



International Civil Aviation Organization

**The Tenth Meeting of the Asia/Pacific Aeronautical Information Services –
Aeronautical Information Management Implementation Task Force
(AAITF/10)**

Bangkok, Thailand, 27-30 April 2015

Agenda Item 4: AIS-AIM Updates

ELECTRONIC TERRAIN AND OBSTACLE DATA

(Presented by INDONESIA)

SUMMARY

This paper presents an overview of Indonesia's progress towards the Roadmap for the Transition from AIS to AIM, especially Terrain and Obstacle data.

1. INTRODUCTION

1.1 According to the International Civil Aviation Organization's (ICAO) requirement in Annex 15, all ICAO participating states shall provide availability of terrain data for area 1 and obstacle data for obstacles in Area 1 higher than 100 m above ground.

1.2 From 12 November 2015, at aerodromes regularly used by international civil aviation, electronic terrain data shall be provided for:

- a) Area 2a;
- b) the take-off flight path area;
- c) an area bounded by the lateral extent of the aerodrome obstacle limitation surfaces.

1.3 From 12 November 2015, at aerodromes regularly used by international civil aviation, electronic obstacle data shall be provided for :

- a) Area 2a , for those obstacles that penetrate the relevant obstacle data collection surface specified in Appendix 8 annex 15;
- b) objects in the take-off flight path area which project above a plane surface having a 1.2 per cent slope and having a common origin with the take-off flight path area; and
- c) penetrations of the aerodrome obstacle limitation surfaces.

2. DISCUSSION

ETOD currently in indonesia

2.1 DGCA is identified as a responsible body for the co-ordination of terrain and obstacle data implementation to ensure that the necessary actions are taken and implementation progressed.

2.2 DGCA realize that it is important to identify all such stakeholders (Military, Geospatial and Informatic Bureau, AIRNAV, Airport Operator, Chart Provider, Aircraft Operator, Surveyor, Research and Technology Agency, national institute of aeronautics and space) in order to determine the responsibilities and to develop a feasible plan for the implementation of terrain and obstacle data.

2.3 To raise stakeholders' awareness of the requirements of terrain and obstacle data, a series of regional seminars are held by Indonesian Civil Aviation Institute (ICAI) on February, 28th 2015 . This would allow all parties, especially those that are not aware of the ICAO requirements, to be briefed on the requirements of ICAO towards the implementation of terrain and obstacle data.

2.4 Terrain data, Area 1 is fully served by the NASA Shuttle Radar Topographic Mission (SRTM) and the Advanced Spaceborne Thermal Emission and Reflection Radiometer (Global Digital Elevation Model (ASTERDEM), and for Area 2 10 airport (Aceh, Makassar, Bandung, Surabaya, Padang, Medan, Bali, Ambon, Manado, Jakarta) provided by Interferometric Synthetic Aperture Radar (IfSAR). Area 3 and 4 are Icurrently not available. For Obstacle data, almost all of airport "70%" data is update after 2011.

2.5 Currently, "ENR5.4" is "Reserved" in AIP Indonesia, so we need to obtain information and expand. Even ruled by CASR 139 about obstacle permission, the assessment process is deficient and it should be updated to ensure that the obstacles within the scope of Chapter 10 of ICAO Annex 15 [Reference 4]. Lack of socialization is the main reason.

On Process and Future

2.6 AIRNAV proposed Task Force lead by DGCA to allow for a co-ordinated plan for implementation, with a common understanding of what actions need to be taken. Priorities for work may be set and those involved can understand how their tasks impact the work of others and the progress of implementation.

2.7 DGCA will assess the data sources that currently exist to ensure the data could be used to meet the terrain and obstacle data requirements of ICAO Annex 15 [Reference 4] Chapter 10.

2.8 DGCA will consider how surveyors may be monitored to ensure that they adhere to appropriate standards. The standards to be applied by the surveyors, for example, the feature capture rules, should be agreed by the DGCA and documented.

2.9 DGCA will provide the validation and verification of both new and existing data to identify if any means to validate data, including metadata, already exist. In addition, to determine the suitability of existing data and how its quality can be verified and validated.

2.10 DGCA will manage identification of obstacles that may be applied by all those actors who are responsible for the specification, procurement, collection, processing and publication of obstacle data.

3. ACTION BY THE MEETING

The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

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