*INTERNATIONAL CIVIL AVIATION ORGANIZATION*

**TWENTY NINTH MEETING OF THE ASIA/PACIFIC AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (APANPIRG/29)**

*Bangkok, Thailand, 3 to 5 September 2018*

**Agenda Item 2: Global and Inter Regional Activities**

# AREAS OF INTEREST FOR THE UNITED STATES AT ICAO'S 13th AIR NAVIGATION CONFERENCE

(Presented by the United States)

**SUMMARY**

This paper provides an overview of areas of interest for the United States for the 13th ICAO Air Navigation Conference in October 2018 and leading up to the 40th Session of the Assembly in 2019. Through this paper, the United States seeks to share information on key priorities of interest to the global aviation community, with the objective of enhancing the safety, efficiency and sustainability of aviation around the world through collaboration.

*Strategic Objectives:*

*A: **Safety** – Enhance global civil aviation safety*

B: ***Air Navigation Capacity and Efficiency**—Increase the capacity and improve the efficiency of the global aviation system*

E***: Environmental Protection** — minimize the adverse environment effects of civil aviation activities.*

## 1. INTRODUCTION

1.1 During the 13th ICAO Air Navigation Conference (AN-Conf/13), the United States will highlight a number of areas of interest to the global aviation community in advance of the 40th Session of the Assembly in 2019. The United States believes it is imperative for ICAO and its global stakeholders to continue to collaborate in improving global aviation safety and environmental performance; advancing seamless and efficient global air navigation through interoperable standards, procedures and technologies; and harmonizing regulatory principles and concepts.

## 2. DISCUSSION

The United States has identified the following as key areas of interest for AN-Conf/13:

2.1 **Emerging Issues:**

**a) Transition the work of the Unmanned Aircraft Systems (UAS) Advisory Group into the Global Air Navigation Plan (GANP):**

Over the past year, the UAS Advisory Group has made great progress in developing the core framework and boundaries of a UAS Traffic Management (UTM) system, including principles, assumptions and potential services. The United States will recommend transferring the Advisory Group's work to the GANP to make it readily accessible as part of guidance supporting a harmonized and interoperable air navigation system, and will propose that any future work continue under the GANP structure.

**b) Operations by non-certificated UAS in the high seas:**

The present framework governing high seas operations does not provide for States and/or their appropriate authorities to establish procedures enabling non-certificated UAS to access this airspace safely. The United States will recommend an approach for ICAO and States to address this shortfall to accommodate the continued safe integration of these new, non-traditional entrants into the aviation sector.

**c) Integration of the Remotely Piloted Aircraft Systems (RPAS) work program:**

Timely completion of the RPAS Panel's ambitious cross-disciplinary work program to achieve delivery of a comprehensive initial suite of SARPs and PANS requires coordination with other ICAO Panels and expert groups that are concurrently engaged in carrying out their individual activities. The United States will recommend that ICAO ensure Panels and expert groups work together to assess their current work programs and identify additional activities required to implement RPAS-related SARPs and guidance material into applicable Annexes and documents; and that ICAO assign appropriate tasks (job cards) to Panels and expert groups.

**d) Certification of supersonic aircraft:**

The United States is committed to advancing the development of supersonic aircraft, as part of our broader efforts to support innovation in transportation. Due to the expected entrance of civil supersonic aircraft type(s) into the fleet within the next five to ten years, additional emphasis must be placed on this topic. Technical discussions within ICAO must continue to develop SARPs to enable the development of supersonic aircraft.

**e) Globally harmonized concepts for cyber security to reduce system vulnerabilities:**

The Information Management Panel has made great progress to establish System Wide Information Management (SWIM) standards, however; States still have concerns about individual and regional information security. In order to realize the efficiency and capacity gains of a secure global SWIM network, each country must have network access to the SWIM nodes via Aviation Community Operational Resilient Network Services (ACORNS). The United States will recommend actions to establish a global trust framework for ACORNS.

2.2 **GANP**

**a) GANP, Aviation System Block Upgrades (ASBUs), and Basic Building Blocks (BBB) Framework**

As international aviation continues to grow at a rapid pace, with a gap in consistent implementation of air navigation standards by States, a comprehensive global plan for

an integrated and interoperable approach to developing and modernizing global air navigation systems is needed.

This is especially true as new and emerging technologies; such as cybersecurity, unmanned aircraft systems (UAS), associated UTM systems and industry innovation are developed and integrated into the legacy system.

The United States plans to discuss the new proposed structure of the Sixth GANP, and associated ASBUs, that should incorporate emerging air navigation technologies into future editions of the GANP while recognizing the importance of regional implementation mechanisms.

**b) Evolution of the Provision of Aeronautical Meteorological Information in SWIM Compliant Formats**

The Meteorology (MET) Divisional Meeting (7 to 18 July 2014) recognized that in large portions of the world there is a lack of information or incomplete information about the location and severity of hazardous weather conditions that affect international air navigation. The MET/14 meeting formulated a recommendation to develop implement a regional hazardous weather advisory centre concept to mitigate the lack of meteorological information available to aviation decision-makers. The Meteorology Panel (METP) is the expert group that providing assistance to ICAO to address this shortcoming in the availability of aeronautical meteorological information.

Subsequently, the aviation user communities, such as the International Air Transport Association, the International Federation of Air Traffic Control Associations, and the International Federation of Airline Pilots Associations, indicated to the METP a strong preference that any action to mitigate the lack of information or incomplete information about hazardous weather conditions be addressed through the provision of globally-harmonized, phenomena-based information that is not limited to the boundaries of Flight Information Regions (FIRs). The provision of globally-harmonized, phenomena-based hazardous weather information will simultaneously existing shortcomings in the provision of aeronautical meteorological services in some parts of the world while supporting the implementation of multiple ASBU modules in the GANP.

**c) Global SWIM**

As global air traffic and air traffic management systems have grown in both volume and complexity, the dependency on information and data has become vital to safety and efficiency. Advancements in technology have led to improvements on local and national scales; however, the interconnectedness of aviation around the world demands global solutions.

A global System Wide Information Management (SWIM) framework is an underlying architecture that connects air traffic modernization, safety and efficiency into a global endeavour. Advanced services that are built upon safe and efficient information exchange includes but are not limited to air traffic flow management (ATFM), trajectory based operations (TBO), UAS traffic management systems (UTM) and operations of varied aircraft above 60,000 feet.

A global SWIM framework is also the foundation for a holistic and total performance management system focused on business and mission needs. The framework will

help provide the information needed to develop the process and procedures to shift and allow the operator to manage the flight trajectory while the Air Navigation Service Providers (ANSPs) focus on managing the constraints of the air navigation resources. With the move to a global SWIM, information is no longer the limitation and the focus shifts to who should best make the decisions resulting in improvements to the total system performance.

**d) Search and Rescue (SAR) and Implementation of Global Aeronautical Distress and Safety System (GADSS)**

Search and rescue processes and procedures are best implemented through regional cooperation and collaboration as detailed in Annex 12 – *Search and Rescue*. Implementation of new Standards, relating to the location of an aeroplane in distress in support of the GADSS, will enhance aviation safety for the crew and passengers of commercial aircraft and for SAR responders. However, response to some SAR incidents and audits under the Universal Safety Oversight Audit Program reveal significant gaps in SAR capability and the need to improve cooperation and collaboration among the various SAR stakeholders within many States and regions.

Performance of SAR depends largely on the organization of SAR services and preparation undertaken before SAR operations occur and based on planning and coordinated approaches. It is supported by local, regional and global collaborative frameworks based on SAR operational scenarios and requirements. Planning and implementation regional groups (PIRGs) can provide direction to national plans for implementation of the global SAR system. PIRG actions therefore have a direct relevance for SAR.

**e) Global Aviation Safety Plan:**

The United States strongly supports the continued evolution of the Global Aviation Safety Plan (GASP) as the high-level framework to strengthen safety worldwide. GASP priorities should remain focused on reducing the global accident rate, and continuous improvement of safety oversight capabilities.

As the high-level strategic plan for ICAO, States, and stakeholders to evaluate performance improvements for aviation safety, it is important the manner and mechanism of measurement is effective, accurate, and capable. Therefore, as a matter of urgency, the proposed revision of performance measurement for the next iteration of the GASP should be addressed to ensure that States and stakeholders can be confident in the outputs.

The key to continuous improvements in aviation safety is to create a sustainable culture of safety through an open and transparent exchange of safety information and data between the State and the aviation community. Safety culture is not just a set of programs and cannot simply be, “established” or “implemented”. A safety culture requires the open and transparent exchange of information, mutual-cooperation, and trust. A just regulatory culture is essential to building effective, non-punitive, safety reporting and data-sharing programs.

At a global level, the GASP strives to enhance aviation safety through this approach; specifically by promoting a positive safety culture, encouraging collaboration, protecting safety data, promoting the sharing and exchange of safety information, and data driven decision-making.

## 3. CONCLUSION

3.1 The United States looks forward to collaborating with ICAO and its regional partners in identifying and addressing mutual viewpoints for improving aviation safety and efficiency worldwide. This paper highlights some of our initiatives for which we request both ICAO's and our regional partners' support, as these initiatives proactively address current and emerging safety risks and challenges.

3.2 Continuously striving for a safer, effectively secure, and more efficient aviation system demands cooperation and collaboration to build upon the sharing of lessons learned, experiences, and information derived from Member States and stakeholders, in order to develop the appropriate global framework to sustain our aviation systems.

## 4. ACTION BY THE MEETING

4.1 The Meeting is invited to Note the information provided in this paper.

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