



Agenda Item 3: ATS surveillance capability and data sharing

Agenda Item 6: Airspace Improvement Programmes

STATUS OF NAVIGATION AID INFRASTRUCTURE POLICIES IN MONGOLIA

(Presented by Mongolia)

SUMMARY

This paper presents a brief summary of recent Civil Aviation Authority of Mongolia (CAAM) activities on airspace improvement.

This paper relates to –

Strategic Objectives:

A: *Safety – Enhance global civil aviation safety*

C: *Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

Global Plan Initiatives:

GPI-8 Collaborative airspace design and management

GPI-10 Terminal area design and management

GPI-12 Functional integration of ground systems with airborne systems

GPI-13 Aerodrome design and management

GPI-22 Communication infrastructure

1. INTRODUCTION

1.1 For enhancement of airspace capacity, an improvement is needed Mongolian airspace to cope with globally increasing air traffic. Mongolia is always grateful participating in globally accepting programs such as Reduced Vertical Separation Minimum (RVSM) due they help us to improve air airspace capability and reliability on aviation safety.

1.2 After implementation of RVSM, Mongolia continued its policy on improving airspace by installing either ground based navigation aids for support aircrafts navigation, or surveillance system for purpose of reducing separation between aircraft.

1.3 Mongolia has chosen RNAV5 using DME/DME for enroute PBN, SSR Mode S and ADS-B extended squitter technologies for surveillance.

1.4 With the present improved airspace and Large Height Deviation (LHD) reduction programme, Mongolia achieved the second safest airspace in the Asia/Pacific Region.

2. DISCUSSION

Ground Based Navigation Aids

2.1 For primary ground-based navigation purposes, Mongolia is installing 10 Distance Measuring Equipment (DME) to the existing four DVOR/DME facilities in 2013 (**Figure 1**).

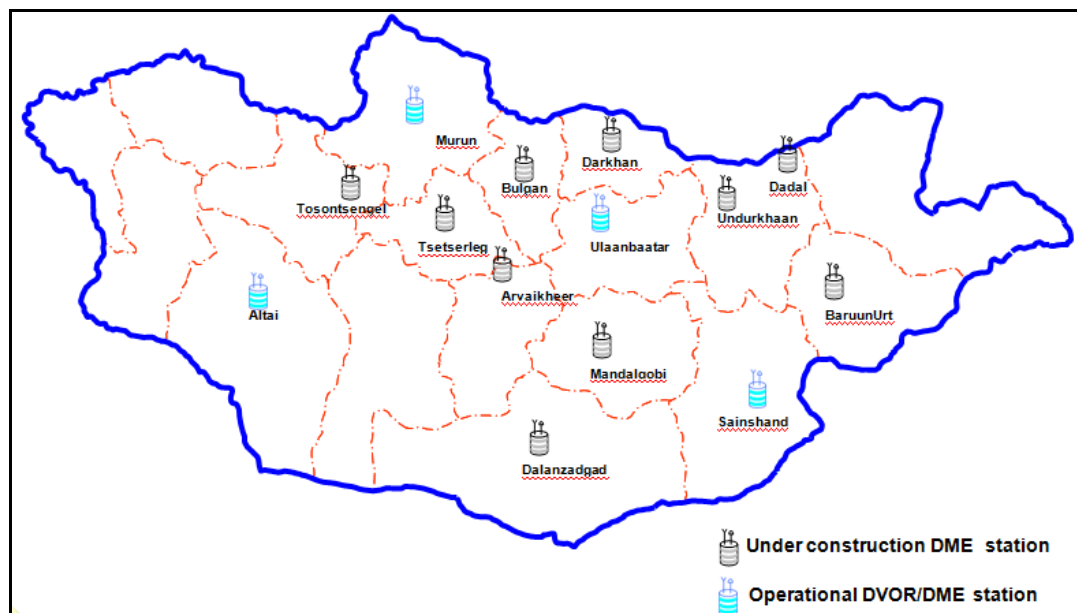


Figure 1: Mongolian DME Station Implementation

2.2 In 2014, Mongolia was planning to install more seven more DME to enable RNAV5 for enroute.

2.2 For ongoing Performance-based Navigation (PBN) purposes and Global Navigation Satellite System (GNSS) use, three GNSS performance monitor aids were planned to be installed in appropriate places to provide GNSS integrity monitoring. Using installed DME and GPMS, Mongolia will implement RNAV 1 for approach at airports, which airlines could choose for their en route alternatives in the near future.

Surveillance Equipment Implementation and Planning

2.3 Mongolia has installed 3 SSRs mode S through main enroute routes, took in operation since 23 Aug 2012. It enables to survey 50 percent of Mongolian airspace. Thus we reduced procedural 10 min/150 km separation to 90 km longitudinal separation on the routes.

2.4 In 2013, Mongolia would operationalize two more Secondary Surveillance Radar (SSRs) to expand radar surveillance coverage by 20%. As a backup for radar, Mongolia had installed five ADS-B ground stations in 2013. The service area of these ADS-B ground stations the same as the existing SSR coverage.

2.5 Five ADS-B ground stations are planned to be installed during the second half of 2013. ADS-B stations will be installed at existing VHF radio communication facilities.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information contained in this paper.

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