



**WORKING PAPER**

**ASSEMBLY — 39TH SESSION**

**TECHNICAL COMMISSION**

**Agenda Item 36: Aviation safety and air navigation implementation support**

**REPORT ON THE ICAO SAFETY AND AIR NAVIGATION IMPLEMENTATION SUPPORT  
PLANS, PROGRAMMES AND MECHANISMS**

(Presented by the Council of ICAO)

**EXECUTIVE SUMMARY**

The *Global Air Navigation Plan* (GANP, Doc 9750) and the *Global Aviation Safety Plan* (GASP, Doc 10004) provide strategic direction for the technical work programme of ICAO in the areas of air navigation safety, capacity and efficiency and serve as guidance for States, the Planning and Implementation Regional Groups (PIRGs), Regional Aviation Safety Groups (RASGs) and Regional Safety Oversight Organizations (RSOOs), service providers, airspace users and other stakeholders. While PIRGs are progressing with regional performance improvements through implementation of relevant aviation system block upgrades (ASBUs), RASGs and RSOOs are supporting implementation strategies and initiatives based on the GASP and safety priorities at national and regional levels. This paper presents the implementation support being provided to the aviation community under the safety and air navigation capacity and efficiency strategic objectives that supports the No Country Left Behind initiative.

**Action:** The Assembly is invited to:

- a) request States to provide sufficient support including technical expertise, participation and contributions to the PIRG, RASG and RSOO work programmes and implementation activities;
- b) call on the Council to promote the use of the GANP and GASP by the PIRGs and RASGs, respectively, to achieve global safety, capacity and efficiency objectives; and to encourage the sharing of best practices from the PIRGs and RASGs across regions;
- c) call on the Council to continue monitoring the implementation of GANP and GASP initiatives;
- d) call on the Council to request PIRGs and RASGs to utilize specific coordination mechanisms for addressing the harmonization of safety and air navigation implementation assistance plans in adjacent areas; and
- e) request ICAO to provide necessary guidance and tools for the implementation of the GASP and GANP.

<i>Strategic Objectives:</i>	This working paper relates to the Safety, Air Navigation Capacity and Efficiency, Environmental Protection and Economic Development of Air Transport Strategic Objectives.
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<i>Financial implications:</i>	The activities referred to in this paper will be undertaken subject to the resources available in the 2017-2019 Regular Programme Budget and from extra budgetary contributions.
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<i>References:</i>	A39-WP/23 A39-WP/24 A39-WP/27 A39-WP/28 A39-WP/29 A39-WP/30 A39-WP/39 A39-WP/45 A39-WP/47 A39-WP/62 Doc 10046, <i>Second High-level Safety Conference (HLSC)</i> Doc 10022, <i>Assembly Resolutions in Force</i> (as of 4 October 2013) Doc 10007, <i>Twelfth Air Navigation Conference Report (AN-Conf/12)</i> Doc 10004, <i>Global Aviation Safety Plan (GASP)</i> Doc 9883, <i>Manual on Global Performance of the Air Navigation System</i> Doc 9854, <i>Global ATM Operational Concept</i> Doc 9750, <i>Global Air Navigation Plan (GANP)</i> Doc 7300, <i>Convention on International Civil Aviation</i> Doc 9734, <i>Safety Oversight Manual, Part B — The Establishment and Management of a Regional Safety Oversight System</i>
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## 1. INTRODUCTION

1.1 This paper outlines the global implementation support plans and programmes for the next triennium that support the No Country Left Behind initiative. The paper also reports on the regional implementation support mechanisms: planning and implementation regional groups (PIRGs), regional aviation safety groups (RASGs), and regional safety oversight organizations (RSOOs).

1.2 In addition to the guidance material, awareness and learning events, web resources and other tools, global implementation support programmes have been established by ICAO, to assist States under all Strategic Objectives, such as the Technical Cooperation, Technical Assistance, and TRAINAIR Plus programmes. In addition, under the Safety Strategic Objective, ICAO is implementing the Runway Safety Programme, Collaborative LOC-I Programme, Safety Management Programme, and the Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA). Air navigation global implementation support programmes include, among others the Performance-Based Navigation (PBN) Programme.

## 2. REGIONAL IMPLEMENTATION SUPPORT MECHANISMS

2.1 *PIRGs*: The planning and implementation regional groups (PIRGs) were established by the Council with the objective of planning for the development of regional air navigation systems and infrastructure. The six regional groups are: ASIA/PAC Air Navigation Planning and Implementation Regional Group (APANPIRG) Africa-Indian Ocean Planning and Implementation Regional Group (APIRG), European Air Navigation Planning Group (EANPG), CAR/SAM Planning and Implementation Regional Group (GREPECAS), Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG), and North Atlantic Systems Planning Group (NAT SPG).

2.2 *RASGs*: In 2010, the Council established the regional aviation safety groups (RASGs) to facilitate implementation of the Global Aviation Safety Plan (GASP). RASG objectives are to monitor GASP progress, coordinate actions among States and make recommendations to ICAO that support a regional performance framework for the management of safety on the basis of the GASP. The following RASGs were established: Regional Aviation Safety Group — Europe (RASG-EUR); Regional Aviation Safety Group — Asia/Pacific (RASG-APAC); Regional Aviation Safety Group — Africa (RASG-AFI); Regional Aviation Safety Group — Middle East (RASG-MID) and Regional Aviation Safety Group — Pan America (RASG-PA).

2.3 *RSOOs*: The regional safety oversight organisations (RSOOs) share the common goal of strengthening the safety oversight capabilities of their Member States and enabling a higher level of compliance with international aviation safety requirements. At the same time, they vary in the range of tasks carried out, their mandates, the level of authority delegated by their Member States, and their organizational, legal and financial structures. The following entities have RSOO-like characteristics as described in the *Safety Oversight Manual, Part B — The Establishment and Management of a Regional Safety Oversight System* (Doc 9734): Autorités Africaines et Malgaches de l'Aviation Civile (AAMAC), Central American Agency of Aviation Safety (ACSA), Agence de Supervision de la Sécurité Aérienne en Afrique Centrale (ASSA-AC), Banjul Accord Group Safety Oversight Organization (BAGASOO), Civil Aviation Safety and Security Oversight Agency (CASSOA), Caribbean Aviation Safety and Security Oversight System (CASSOS), European Aviation Safety Agency (EASA), Interstate Aviation Committee (IAC), Pacific Aviation Safety Office (PASO), SADC Aviation Safety Organization (SASO), and the Latin American Regional Safety Oversight Cooperation System (SRVSOP).

2.4 Other regional safety implementation support programmes include the Cooperative Development of Operational Safety and Continuing Airworthiness Programmes (COSCAPs) established in several sub-regions, the Comprehensive Regional Implementation Plan for Aviation Safety in Africa (AFI Plan), and the AFI Cooperative Inspectorate Scheme, and the Interstate Aviation Committee Commonwealth of Independent States project. Other regional air navigation implementation support programmes include Flight Procedure Program (FPP) Offices.

### 3. **REGIONAL IMPLEMENTATION SUPPORT PRIORITIES**

3.1 *GANP Prioritization*: in support of a globally harmonized air navigation system and to ensure interoperability, the GANP presents the aviation system block upgrades (ASBU) strategy. This strategy promotes commitment from States and industry to modernize the air traffic management (ATM) systems in a cost-effective manner in accordance with the vision outlined in Doc 9854.

3.2 The fifth edition of the GANP (A39-WP/39 refers), while maintaining the stability of the document, includes a new organization of the aviation system block upgrades (ASBUs) in non-overlapping six-year increments starting in year 2013 and continuing through 2031 and beyond. These will allow mid-increment checks by the Assembly. In addition, this fifth edition also emphasizes the application of a performance-based approach when planning the implementation of air navigation operational improvements. Applicable at global, regional and local levels, a performance-based approach is results oriented, helping decision makers set priorities and determine appropriate trade-offs that support optimum resource allocation while maintaining an acceptable level of safety performance and promoting transparency and accountability among stakeholders.

3.3 Priorities are being defined locally by individual States and/or regionally by the PIRGs which are including their plans for ASBU implementation in Volume III of the new structure of the regional Air Navigation Plan (ANP). This new structure allows more dynamic and flexible updates to the regional plans allowing them to adapt to the changing regional operational requirements of airspace users and service providers. States are encouraged to implement the regional priorities as defined by the PIRGs.

3.4 ICAO continues to work on guidance material and tools to support the set of priorities for the implementation of air navigation operational improvements, including those defined in the ASBU strategy. This work includes cost/benefit analysis in support of the decision-making process and provides guidance as necessary to PIRGs and States. Also, to better support the implementation of air navigation operational improvements, a new format of the regional Air Navigation Plans (ANPs) was developed and one of its volumes is now dedicated to support planning and implementation of the ASBUs.

3.5 *GASP Prioritization:* The challenges faced by some States in effectively overseeing aviation operations remain a global safety concern as identified through USOAP audits. In addition, ICAO has identified high-risk accident categories: runway safety, loss of control in-flight (LOC-I) and controlled flight into terrain (CFIT). These were determined based on an analysis of accident data for scheduled commercial air transport operations covering the 2006 to 2011 time period in the 2014 – 2016 edition of the GASP. Recent feedback from RASGs indicates that these priorities still apply for the 2017-2019 edition of the GASP. The new GASP will also include a new Global Aviation Safety Roadmap (GASR) to support States with the implementation of the GASP.

3.6 Runway safety events continue to be the main global high-risk accident category, followed by CFIT and LOC-I. These accidents account for a large portion of the total number of fatalities. The ICAO global Runway Safety Programme and related regional activities are supporting States in the implementation of runway safety-related provisions and best practices to improve runway safety and reduce accidents and incidents. States are encouraged to take more advantage of this programme to assist, for example, in airports establishing runway safety teams by requesting runway safety Go-Team visits.

3.7 RASGs and RSOOs continue to work with all stakeholders to achieve established priorities, targets and indicators consistent with the GASP objectives with a view to increasing the States' USOAP effective implementation (EI) and reducing the number and rate of aircraft accidents. RASGs play an important role in supporting the establishment and operation of a performance-based safety system by analysing safety information and hazards to aviation at a regional level and reviewing action plans developed within the regions.

3.8 *PIRG-RASG coordination:* Every two years, a PIRG-RASG Global Coordination Meeting (GCM) is held. The main objective of the meeting is to exchange views on the setting of priorities and targets by the PIRGs and RASGs in line with the GANP and the GASP. A secondary objective is to share successful initiatives of each PIRG and RASG to ensure the best possible synergy. The last coordination meeting was held in February 2015 under the Chairmanship of the President of the ICAO Council.

3.9 *RSOOs:* The High-level Safety Conference (HLSC) in 2015 concluded that the RSOOs deserve special attention from ICAO, States and safety partners for their objective to improve State safety oversight systems as measured by increases in State USOAP EI values. Also noted by the Conference was that RSOOs in developing regions should receive additional support from the aviation community. RSOOs, as recognized by the High-level Safety Conference (HLSC) in 2015, are an effective mechanism to support States in addressing safety deficiencies and enhancing aviation safety in a coordinated, cooperative and collaborative manner. The objective of an RSOO is the establishment of a regional mechanism for the sharing of aviation safety resources and harmonization of regional safety policies and procedures to achieve a sustainable safety oversight capability at a regional level.

3.10 Implementing ICAO SARPs can be challenging for Member States that do not have the political commitment and resources to fulfil their aviation safety responsibilities. The pooling of resources enables the RSOO to effectively utilize appropriately qualified and experienced personnel, particularly in the provision of expert advisory and consultative services in the area of safety oversight, the execution of safety oversight functions on behalf of Member States, and the provision of technical assistance.

#### 4. CONCLUSION

4.1 Regional implementation mechanisms such as the PIRGs and RASGs, as well as RSOOs, are an effective means to support States in ensuring the safety and efficiency of air operations through the involvement, coordination and cooperation of all members of the aviation community. However, their activities and outputs depend on the participation and contributions from States, which has been insufficient to enable them to realize their full potential in supporting regional implementation effectively. Furthermore, the role of RSOOs in supporting States to meet ICAO obligations may be strengthened with the enhanced recognition of their results and benefits.

4.2 The ASBUs described in the GANP and the safety performance enablers described in the GASP are designed to provide guidance and/or options for improvement where the need exists in the provision of air navigation services worldwide. Although the ASBU modules provide the basis for a globally interoperable system, they are not intended to be implemented everywhere nor implemented at the same time. Accordingly, means and methodologies of prioritizing the operational improvements through ASBU modules, along with identifying corresponding targets, indicators and metrics for monitoring the results after implementation, should be developed and shared from the experience gathered worldwide in order to assist PIRGs and States in determining which module elements to implement, under what circumstances and within what timeframes.

4.3 The GASP lays out a framework that promotes the harmonization of aviation safety activities through a series of steps that States must complete to establish an effective safety oversight system. The GASP also includes objectives for States to meet through the implementation of effective safety oversight systems, State safety programmes (SSPs) and the development of advanced safety oversight systems including predictive risk management. The GASP objectives encourage collaboration with key aviation stakeholders to promote safety initiatives both at the regional and sub-regional levels. The new GASR, as well as global and regional implementation support activities, will support States with the implementation of the GASP.