International Civil Aviation Organization

Ninth Meeting of the Surveillance Implementation Coordination Group (SURICG/9)

Bangkok, Thailand 07 - 10 May 2024

UPDATE ON SURVEILLANCE ACTIVITIES IN NEPAL

(Presented by Nepal)

SUMMARY

This paper presents an update providing information of Nepal's Surveillance Activities.

1. INTRODUCTION

1.1 This paper aims to provide the brief summary of the existing and future plan of surveillance system in Nepalese FIR.

2. DISCUSSION

Current Surveillance Status

Nepal's current surveillance system service structure is based on PSR, SSR, MSSR, ADS-B and WAM Systems.

2.1 **Primary Surveillance Radar (PSR) and Secondary Surveillance Radar (SSR)**

Toshiba-NEC, Japan make collocated PSR and SSR system at Tribhuvan International Airport (VNKT) terminal, continuously operating since 1998 A.D. for approach (APP) control services in Kathmandu FIR.

2.2 **Monopulse Secondary Surveillance Radar (MSSR)**

Mode S Mono Pulse Secondary Surveillance Radar (MSSR), NEC Japan make, system installed at Tribhuvan International Airport (VNKT) terminal (T-MSSR) for Approach (APP) control service has coverage up to 200 NM and En-route MSSR (E-MSSR) installed at Mt. Bhattedanda, at 7000 ft. high south of TIA has coverage up to 250 NM, serving for Area (ACC) control service in Kathmandu FIR are operational since 2017 A.D.

2.3 Four (4) ADS-B ground stations, Era a.s. Czech republic make, Tier 2 category, in line with ADS-B implementation and operations guidance document (AIGD) edition 15.0, located at Dhangadhi (VNDH), Nepalgunj (VNNG), Gautam Budha Internation Airport, GBIA (VNBW)

and Mt. Phulchowki (Kathmandu) are in test operation. It helps to extend the surveillance coverage in the far western regions with Non Radar Area (NRA) operations.

2.4 Wide Area Multilateration (WAM) has been installed in newly operated Pokhara International Airport (PIA) with 11 stations, provides monitoring service in PIA (VNPR) TMA, is under test operation since 2023 A. D.

2.5 MSDPS, NEC Japan make system has capability to integrate 64 surveillance data including PSR, SSR, MSSR, ADS-B and MLAT. Currently it integrates data from eight surveillance sources at VNKT, facilitating both Approach (APP) and Area (ACC) control service in Kathmandu FIR.

Surveillance Future Plan and ongoing activities

2.6 With Japan International Cooperation Agency (JICA) grant assistance, Under the project "The project to improve Air Navigation Services for Enhancing Flight Handling capacity at T.I.A.", a survey for MLAT implementation for SMC service in Kathmandu (VNKT) has been scheduled and expected date of operation of the system is by 2027 A.D.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper; and

b) discuss any relevant matter as appropriate

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