الهيئة العامة للطيران المدني
General Authority of Civil Aviation

DIRECTORS GENERAL OF CIVIL AVIATION-MIDDLE EAST REGION

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Agenda Item 5: Air Navigation

A COMPREHENSIVE STRATEGY FOR AIR NAVIGATION REVISED GLOBAL AIR NAVIGATION PLAN

(Presented by the Secretariat)

SUMMARY

The Global Air Navigation Plan (GANP, Doc 9750), while providing the strategic direction for the technical work programme of ICAO in the field of efficiency of the global air navigation systems, serves as guidance for the planning and implementation regional groups (PIRGs), States, service providers, airspace users and other stakeholders. This paper presents the revised edition of the GANP, the fourth edition which is available at: http://www.icao.int/GANP

1. INTRODUCTION

1.1 An effective global ATM system achieves interoperability and seamlessness across all regions for all users during all phases of flight. It meets agreed levels of safety, provides for optimum economic operations, is environmentally sustainable and respects national security requirements. ICAO's guiding vision in this regard is established in the *Global Air Traffic Management Operational Concept* (Doc 9854), while the GANP serves as the supporting strategic planning document. Based on comprehensive consultation by ICAO of State and industry stakeholders, the GANP has been restructured and revised and will be further supported by dedicated tools designed to assist ICAO's Planning and Implementation Regional Groups (PIRGs), States, Service Providers, airspace users and other stakeholders during the phased implementation of the new Global Plan.

2. FOURTH EDITION OF GANP

2.1 To support a globally harmonized air navigation system, ICAO has developed the fourth edition of the GANP to provide clear guidance on the guiding operational targets and supporting technologies, avionics, procedures, standards and regulatory approvals needed to realize them. The GANP additionally establishes a framework for incremental implementations based on the specific operational profiles and traffic densities of each State. This is accomplished through the Aviation System Block Upgrades (ASBUs), a consensus-driven framework which forms the basis of the revised GANP.

2.2 The Twelfth Air Navigation Conference (AN-Conf/12), held in November 2012, reviewed this fourth edition of the GANP and noted that it builds on past planning documents and provides a global planning framework including a timeline for which future improvements can be implemented by PIRGs and States in accordance with their operational needs. In addition, it identifies the need for the development of standards and recommended practices, regulatory requirements, procedures and technology associated with the ASBUs.

2.3 The ASBUs are supplemented by communications, navigation, surveillance (CNS), avionics and information management roadmaps. The AN-Conf/12 agreed that the ASBUs and associated technology roadmaps were an integral part of the GANP and a valuable implementation tool kit and that the policy and associated principles it presents would be fundamental to successful global long-term air navigation planning. The ASBUs are furthermore organized in five-year increments starting in 2013 and continuing through 2028 and beyond. On this basis the revised GANP represents a rolling, fifteen–year strategic methodology which leverages existing technologies and anticipates future developments based on State/Industry agreed operational objectives. This will enable sound investment strategies and help to generate the required commitment to the Plan from States, equipment manufacturers, operators and service providers.

2.4 ASBU implementation is to be realized through tailored regional work programmes derived from the GANP based on specific operational needs. ICAO's PIRGs design these work programmes first by identifying the operational characteristics of their homogeneous ATM areas, major traffic flows and major international aerodromes. Analysis of this operational data identifies performance improvement opportunities and specific ASBU capability Modules are then evaluated to identify which of them best delivers the needed operational improvements.

2.5 Once operational analyses and resulting implementations have been completed, the next step calls for air navigation performance monitoring through an established measurement and reporting strategy. During an initial phase, at the regional level, the implementation status will be depicted using dynamic maps and charts on the ICAO website. Analysis of reporting data will be carried out collaboratively. Results will then be published in the proposed Regional Performance Dashboards (web-based) and in an annual Global Air Navigation Report, discussed in paragraph 2.6.

2.6 ICAO is presently introducing regional 'Performance Dashboard' homepages for every ICAO Regional Office public website. These dashboards will illustrate the regional implementation status of respective ICAO Safety, Capacity/Efficiency, and Environmental strategic objectives. The objective of the proposed Global Air Navigation Report, to be published annually, is to assist PIRGs and States in understanding which areas require special attention to effectively improve air navigation performance worldwide as well as to help propagate information on implementation success stories and associated best practices. This first edition of this Report, slated for March 2014, also provides an opportunity for the civil aviation community to evaluate progress across different ICAO regions in the establishment of air navigation infrastructure. This will facilitate more effective interregional harmonization planning. The outcomes reflected in the proposed Report could also help identify annual tactical adjustment priorities for regional work programmes, as well as informing longer-term policy adjustments.

2.7 The metrics or dataset to be reflected in the Dashboards and the proposed Report reflects key global air navigation priorities such as Performance Based Navigation (PBN), Continuous Decent Operations (CDO), Continuous Climb Operations (CCO), Aeronautical Information Management (AIM), Air Traffic Flow Management (ATFM) and estimated environmental benefits accrued from operational improvements based on ICAO's Fuel Savings Estimation Tool (IFSET) or other method. The initial dataset was agreed to by a recent PIRG-RASG Global Coordination Meeting held in Montreal. The

IFSET, developed in 2011, may be applied globally and has the ability to capture the difference in flight trajectory performance in terms of fuel consumption – before and after implementation of operational improvements at local, regional or global levels. The tool is designed to assist States in estimating and reporting fuel savings in a manner consistent with the models endorsed by ICAO's Committee on Aviation Environmental Protection (CAEP) and in alignment with the GANP. Either the IFSET or any other more rigorous tool recognized by CAEP can be used.

2.8 The Council of ICAO has approved the revised edition, entitled the fourth edition of the GANP, which is available at: http://www.icao.int/GANP

3. UPDATES TO GANP

3.1 The ICAO Air Navigation Commission will review the GANP as part of the triennial work programme, reporting to the Council one year in advance of each ICAO Assembly. The ANC report will provide a review of global progress made in achieving the GANP objectives and will consider lessons learned by States and industry. Moreover, the ANC report will consider possible changes in future aviation needs, the air navigation context and other influencing factors, proposing suitable adjustments to the GANP to accommodate these eventualities. Prior to being presented to the Council, proposed updates will be circulated to Member States for consultation. Following approval by the Council, any amendments to the GANP and its specified supporting documents will then be submitted for endorsement by ICAO Member States at the following ICAO Assembly.

4. ACTION BY THE MEETING

4.1 The meeting is invited to note that the Council of ICAO has approved the revised edition, entitled the fourth edition of the GANP, which is available at: http://www.icao.int/GANP.

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