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AGENDA ITEM 4: AIR NAVIGATION

**MODERNIZATION OF INDONESIA'S AIR TRAFFIC
MANAGEMENT AUTOMATION SYSTEM**

(Presented by the Republic of Indonesia)

INFORMATION PAPER

SUMMARY

Indonesia is carrying out a broad modernization programme to strengthen its air navigation infrastructure. This paper provides information on major system implementation activities, including the new ATM Automation System (ATMAS) at the Jakarta Air Traffic Service Center (JATSC), the development of a centralized Air Traffic Flow Management (ATFM) capability, and the enhancement of the Aeronautical Message Handling System (AMHS) and Aeronautical Information Management (AIM) system. Indonesia is also upgrading ATMAS capabilities at selected Approach Control units which are Medan, Pontianak and Balikpapan. These initiatives are intended to improve the safety, enhance operational efficiency, connectivity and aeronautical data exchange within Jakarta and Ujung Pandang FIRs.

MODERNIZATION OF INDONESIA'S AIR TRAFFIC MANAGEMENT AUTOMATION SYSTEM

1. INTRODUCTION

1.1 Indonesia is implementing major improvements to its air navigation infrastructure to respond to the continued growth of air traffic services and to support the technology direction set out in the ICAO Global Air Navigation Plan (GANP).

1.2 This Information Paper outlines the progress of several important system implementation programmes, covering the new ATM Automation System (ATMAS) at the Jakarta Air Traffic Service Center (JATSC), the centralized Air Traffic Flow Management (ATFM) system, and upgrades to the Aeronautical Message Handling System (AMHS) and Aeronautical Information Management (AIM) system.

1.3 Indonesia is also modernizing ATMAS at Medan, Pontianak and Balikpapan in order to improve operational efficiency, system connectivity and data exchange capability within the Jakarta and Ujung Pandang Flight Information Regions (FIRs).

2. DISCUSSION

New ATMAS at JATSC

2.1 Indonesia is currently conducting operation of the new ATMAS at the Jakarta Air Traffic Service Center (JATSC). The system is designed to significantly strengthen surveillance and communication capabilities in support of air traffic service operations.

2.2 The new ATMAS includes functions to support data link services for oceanic and remote operations, as well as automated coordination between air traffic service units through ATS Interfacility Data Communication (AIDC). These features are expected to reduce controller workload, improve operational efficiency, consistency, controller situational awareness and reduce LHD occurrences at the FIR boundaries.

2.3 The system is capable of supporting a wide range of AIDC messages for automated coordination, including Advance Boundary Information (ABI), Estimate (EST), Acceptance (ACP), Transfer of Control (TOC), Assumption of Control (AOC), Preliminary Activate (PAC), Logical Acknowledgement Message (LAM), Logical Rejection Message (LRM), Coordination Message (CDN), Rejection (REJ) and Coordination Cancellation Message (MAC).

2.4 For tactical traffic flow management, the ATMAS is equipped with integrated Arrival Management (AMAN) and Departure Management (DMAN) functions. The system also supports current ATS messages through AMHS and is prepared for future use of the Flight Information Exchange Model (FIXM).

Air Traffic Flow Management (ATFM) System

2.5 In parallel with the ATMAS modernization, Indonesia is advancing the implementation of a dedicated ATFM system to support demand and capacity balancing at strategic, pre-tactical and tactical levels. The system is intended to provide national coverage for controlled airspace in the Jakarta and Ujung Pandang FIRs, with an initial focus on major aerodromes such as Soekarno-Hatta, Ngurah Rai, Juanda and Sultan Hasanuddin.

Aeronautical Message Handling System (AMHS)

2.6 To ensure reliable aeronautical data exchange, Indonesia is implementing a more robust AMHS covering both the Jakarta and Ujung Pandang FIRs. The system is intended to facilitate the exchange of aeronautical messages, including standard ATS messages, AIDC messages and other operational messages. It also supports the exchange of information using the ICAO Weather Information Exchange Model (IWXXM), which is an important step in Indonesia's preparation for the transition to System-Wide Information Management (SWIM).

Aeronautical Information Management (AIM)

2.7 Indonesia is continuing the transition from Aeronautical Information Service (AIS) to Aeronautical Information Management (AIM). The new AIM system is focused on the provision of quality-assured aeronautical data and information, and supports the management and distribution of digital datasets such as digital AIP, terrain data, aerodrome mapping data and digital instrument flight procedure datasets.

2.8 The system meets current operational needs by distributing data through AMHS and is prepared for future aeronautical data exchange using the Aeronautical Information Exchange Model (AIXM).

Conclusion

2.9 Through these system implementation activities, Indonesia reaffirms its commitment to the ICAO Global Air Navigation Plan. The modernization programme is intended not only to increase capacity and safety, but also to support more sustainable aviation operations by reducing delays and optimizing flight trajectories.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to note the information contained in this Paper.

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