and ICAO;

The Assembly resolves that there is a need for effective technical contributions from Contracting States to the technical work of ICAO.

Associated practices

1. The Council should encourage effective participation by Contracting States in the technical work of ICAO, paying due regard to the need to minimize the cost to ICAO and Contracting States of such participation.

2. Insofar as each may find it practicable, Contracting States should:
 - a) assist, by correspondence, in advancing ICAO technical projects;
 - b) attend ICAO meetings and participate actively in pre-meeting preparations, particularly by presenting advance documentation containing either specific proposals relative to items of the agenda or their views on documentation submitted to them;
 - c) participate in ICAO panel activities and ensure that their nominees are suitably qualified and are able to contribute effectively to the panel work;
 - d) undertake specialized studies as requested by ICAO; and
 - e) assist ICAO in its technical work through any other means the Council may devise.

APPENDIX M

The Headquarters' and Regional Offices' technical Secretariat

Whereas there is a continuing need to provide effective assistance to Contracting States in the implementation of Regional Plans, SARPs, PANS and SUPPS;

Whereas it is important that the technical Secretariat of Headquarters and the Regional Offices is effectively used to provide assistance to Contracting States in their implementation problems; and

Whereas it is important that, for the proper execution of their tasks, the members of the technical Secretariat of Headquarters and the Regional Offices are enabled to maintain their technical proficiency and are kept adequately informed of the latest developments in their particular fields;

The Assembly resolves that:

1. the resources of the Headquarters' and Regional Offices' technical Secretariat shall be effectively deployed to provide optimum assistance to Contracting States with their problems relating to continuous monitoring activities, the implementation of Regional Plans, SARPs, PANS and SUPPS; and
2. the members of the Headquarters' and Regional Offices' technical Secretariat shall be enabled to maintain their technical proficiency and to keep adequately informed on the latest technical developments.

Associated practices

1. The members of the Headquarters' and Regional Offices' technical Secretariat should be enabled to carry out frequent visits of adequate duration when such visits are necessary or are requested by Contracting States to assist them with their implementation problems.

2. To the maximum practicable extent, temporary assignment of specialized personnel from one Regional Office to another and from Headquarters to the Regional Offices should take place when temporary reinforcement in the Regional Offices is required.

3. The members of the Headquarters' and Regional Offices' technical Secretariat should be enabled to keep adequately up to date in their particular fields by, inter alia, attendance at selected technical meetings, visits to research and development organizations, witnessing trial applications, and evaluation of new equipment and techniques. However, such visits should not be allowed to take priority over the primary function of the Secretariat to serve ICAO and its several deliberative bodies. Furthermore, the travelling on such visits should be integrated as far as possible with travel necessary for the performance of other ICAO duties.

APPENDIX N

Cooperation among Contracting States in investigations of aircraft accidents

Whereas it is incumbent on the State in which an accident occurs to institute an inquiry into the circumstances of the accident in conformity with Article 26 of the Convention;

Whereas owing to the growing sophistication and complexity of modern aircraft, the conduct of an accident investigation may require participation by experts from many specialized technical and operational fields and access to specially equipped facilities for investigation;

Whereas many Contracting States do not have such specialized technical and operational expertise and appropriate facilities;

Whereas it is essential for flight safety and accident prevention that accidents be thoroughly investigated and reported and that the effectiveness of the investigations should not be unduly hampered by considerations of cost;

Whereas the costs of salvage and investigation of major aircraft accidents may place a heavy financial burden on the resources of the State where the accident occurred; and

Mindful of the publication of the ICAO *Manual on Regional Accident and Incident Investigation Organization* (Doc 9946);

The Assembly resolves to recommend that Contracting States cooperate in the investigation of aircraft accidents, especially accidents in which the investigation requires highly specialized experts and facilities and that to this end Contracting States and regional accident and incident investigation organizations (RAIOs), to the extent possible, inter alia:

- a) provide, on request by other Contracting States, expert assistance and facilities for the investigation of major aircraft accidents; and
- b) afford opportunity to Contracting States seeking investigation experience to attend investigations of aircraft accidents, in the interest of developing and furthering investigation expertise.

Associated practices

1. Contracting States are encouraged to support the convening of regional accident investigation workshops with a view to exchanging information on each State's investigation legislation and procedures, on the sharing of knowledge and expertise in investigation management and techniques, on

the availability of experts and facilities and on practices in dealing with encountered accident investigation difficulties.

2. Contracting States should be encouraged to facilitate the participation of investigators of accident investigation authorities as observers in investigations in other States for training purposes and orientation visits.

3. Contracting States and RAIOS are encouraged to assess their needs and capabilities in the field of aircraft accident investigation and prevention with a view to developing training curricula for basic accident investigation and prevention courses. The use of regional training centres for such courses should be fully explored as well as the incorporation of the TRAINAIR PLUS methodology which provides for internationally standardized and competency-based training.

4. Contracting States are encouraged to refer to the model Memorandum of Understanding (MOU) developed by ICAO in 2007 for use by States to encourage mutual cooperation during the investigation of aircraft accidents and serious incidents. The model MOU is available on the ICAO public website.

5. Contracting States are encouraged to consider, as necessary, the ICAO *Manual on Regional Accident and Incident Investigation Organization* (Doc 9946) which provides guidance on how to establish and manage a regional accident and incident investigation system within a region or subregion.

APPENDIX O

Human performance

Whereas the aims and objectives of ICAO as laid down by the Chicago Convention provide for fostering the development of international air transport “. . . so as to . . . promote safety of flight in international air navigation”;

Whereas it is recognized that human performance, as influenced by physiological and cognitive capabilities and constraints, contributes significantly to the overall safety performance of the aviation system;

Whereas it is recognized that the safety and efficiency benefits associated with new technologies, systems and procedures can only be realized when they are designed to enhance the performance of the individuals who use them; and

Whereas it is recognized that implementation of the future aviation systems will result in changes in roles for aviation professionals requiring work across multi-disciplinary teams to support collaborative decision-making;

The Assembly resolves that:

1. Contracting States ensure the integration of human performance considerations in the planning, design, and implementation of new technologies, systems and processes as part of a safety management approach;

2. Contracting States promote and facilitate the integration of human performance elements within competency-based training programmes throughout the career of a professional; and

3. Contracting States include strategies which promote safe, consistent, efficient and effective operational performance of the individual and across teams of individuals to address safety priorities.

34.16 The Commission considered A38-WP/216, presented by CANSO, which acknowledged that the way airspace is structured and designed, and air traffic services are organized and provided, has a direct impact on capacity and efficiency. In the context of Appendix G – Delimitation of air traffic services airspaces to the revised Resolution A37-15 on a Consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation, CANSO was of the view that greater visibility of the capacity and efficiency challenges to air navigation in certain regions could be a positive step to their resolution and suggested that this subject be covered in the proposed annual ICAO Global Air Navigation Report.

34.17 The Commission recognized the importance of, and the role played by, the resolving clauses and associated practices in Appendix G in establishing airspace on the basis of technical and operational considerations with the aim of ensuring safety and optimizing efficiency. On this basis, the Commission agreed that clearly identifying capacity and efficiency challenges in the proposed annual ICAO Global Air Navigation Report, including potential cooperative arrangements between States, could lead to improved air navigation performance.

Agenda Item 35: Air Navigation — Implementation Support

35.1 The Commission reviewed A38-WP/88, presented by the Council, related to regional priorities and targets for air navigation and agreed on the need to prioritize regional implementation of the operational improvements for air navigation through Aviation System Block Upgrade (ASBU) modules. The Commission requested the Council to instruct planning and implementation regional groups (PIRGs) to: establish, consistent with Recommendations 6/1 and 6/12 of the Twelfth Air Navigation Conference, priorities and targets for air navigation by May 2014; share successful initiatives among one another; utilize specific interface groups, where required, for addressing the harmonization of air navigation plans in adjacent areas of PIRGs; and develop a coordination mechanism in each region between the PIRGs and regional aviation safety groups (RASGs) to ensure consistency of action and avoid overlap.

35.2 The Commission noted that based on the revised Global Air Navigation Plan (GANP) and ASBU framework, the following regional actions were required by mid-2014, aligned with global requirements but flexible for regional variations and avoiding duplication of efforts: revision of regional air navigation plans and associated implementation plans; alignment of the PIRGs terms of references and work programmes; establishment of regional implementation priorities, indicators, metrics and targets; measurement, monitoring and reporting of implementation through the regional performance dashboards; and inclusion of regional results in the Global Air Navigation Report.

35.3 The Commission noted that the following will support achieving the regional actions outlined in 35.2: prioritize and select operational improvements and ASBU block modules; cooperate and collaborate for efficient and effective regional implementation; coordinate between PIRGs and RASGs in the same region for synergies and to avoid duplication; and harmonize and share lessons learned and best practices between PIRGs in different regions.

35.4 The Commission reviewed A38-WP/312, presented by Colombia; noting that Colombia supported and applied the approach of operational improvements in the ASBUs and their development of fifteen ASBU modules according to operational needs. The Commission noted the work underway to

develop a common set of indicators to allow harmonized reporting and the evaluation of objectives for operational improvements.

35.5 The Commission reviewed A38-WP/259, previously presented under Agenda Item 30 by the Latin American Civil Aviation Commission (LACAC), and urged States to support the regional efforts in South America for the safe and orderly development of civil aviation through the setting of goals for 2016 in the areas of operational safety and air navigation.

35.6 The Commission reviewed A38-WP/355, also presented by LACAC, related to support received and continuation thereof for implementation of a regional ATM system, taking into account the ATM operational concept and the corresponding communication, navigation and surveillance technological support for the implementation of the Global Air Navigation Plan. In the paper, LACAC encouraged States and the international aviation community to note the good model used which was supported by ICAO.

35.7 The Commission reviewed A38-WP/211, presented by the African Civil Aviation Commission (AFCAC), which provided proposals to extend the benefits of research and development (R&D) to developing regions and to promote cooperation and collaboration including the coordination of operational R&D activities with regional civil aviation commissions.

35.8 The Commission reviewed A38-WP/212, also presented by the AFCAC, on the mitigation of global navigation satellite system (GNSS) vulnerabilities. The paper called for ICAO, in cooperation with relevant stakeholders, to address the GNSS implementation strategy in the regions where no universal augmentation system was deployed.

35.9 The Commission reviewed A38-WP/247, presented by the Agency for Air Navigation Safety in Africa and Madagascar (ASECNA), and noted the progress of performance-based navigation (PBN) implementation in the AFI Region and commended ICAO for implementing a Flight Procedures Programme (FPP) Office to assist the States with expediting implementation. It acknowledged that an FPP could only be successful through commitment and support by the Region's States, as also discussed under Agenda Item 37.

35.10 The Commission reviewed A38-WP/195 Revised, presented by the Civil Air Navigation Services Organisation (CANSO), which addressed the need for the PIRGs, States, air navigation service providers (ANSPs) and operators to establish priorities and targets consistent with the GANP. The Commission took note of the proposal for a needs and dependency analysis (NDA) and a proposal for training on subjects such as the NDA, business case development and cost-benefit analysis.

35.11 Information papers were provided by Lithuania on behalf of the EU, ECAC and EUROCONTROL (A38-WP/282), the United States (A38-WP/146) and the Central American Corporation for Air Navigation Services (COCESNA) (A38-WP/233).

35.12 The Commission reviewed A38-WP/162, presented by Singapore, and urged States to actively participate in and support air traffic management (ATM) modernization in the regions through innovation and collaboration. The Commission also supported the need for a framework to coordinate ATM modernization efforts across the regions for global harmonization and interoperability.

35.13 The Commission reviewed A38-WP/253, presented by ASECNA, and noted the actions undertaken by ASECNA within the framework of the improvement of the aeronautical mobile service

using remote very high frequency (VHF) and other services linked via very small aperture terminal (VSAT).

35.14 Information papers were provided by China (A38-WP/210), India (A38-WP/341 and A38-WP/344) and ASECNA (A38-WP/244).

Agenda Item 36: Air Navigation — Emerging Issues

36.1 The Commission reviewed A38-WP/121, presented by Nepal, which called for the provision of Standards that identify the necessary type approval or design certification requirements for air traffic services (ATS) equipment design conformance with established human factors principles. The Commission also reviewed A38-WP/243, presented by Venezuela (Bolivarian Republic of), related to guidance documentation for the certification of air navigation services. The Commission considered: the difficulties in establishing such Standards and guidance where currently no precedent exists; the potential for inhibition of innovation and competition; and the need for extensive work to support the development of such Standards when resources were extremely limited. There was some support for the intent expressed in both of these papers but the Commission observed that the budget requirements would not allow progress in the next triennium without significant SAFE Fund donations by one or more States for this work.

36.2 The Commission reviewed A38-WP/265, presented by the United Arab Emirates, which recommended further standardization of digital data exchange under ICAO coordination and development of guidance and training material aimed at increasing the interoperability and the exchange of the aeronautical data.

36.3 The Commission recalled that Amendment 37 to Annex 15 — *Aeronautical Information Services*, to be applicable on 14 November 2013, contained expanded performance specifications relating to the digital exchange of aeronautical information and that this approach had been taken so as not to inhibit the continuing development of the aeronautical information eXchange model (AIXM) data exchange model. The Commission noted that while the objective of adopting a specific exchange model was increased standardization and interoperability, it would involve developing, implementing and maintaining a detailed technical standard. In this connection, the Commission also recalled Assembly Resolution A37/15 which recommended that the ICAO Council should promote the development and upkeep of broad system-level, functional and performance requirements and should continue seeking the most appropriate means of development, translation, processing and dissemination of technical specifications. In consideration of the recommendations to further improve the harmonization and the interoperability of the digital aeronautical data exchange, the Commission would refer these to the Council of ICAO for consideration by the expert groups currently developing Standards and Recommended Practices (SARPs) and guidance for the further transition from aeronautical information service (AIS) to aeronautical information management (AIM) and the development and implementation of system-wide information management (SWIM).

36.4 Information papers were provided by China (A38-WP/190 and WP/192), Iran (Islamic Republic of) (A38-WP/281) and ASECNA (WP/241).

36.5 The Commission reviewed A38-WP/337, presented by the Russian Federation, which provided information on the Russian Federation's concept of the use of self-organizing airborne networks to support integration of remotely piloted aircraft into civil controlled airspace. The Commission noted

the potential benefits of the concept and the relationship to AN-Conf/12 Recommendation 1/10, Automatic dependent surveillance – self-organizing wireless data networks. The Commission requested that the ICAO Council study the proposal as part of the next revision of the Global Air Navigation Plan.

Agenda Item 37: Progress on Implementation of the Comprehensive Regional Implementation Plan for Aviation Safety in Africa (AFI Plan)

37.1 The Commission reviewed A38-WP/67, presented by the Council, which provided a progress report on the Comprehensive Regional Implementation Plan for Aviation Safety in Africa (AFI Plan), including details on the achievements reached in its implementation under the lead of the ICAO Regional Offices in Dakar, Senegal and Nairobi, Kenya. Support was expressed for the paper and, recognizing that more efforts were needed to address significant safety concerns (SSCs) and safety-related deficiencies in the AFI Region, the Commission encouraged ICAO and aviation safety partners to provide assistance to African States in overcoming such deficiencies. The paper also outlined the requirements needed for the continuation and expansion of the AFI Plan in the next triennium, based on the decisions and targets adopted during the Ministerial Conference on Aviation Safety held in Abuja, Nigeria in July 2012 and later endorsed by the Assembly of Heads of States of the African Union in January 2013.

37.2 It was recalled that during an earlier discussion under Agenda Item 35: Air Navigation — Implementation Support (WP/247), the Commission had asked States in the AFI Region to provide personnel resources and/or financial support, as a matter of urgency, to expedite the establishment of the Flight Procedures Programme (FPP) Office with full operational capability. In this regard, the Commission agreed to incorporate this into the draft resolution presented in A38-WP/67.

37.3 The Commission reviewed A38-WP/353, Revision No. 1, presented by Niger, that highlighted the establishment of the Association of African Aviation Training Organizations (AATO) in April 2013. The goal of AATO was to ensure high quality and standardized aviation training in Africa by promoting cooperation among its members and encouraging the sharing of expertise. There was broad support for WP/353, Revision No. 1 and the Commission congratulated the African States for this unique initiative that would benefit aviation safety professionals in the region. It was noted that the AFI Plan would continue supporting AATO, including through guidance on outlining a plan to address current training needs in Africa.

37.4 The Commission noted that A38-WP/213, presented by the Members of the African Civil Aviation Commission (AFCAC), had been presented under Agenda Item 27: Aviation Safety — Policy.

37.5 When reviewing A38-WP/214, presented by Ethiopia on behalf of AFCAC, on the AFI Cooperative Inspectorate Scheme (AFI-CIS), the Commission noted the progress, challenges, assistance provided and benefits of AFI-CIS which was intended to create a pool of safety inspectors in Africa. The Commission recognized the sharing of expertise provided by AFCAC through the management and implementation of the inspector scheme and endorsed ICAO's commitment to continue to support the AFI-CIS. While the Commission noted that inspectors had been mobilized to the AFI-CIS by certain States, all stakeholders were called on to support this scheme by providing resources for training of the CIS inspectors and for future missions conducted under the AFI-CIS.

37.6 In light of the discussion, the Commission agreed to submit, for adoption by the Plenary, the following resolution:

Resolution 37/1: Comprehensive Regional Implementation Plan for Aviation Safety in Africa

Whereas ICAO continues to play its leadership role to reduce serious deficiencies in the Africa-Indian Ocean (AFI) Region which are detrimental to the functioning and further development of international civil aviation;

Noting that actions taken by ICAO under the Comprehensive Regional Implementation Plan for Aviation Safety in Africa (the AFI Plan) have begun to demonstrate positive progress in enhancing aviation safety in the continent;

Noting with satisfaction the significant progress made by African States in improving their level of safety oversight;

Recognizing that success in fully achieving the objectives of the AFI Plan mainly depends on the efforts made by the African States themselves;

Recognizing that many Contracting States in the AFI Region, despite the efforts they make, would, in the immediate future, require continued technical and/or financial support from ICAO and other stakeholders to comply with the requirements of the Chicago Convention and its Annexes;

Recognizing that many African States cannot, on their own, support an effective and sustainable national safety oversight system and therefore have to be urged and supported to establish regional safety oversight organizations (RSOOs);

Recalling Recommendation 4/5 of the Special Africa-Indian Ocean Regional Air Navigation Meeting (SP AFI/08 RAN) on the establishment of regional accident investigation agencies (RAIAs) alongside the development and establishment of RSOOs, thus enabling States to meet their international obligations in the area of accident investigation by collaborating and sharing resources;

Noting that ICAO is supporting many African States to establish RSOOs and RAIAs;

Noting the Abuja Declaration on Aviation Safety in Africa adopted during the Ministerial Conference on Aviation Safety held in Abuja in July 2012;

Noting the aviation safety targets adopted during the Ministerial Conference on Aviation Safety held in Abuja, Nigeria in July 2012 and endorsed by the Assembly of the African Union in January 2013;

Noting the ICAO Plans of Action developed for some Contracting States will serve as a platform to provide, in coordination with other stakeholders, direct assistance in resolving their significant safety concerns (SSCs) as well as other major safety deficiencies;

Noting that regional organizations initiated or established in the AFI Region will continue to require ICAO support for the near future and until they are solidly established and self-supporting;

Recognizing the benefit of continuing to coordinate, under the ICAO umbrella, activities of all stakeholders providing assistance to States in the AFI Region;

Recognizing that ICAO will require additional resources to successfully carry out the support it provides to States in the AFI Region; and

Noting that strong regional offices would be a positive catalyst for the enhancement of aviation safety in the AFI Region;

The Assembly:

1. *Welcomes* the considerable effort made by African States and regional organizations to enhance aviation safety;
2. *Urges* Contracting States of the AFI Region that accepted ICAO Plans of Action, to commit to achieving the objectives set forth in the Plans, through the resolution of major safety-related deficiencies, including the SSCs;
3. *Urges* Contracting States of the AFI Region to commit to and accelerate the establishment of RSOOs and RAIAs, where required, and strengthen cooperation across the region in order to make the optimum use of available resources;
4. *Urges* Contracting States of the AFI Region to refrain from duplication of services in joining more than one RSOO;
5. *Urges* Contracting States of the AFI Region to implement the recommendations of the AFI Planning and Implementation Regional Group (APIRG) and the Regional Aviation Safety Group (RASG-AFI) meetings;
6. *Urges* States, industry and donors to support the implementation of priority activities identified by APIRG and RASG-AFI;
7. *Urges* States, industry and donors to make contributions in cash and kind towards the implementation of the AFI Plan and instructs the Council to recognize all such contributions;
8. *Urges* African States, ICAO and AFCAC to jointly address identified safety deficiencies;
9. *Instructs* the Council to monitor the achievement of the aviation safety targets established by the Ministerial Conference on Aviation Safety held in Abuja in July 2012;
10. *Instructs* the Council to ensure the continued leadership role of ICAO 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;
11. *Instructs* the Council to 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;
12. *Urges* Contracting States of the AFI Region to support the establishment of the AFI Flight Procedure Programme (FPP) Office with seconded personnel and financial assistance as a matter of urgency to expedite the implementation of PBN in the region; and
13. *Declares* that this resolution supersedes Resolution A37-7.

Agenda Item 38: Other issues to be considered by the Technical Commission

38.1 The Commission considered A38-WP/38, presented by the Council, which provided a summary of work undertaken since the 37th Assembly in the area of non-chemical disinsection of the aircraft cabin and flight deck for international flights and noted that the use of non-chemical disinsection methods remained under development. The Commission agreed that any developments should be shared with ICAO and, where relevant, the World Health Organization (WHO). The Commission supported further work on non-chemical disinsection, but also noted that chemical disinsectants, when used in accordance with instructions and WHO guidance, were generally regarded as both safe and effective and would continue to be used. Nevertheless, concerns existed regarding the effect on passengers and crew health. The Commission was informed that the air curtain, which remained a potential alternative, was intended for use only at passenger entry doors and that netting was proposed for other doors. Promising research into the use of both the air curtain and netting was ongoing. The Commission also agreed that ICAO should request WHO to include the subject of non-chemical disinsection methods in its recently established Vector Control Advisory Group.

38.2 In reviewing A38-WP/225, presented by Indonesia which addressed capacity building activities for Aviation Human Resources Development in the aviation field conducted by the Air Transportation Human Resources Development Centre (ATHRDC) of the Ministry of Transportation in Indonesia, the Commission noted the progress made by Indonesia in this area. In relation to the prioritization of capacity-building activities on human resource development and the facilitation and coordination of these activities, the Commission noted that these responsibilities lay more with the regions and individual States.

38.3 Information papers were provided by Nepal (WP/139) and the Interstate Aviation Committee (WP/224).

38.4 The Commission considered working papers A38-WP/156 and 257, presented by Venezuela (Bolivarian Republic of), proposing the development of an e-learning environment for ICAO online courses with the aim of improving safety as well as developing guidelines for safety management system (SMS) training programmes in the form of standardized training packages (STPs). Acknowledging the importance and advantages of the distance learning delivery methodology, the Commission noted Venezuela's progress in this field. The Commission also noted that ICAO was currently developing a blended, online classroom safety management course which would be launched during the second quarter of 2014.

38.5 The Commission also reviewed A38-WP/174, presented by Indonesia, proposing that ICAO introduce training courses for Members States on ICAO Annexes. The Secretary informed the Technical Commission that, while ICAO did not provide specific training on individual Annexes, computer-based training related to the Universal Safety Oversight Audit Programme was available and addressed all of the Critical Elements (CEs) in addition to offering some guidelines for the implementation of various Annexes.

38.6 The Commission discussed A38-WP/148, presented by Dominican Republic, proposing post-training evaluation, including on-the-job performance levels, to allow assessment of trainees in their operational environment. Also proposed was the establishment of a mechanism using the TRAINAIR PLUS methodology to collect information on how participants apply the competencies acquired during training and how to measure the effective transfer of knowledge, skills and attitudes and their on-the-job application. The Commission recognized the importance of measuring training effectiveness and

supported recommendations in A38-WP/148. It was agreed that the Secretariat would coordinate these recommendations with the TRAINAIR PLUS Steering Committee

38.7 An information paper was provided by COCESNA (A38-WP/221 and Corrigendum No. 1).

38.8 The Commission considered A38-WP/143, presented by India, that requested the Council to consider reviewing obstacle limitation surface (OLS) criteria contained in Annex 14 — *Aerodromes*, Volume I — *Aerodrome Design and Operations*, taking into consideration current aircraft navigational and performance capability. The Commission agreed that the Council should initiate work on this subject, involving the necessary technical disciplines and taking into account resource implications.

38.9 Also presented was A38-WP/153 which related to India's successful experience in near parallel runway operations and their work on a preliminary mathematical model developed for future use. The Commission requested the Council to consider developing amended guidelines to be included in the *Manual on Simultaneous Operations on Parallel or Near-Parallel Instrument Runways* (Doc 9643), with the understanding that there would have to be a proper consideration of risk.

38.10 The Commission considered A38-WP/298, presented by the Republic of Korea, that requested ICAO to continue to work on Standards for runway end safety areas (RESA) through the examination of accident data and cost-benefit analysis. The Commission emphasized that the focus should be on, not only RESA, but on a comprehensive approach for addressing runway safety, as reflected in the current ICAO work programme, which included other means such as arresting systems and runway surface condition assessment and reporting. It was also noted that at certain airports around the world, it would be difficult to expand the RESA due to urban constraints. Noting that the subject of RESA was included in the ICAO work programme for the next triennium, the Commission recommended that the proposals by the Republic of Korea be taken into account as necessary.

38.11 A38-WP/302, Revision No. 1, also presented by the Republic of Korea, on measures for preventing runway excursions caused by unstable approaches, suggested that provisions on flight operational quality assurance (FOQA) and additional training measures for flight crews be included in the *Manual on the Approval of Flight Crew Training Organizations* (Doc 9841). The Commission noted the information presented and concluded that Annex 19, the *Safety Management Manual* (SMM) (Doc 9859) and the newly published *Flight Data Analysis Programme Manual* (Doc 10000) offered adequate provisions and guidance to address data-driven development of training programmes taking into account a formal hazard identification and risk mitigation process.

38.12 The Commission considered A38-WP/151, presented by Indonesia, which outlined the need for Member States to ensure they have well-trained air navigation services (ANS) personnel. The paper also contained a proposal for developing licensing requirements for aeronautical information systems (AIS) personnel, air traffic safety electronics personnel (ATSEP) and flight procedure designer personnel in Annex 1 — *Personnel Licensing*. The Commission recalled that ICAO had developed, in cooperation with International Federation of Air Traffic Safety Electronics Associations (IFATSEA), competency frameworks for ATSEPs as a means to foster high quality and globally uniform training. The Commission did not come to consensus on whether a sufficient safety case was available to justify the development of international licensing provisions for personnel outside of the scope of the existing disciplines covered under Annex 1. The Commission noted that the absence of international licensing provisions would not preclude States or regions from establishing their own national certification or licensing requirements. The Commission agreed that, resources permitting, the ICAO Council be

requested to identify the safety case for the development of international licensing provisions beyond the current scope of disciplines covered under Annex 1.

38.13 The Commission considered A38-WP/252, presented by United Arab Emirates, which highlighted the significant threat posed by laser emitters to civil aviation safety and security. The paper noted the growth of laser occurrences required a global response to mitigate the risk associated with the unregulated use of laser emitters. The Commission noted that a number of States were taking action to mitigate the risks posed by laser emitters, and that much more could be achieved, particularly in the area of taking appropriate legal action against offenders under applicable criminal law. Nevertheless, should additional matters need to be addressed by ICAO, the Commission agreed that the task should be referred to the Council for further consideration. In this respect, the European Aviation Safety Agency (EASA) offered to provide resource assistance.

38.14 The Commission considered A38-WP/359, presented by Japan, that described the use of a crisis management system and emergency equipment for air traffic control in preparing for natural disasters such as the recent tsunami caused by the earthquake in Japan in 2011. The paper invited the Assembly to encourage States to share their best practices for crisis management; to note the importance and the necessity of proactive measures against events, including natural disasters; and to consider their emergency response framework and prepare their emergency equipment for ATC.

38.15 A38-WP/325, presented by the Republic of Korea, focused on emergency or contingency plan provisions contained in several ICAO Annexes. The paper invited ICAO to consider developing comprehensive guidance material for the proper establishment of State emergency response planning (ERP) connecting all of the relevant Annexes, as distinct from separate emergency response provisions of service providers.

38.16 The Commission considered A38-WP/149, presented by Indonesia which provided information on improving State capability to manage evacuations and incoming relief in the aftermath of a disaster in hazard-prone areas. The paper highlighted the use of disaster-focused airports in the Get Airport Ready for Disaster (GARD) programme and requested that ICAO develop guidance material for operational procedures for airports in hazard-prone areas.

38.17 Regarding A38-WP/359, A38-WP/325 and A38-WP/149, and in view of the considerable support from States on the need to progress work on different aspects of emergency response, the Commission agreed that the Council should initiate work to further examine these issues.

38.18 The Commission considered A38-WP/132 and A38-WP/364, presented by Canada, which provided a concept of space-based ADS-B that leveraged two established technologies (satellites and ADS-B) to allow for global air traffic services (ATS) surveillance coverage. The concept had the potential to enhance safety and significantly contribute to more efficient airspace management, optimum altitude aircraft operations, preferred routings and reduced fuel burn in remote regions where ground-based surveillance was not feasible or practical. The Commission noted that space-based ADS-B had been the subject of AN-Conf/12 Recommendation 1/9 and that the concept would be included in the GANP although, as noted, there was a mention of space-based ADS-B in the fourth edition of the GANP. The Commission agreed that consideration of the development of ICAO provisions and guidance material should be referred to the Council, noting that such work should be, to the extent possible, performance-based.

38.19 The Commission reviewed A38-WP/326, presented by the Republic of Korea, concerning civil/military cooperation. The paper invited ICAO to consider supporting conferences at which examples

of civil/military cooperation could be introduced, discussed and shared amongst Member States. It was recalled that, as covered in AN-Conf/12 recommendations and the Consolidated statement of continuing ICAO policies and associated practices related to air navigation, ICAO had already taken action in the regions to encourage States to improve civil/military cooperation. The Commission agreed that the Council should consider further the need to develop guidance material on flexible use of airspace (FUA), airspace design and interoperability and to take into consideration the principles of collaborative decision-making (CDM) in the sharing of the information among civil and military partners and the use of air traffic flow management (ATFM) to increase efficiency in the utilization of the airspace.

38.20 Information papers were provided by India (A38-WP/346, Revision No. 1), Mongolia (A38-WP/324), Nepal (A38-WP/117), the Republic of Korea (A38-WP/308) and Venezuela (Bolivarian Republic of) (A38-WP/256).

APPENDIX

**LIST OF DOCUMENTS AND WORKING PAPERS ASSOCIATED
WITH THE WORK OF THE TECHNICAL COMMISSION**

List of documents

| Document | Title |
|-----------------|--|
| Doc 7300 | <i>Convention on International Civil Aviation</i> |
| Doc 9750 | <i>Global Air Navigation Plan</i> |
| Doc 9859 | <i>Safety Management Manual (SMM)</i> |
| Doc 9883 | <i>Manual on Global Performance of the Air Navigation System</i> |
| Doc 9935 | <i>Report of the High-level Safety Conference (2010)</i> |
| Doc 9952 | <i>Annual Report of the Council – 2010</i> |
| Doc 9958 | <i>Assembly Resolutions in Force (as of 8 October 2010)</i> |
| Doc 9975 | <i>Annual Report of the Council – 2011</i> |
| Doc 10001 | <i>Annual Report of the Council – 2012</i> |
| Doc 10004 | <i>Global Aviation Safety Plan</i> |
| Doc 10007 | <i>Report of the Twelfth Air Navigation Conference (2012)</i> |

List of working papers

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| 26 | Annual Reports of the Council to the Assembly for 2010, 2011 and 2012 | | | A38-WP/375 | A38-WP/410 |
| 27 | Aviation Safety – Policy | A38-WP/84 | Lithuania on behalf of EU and its Member States and the other Member States of ECAC; and EUROCONTROL | A38-WP/377 | A38-WP/410 |
| | | A38-WP/92 | | | |
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| | | A38-WP/102 | United States, Brazil | | |
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| | | A38-WP/223 | Brazil with support from the other Member States of LACAC | | |
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| | | A38-WP/280 and Revision No. 1 | Republic of Korea | | |
| | | A38-WP/296 | ITF | | |
| 28 | Aviation Safety – Standardization | A38-WP/77 | Lithuania on behalf of EU and its Member States and the other Member States of ECAC; and EUROCONTROL | A38-WP/379 | A38-WP/410 |
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| 29 | Aviation Safety – Monitoring and Analysis | A38-WP/50 | | A38-WP/388 | A38-WP/410 |
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