

ELEVENTH AIR NAVIGATION CONFERENCE

Montreal, 22 September to 3 October 2003

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OVERVIEW OF PAKISTAN'S ROLE IN ACHIEVING GLOBAL ATM OPERATIONAL REQUIREMENTS

(Presented by Pakistan)

SUMMARY

This paper provides an overview of Pakistan's role in achieving the operational enhancements with reference to future global ATM concept and ICAO SARPs through the existing air traffic services system and its upgradation to meet the future global regional demands.

1. AGENDA ITEM 1:INTRODUCTION AND ASSESSMENT OF A GLOBAL AIR TRAFFIC MANAGEMENT (ATM) OPERATIONAL CONCEPT

1.1 Introduction

1.1.1 Pakistan has all along followed a policy of compliance of all ICAO Standards and Recommended Practices (SARPs) with minimal difference. The emergence of modern aviation technologies both for aircraft and ground equipment brought revolution in air traffic management. The changes are rapid

and require fast pace by the international aviation community in general and regional in particular. Civil Aviation Authority Pakistan is trying to exploit all possible avenues to keep up the pace of development along with the world in general and at the regional level in particular.

1.2 Pakistan and CNS/ATM system

1.2.1 The geographical location

1.2.2 Pakistan holds a strategic location in Asia. It is situated at the periphery of Asia/Pacific and Middle East Regions. Vital air links passing through these two regions including Europe route through Pakistan.

1.2.3 Air traffic services system

1.2.3.1 Radar coverage

1.2.3.1.1 Pakistan airspace have been provided with radar coverage except for a minor area through an integrated aeronautical communication and control system. The radar system consists of three co-located primary and surveillance radars (CSF Thomson AIRCAT -500) at Karachi , Lahore and Islamabad Airports and three remote stand alone secondary surveillance radars at Pasni, Lakpass and Rojhan. Pasni, Lakpass and Rojhan are hooked up with Karachi Area Control Centre through V-Sat link. Lakpass, Rojhan and Islamabad are connected with the Lahore Area Control Centre. The whole system provides the computer processed data at air traffic control positions. Radar failure back up has also been provided with non-radar (procedural control) air traffic control backup.

1.2.4 Communications

1.2.4.1 VHF and extended range VHF communication systems have been made available at all air traffic control positions in area control centers to ensure pilot-controller contact for the safe and efficient flow of air traffic.

1.2.5 Air space management

1.2.5.1 Civil Aviation Authority, Pakistan has always lived up to expectations of the aircraft operators and IATA. The demand for shorter and direct routes of the operators were genuine because of the high operating cost, and more fuel consumption. In September 2000 Pakistan hosted IATA's joint route development group meeting. Members of neighbouring FIRs participated in the meeting. The meeting succeeded in the development of mutually agreed short and direct routes as well as parallel route. This development will also facilitate the implementation of RNP and RSVM requirements. A polar route had also been developed for non-stop flights from Islamabad to United States via north of Pakistan. The same has been offered to United Air and Delta Airlines.

1.2.6 ADS and CPDLC

1.2.6.1 Pakistan is in the planning and evaluation stage for the up-gradation of existing SSR's and extended range VHF link. The up gradation of the radar system will include the built in provisions of ADS and CPDLC to meet the future and global requirements.

1.3 Reduced vertical separation minima

1.3.1 Implementation

1.3.1.1 Pakistan will be able to apply the RVSM criteria in the Lahore and Karachi FIRs w.e.f. November 27, 2003 between FL 290 to FL 410 (both inclusive).

1.3.2 RVSM and CVSM transition

1.3.2.1 Heavy density of traffic operates from the Far East and Europe while overflying Pakistan and Afghanistan. Afghanistan is non-RVSM airspace. Thus Pakistan will hand over and accept traffic at transfer of control points at CVSM levels. The transition from RVSM to CVSM and vice versa will take place in Lahore FIR. Similarly action has to be taken for traffic operating to/from Uramchi/Dushanbe ACC via Lahore FIR.

1.3.3 Training

1.3.3.1 A group of ten air traffic controllers have been trained abroad for the application of RVSM. They have been assigned the task for providing future training to other controllers. This will enable the smooth implementation of RVSM in Pakistan airspace on 27 November 2003.

1.4 THE ROLE OF AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS) TECHNOLOGIES

1.4.1 The carriage of ACAS has been made mandatory in Pakistan airspace with effect from 1 July 2001 on all turbine engine aeroplane having maximum certified take off mass in excess of 15 000 kg or authorized to carry more than thirty (30) passengers. This condition has been incorporated in AIP Pakistan.

2. AGENDA ITEM 2: SAFETY AND SECURITY IN AIR TRAFFIC MANAGEMENT (ATM)

2.1 Safety and security of aircraft operations is an issue of main concern of the aviation world community. ICAO's efforts in this regard have always been timely and effective. Pakistan has been complying with the existing SARPs as far as practicable to ensure safety of aircraft operations. The Safety Investigation Board of CAA Pakistan has been tasked to investigate all aircraft accidents and incidents. Its recommendations are mandatory and complied to maintain and enhance safety levels. Pakistan is also evaluating its present air traffic control system based on PSRs and SSRs for upgradation to accommodate future global regional requirements by including ADS, CPLDC and safety alerts in its future system. Upgradation of the communication system will also take place simultaneously.

3. **AGENDA ITEM 3: AIR TRAFFIC MANAGEMENT (ATM) PERFORMANCE TARGETS FOR SAFETY, EFFICIENCY AND REGULARITY AND THE ROLE OF REQUIRED TOTAL SYSTEM PERFORMANCE (RTSP) IN THIS RESPECT**

3.1 Pakistan is not using global navigation satellite system (GNSS). ICAO has also allowed the use of ILS till the equipment lasts. Thus there is no immediate requirement of GNSS implementation. However Pakistan is studying the use of GNSS for non-precision approaches. The regional progress is being closely monitored. The ATM performance targets for safety, efficiency and regularity and the role of RTSP in this respect will also be given due thought to meet the regional and global demands as envisaged by ICAO.

4. **AGENDA ITEM 4: CAPACITY-ENHANCEMENT MEASURES**

4.1 The concern of aviation community regarding safety in the light of increasing traffic particularly in the vicinity of aerodromes is growing. As far as Pakistan is concerned SARPs of ICAO are being followed to ensure safety. At the moment major international airports in Pakistan are capable of handling much more traffic than what is operating now. Implementation of RVSM will enhance airspace capacity considerably. This will not only reduce the operating cost of the operators but also will increase the flight safety in Pakistan airspace as well.

5. **AGENDA ITEM 7: AERONAUTICAL AIR-GROUND AND AIR-TO-AIR COMMUNICATIONS**

5.1 Pakistan has adequate VHF and HF coverage. Extended range VHF through V-SAT links and telephone lines been provided to ensure reliable pilots — controller communication throughout the airspace. The minor north western area of Karachi ACCs west sector has only HF communication. However work is in progress to provide extended range VHF coverage in this portion as well.

5.2 The upgradation plan of radar will cater for the requirements of VHF/HF data links.

6. **PAKISTAN'S COMMENTS/VIEWS ON ATMCP/1 RECOMMENDATIONS**

6.1 The recommendations of ATMCP/1 meeting report were analyzed. CAA Pakistan has its reservations as under:

a) Paragraph 2.1.2.1(d) of the ATMCP/1 Report

Pakistan's position is that

“National boundaries should be respected at all times. Considerations like economical operations, reduced distance are not as important as the sovereignty of a country”.

b) Paragraphs 2.3.3 to 2.3.6 of the ATMCP/1 Report

“Requirements raised in these para’s will demand more financial investment by the aerodrome operators / service providers which may not be cost effective in all the cases. Thus prior to finalizing such requirements, cost benefit analysis and business case studies will be required”.

Note.— The above views, has already been forwarded to ICAO at the appropriate level.

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