



INTERNATIONAL CIVIL AVIATION ORGANIZATION
Fourth Meeting of AFI Region Directors General of Civil Aviation (DGCA/4)
(Matsapha, Manzini, Swaziland, 8 to 9 November 2010)

Agenda Item 5: ICAO Technical Cooperation and Human Resources Development for Civil Aviation

5.1: Regional Technical Cooperation Projects - AFI PBN Implementation

(Presented by the Secretariat)

SUMMARY

This paper presents the AFI PBN Project Proposal. The project is aimed at providing assistance to States in the implementation of PBN in accordance with the ICAO PBN concept laid down in the *Performance Based Navigation Manual* (Doc 9613). The Project will be implemented as a Technical Cooperation Project, in close collaboration with the relevant technical sections at ICAO Headquarters and in the Regional Offices.

Action by DGCA/4 is contained in paragraph 4.

STRATEGIC OBJECTIVES

This paper is related to ICAO Strategic Objectives A. Safety - Enhance global civil aviation safety; D. Efficiency – Enhance the efficiency of aviation operations; C. Environmental Protection – Minimize the adverse effect of global aviation on the environment - through the design of ATS routes that enhance safety, maximize efficiency while minimizing the effect on the environment.

FINANCIAL IMPLICATIONS

Adequate financial support by participating States is essential to guarantee continuity once the project is launched. The level of contributions will be determined by the Project Steering Committee taking into consideration the scope of activities and the project budget.

REFERENCES

Resolution A36-23
The Special AFI/8 RAN Meeting in November 2008

1. INTRODUCTION.

1.1 Resolution A36-23 as amended by the 37th Assembly Session, calls for achievement by States, of specific goals with regard to *Performance-based navigation*, and for ICAO to develop a coordinated action plan to assist States in the implementation of PBN and to ensure the development and/or maintenance of globally harmonized SARPs, Procedures for Air Navigation Services (PANS) and guidance material including a global harmonized safety assessment methodology to keep pace with operational demands.

1.2 The Special AFI/8 RAN Meeting in November 2008 formulated Recommendation 6/13: *Publication of GNSS-based RNP approach procedures* calling on States that had taken part in the IATA area navigation (RNAV) global navigation satellite systems (GNSS) procedures to develop and implement a programme to publish GNSS-based required navigation performance (RNP)

approaches, and to remove any restrictions that may be impeding operations. Moreover, Recommendation 6/14: called on ICAO to provide assistance to States in overcoming legal and regulatory difficulties associated with the implementation of global navigation satellite systems (GNSS) based approach procedures.

1.3 The Special AFI/8 RAN Meeting in November 2008 also formulated Recommendation 6/28 - Implementation of a Global ATM System ICAO Technical Cooperation Project urging that the AFI Region consider the establishment of a Technical Cooperation Project, funded by AFI States and donors, to support planning and implementation of performance objectives, aligned with the Global ATM Operational Concept and the Global Air Navigation Plan

1.4 Missions carried out to States in 2010 identified that in the States visited there was a significant requirement for the development of expertise in the areas covered by the Global Air Navigation Plan other than ATS. Aspects relating to PBN were particularly affected due to lack of training and expertise.

2. **PROJECT OBJECTIVES**

2.1 One of the current focus areas for the reduction of accidents is runway excursions. Implementation of vertically guided PBN approaches will have a direct contributing effect in reducing these types of occurrences.

2.2 The AFI PBN Implementation Project is designed to give effect and support to Recommendations of the Regional Air Navigation meeting and Conclusion adopted within the framework of APIRG, more particularly those from the PBN and GNSS Task Forces. These will be achieved through:

- Development of model regulations to enable the GNSS aspects of air navigation and the implementation of PBN
- Direct interaction with States needing assistance to ensure that the model regulations are appropriately integrated into the specific States' legislation
- Assistance to States in developing specific actions in order to meet the requirements of the Regional PBN Implementation Plan, and support efforts relating to the States' national performance objectives.

3. **PROJECT STRATEGY**

3.1 It is proposed that the project be implemented as a cooperative type project in the manner of the other regional cooperative programmes being implemented by ICAO TCB. Pooling of resources offers a practical and cost-effective method of addressing common goals while the cooperative framework enhances harmonized implementation and fosters participation of interested third party stakeholders and donor agencies. The project is to be directed by a Steering Committee comprising representatives of the States participating in the project. Monitoring of the performance of the project is to be carried out by the Steering Committee as well as the relevant APIRG Task Force(s) through the Regional Officers/secretaries of the Task Force(s).

3.2 The project will require two experts, one PBN, and the other Legal, and will entail a visit to the Regional Offices and to identify target States. With the guidance of the Regional Offices the experts will carry out a gap and impediments analysis in the individual States and prioritize the specific project elements for each State. An initial duration of 12 months is estimated for the Project.

3.3 The PBN expert is to travel to target States and undertake the following tasks:

- identifying specific challenges and impediments to implementation of the GNSS-based instrument approach procedures, and proposing solutions;
- assisting in the development and implementation of actions to support national performance objectives relating to ATM and in particular those that are PBN related;
- identifying further actions where applicable and making recommendations to the project Steering Committee for their implementation.

3.4 The Legal expert will be required to:

- develop model regulations to enable the GNSS aspects of air navigation and the implementation of PBN
- travel to target States and after further consultations at the State level,
- assist in the integration of the PBN and GNSS enabling legislative provisions to conform to the State's legislative system.

3.5 Following the preliminary assistance visits and compilation of data (from a gap and impediments analysis) on individual beneficiary States, it is proposed to prioritize actions according to the degree of their importance in the hierarchy of the regional/national PBN implementation plan. Thereafter ICAO TCB will develop a detailed project with estimated costs, drawing on the experience States within and outside the region which have implemented PBN.

3.6 It is proposed to commence the preliminary assistance visits using funds that are available at ICAO for such missions. ICAOTCB will subsequently assist in the sourcing and mobilization of the requisite funds for implementation of the detailed project.

4. **ACTION BY DGCA/4**

The meeting is invited to

4.1 Note the information provided in this paper which is intended to generate interest from States who may need the assistance being proposed under this project.

4.2 Urge States interested in the PBN Project to submit a formal indication of interest to participate in the project to ICAO ESAF and WACAF Offices.