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## **ASSEMBLY — 38TH SESSION**

### **REPORT OF THE TECHNICAL COMMISSION ON AGENDA ITEMS 30, 31, 32 AND 33**

(Presented by the Chairman of the Technical Commission)

The attached report on Agenda Items 30, 31, 32 and 33 has been approved by the Technical Commission. Resolutions 30/1, 30/2, 31/1 and 31/2 are recommended for adoption by the Plenary.

*Note.— After removal of this covering sheet, this paper should be inserted in the appropriate place in the report folder.*

(18 pages)

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**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 (WA38-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 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, *Criteria for the Qualification of Flight Simulation Training Devices*, Volume I – *Aeroplane* (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 — Criteria for the Qualification of Flight Simulation Training Devices, Volume I – Aeroplane*, (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 FSTD's based on guidance contained in Doc 9625;

*The Assembly:*

1. *Urges* Contracting States to establish systems to recognize the approval of FSTD's 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 FSTD's; and
3. *Urges* Contracting States to assist each other in the establishment of systems to recognize the approval of FSTD's.

### **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, 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).

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**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. Given the budgetary implications, however, this should be referred to the Council for review.

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 *Flight Data Analysis Programme Manual* (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 taking into account the budgetary implications.

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 Recommend Practice, the lack of a common approach to post-accident testing could may 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, given the budgetary implications, 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. Given the budgetary implications, however, this should be referred to the Council for review. 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, taking into consideration budgetary issues.

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, taking into account budgetary implications, 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, taking into account budgetary implications, should review this proposal

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

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**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) while also considering proposals to strengthen the GANP, and the Aviation System Block Upgrades (ASBUs) as an integral part of it, 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, taking into account budgetary issues.

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.

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**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, 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 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 taking into account budgetary implications.

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 of ICAO for further review.

33.6 Information papers were provided by China (A38-WP/193) and Russian Federation (A38-WP/207).

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 of ICAO for further consideration.