



ICAO

**Twenty Second Meeting of the Africa-Indian Ocean Planning and Implementation Regional Group (APIRG/22)
(Accra, Ghana, 29 July – 02 August 2019)**

Agenda Item 2.2: Update on Air Traffic Management & Search and Rescue Matters

**AFI SSR CODE ALLOCATION AND ASSIGNMENT REVIEW
(ASCAAR)**

(Presented by Kenya Civil Aviation Authority)

SUMMARY
<p>The ASCAAR is an AFI priority project No. 3 set up to review of the AFI SSR Code Allocation and Assignment Method. The project was coordinated by ICAO and executed by the project team members so as to ensure that adequate SSR codes are available to FIRs/blocks of airspace for allocation in order assignment to aircraft in a safe, effective and efficient manner.</p> <p>The project team used the guidelines provided by ICAO to develop a multiple Participating Areas (PA) as opposed to the existing single (PA) model.</p> <p>All AFI FIRs were allocated SSR Codes for international and domestic assignment.</p> <p>Current Transit SSR Codes were retained since all AFI FIRs had already been allocated such codes for assignment to international transit flights. It is anticipated that aircraft will retain the assigned transit code beyond national boundaries and PA but not beyond the AFI region.</p>
<p>REFERENCE(S):</p> <ol style="list-style-type: none"> Operational requirements for CNS(OPREC) and RVSM & Operational Safety in ATS (ROSATS) priority projects ICAO Doc 4444 – PANS ATM ICAO Annex 10 Vol. IV
<p>Related ICAO Strategic Objective(s):</p> <ol style="list-style-type: none"> Enhance global civil aviation safety Increase the capacity and improve the efficiency of the global civil aviation system Minimize the adverse environmental effects of civil aviation activities

1. INTRODUCTION

1.1 ASCAAR project team members as constituted by Airspace and Airport Operations SG:

- Kenya – Chairman
- Botswana – Member
- Cote d’Ivoire – Member
- Ghana – Member
- South Africa – Member

- Nigeria – Member
- Senegal – Member
- ASECNA – Member
- IATA – Member
- CANSO – Member
- IFATCA – Member
- East African Community – Invited Organization
- EUROCONTROL – Invited Organization

1.2 One (01) physical meeting was held in Nairobi, Kenya, 2-4 May 2018 and attended by eight (08) experts from Botswana, Kenya, East African Community and IFATCA. The rest of the work was conducted online.

1.3 The new code allotment plan is expected to provide FIRs in the AFI region with a means to coordinate the use of 4096 Secondary Surveillance Radar (SSR) codes in Mode A/3 in the safest, efficient and economical manner.

1.4 The team updated the AFI SSR Code Management Plan and assignment standards in order to make codes available to all airspaces and improve usage to increase availability of each code.

1.5 The team anticipates that the project lead to:

- Streamlining inter-FIR code allocation within given blocks of airspace; and
- Increasing the efficiency of SSR code usage.

2. DISCUSSION

2.1 The SSR Codes allocation process ensured that;

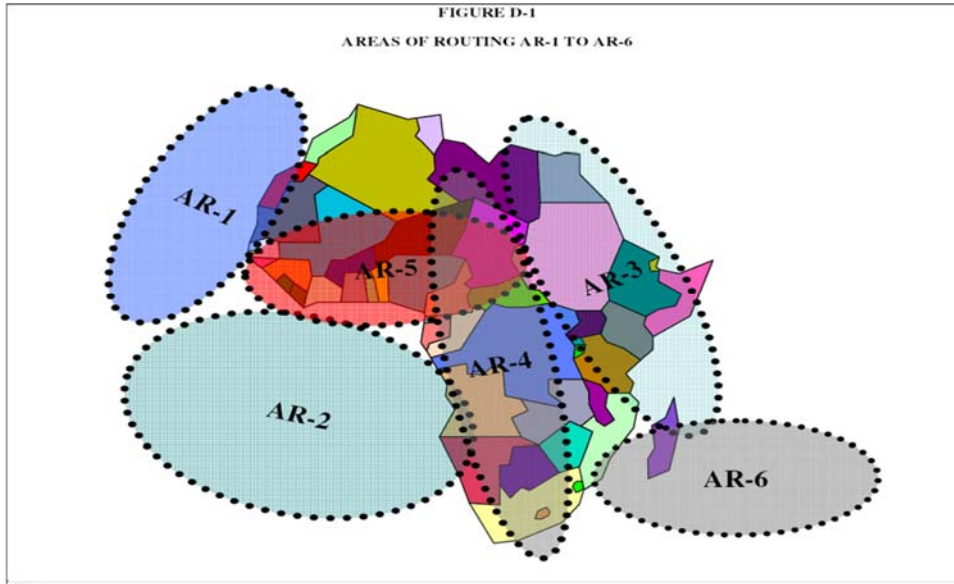
- All States/FIRs/blocks of airspaces are allocated SSR codes.
- No multiple code allocations in States/FIRs/blocks of airspace.
- FIRs/blocks of airspace code allocation/sharing schemes are considered.
- Addressed concerns related to interoperability of CNS/ATM systems

2.2 To address safety concerns, ensure that;

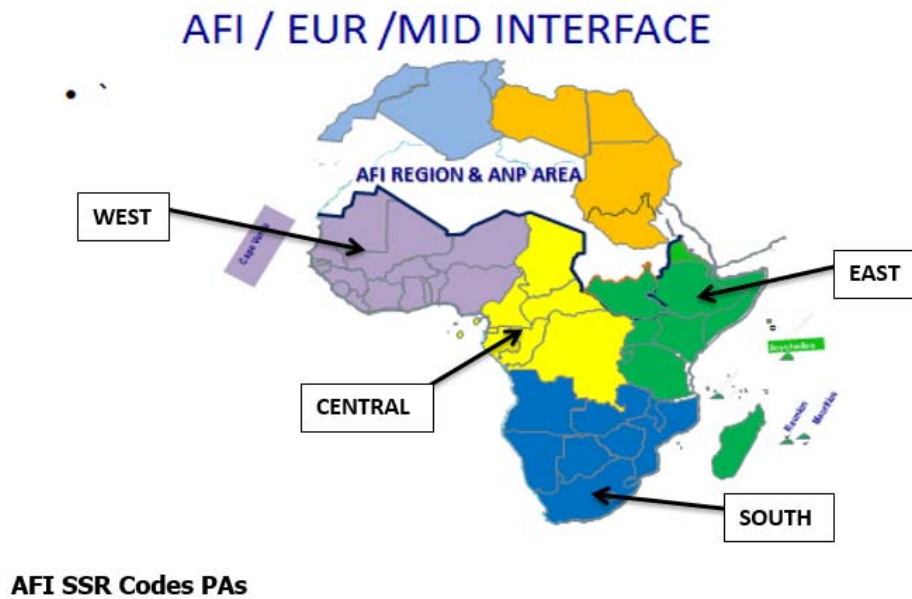
- No conflict in code allocation.
- Availability of SSR codes for allocation and assignment.
- Equitable distribution of allocated SSR codes.

2.3 In order to increase the number codes for allocation, it was necessary to move from one (01) i.e. single Participating Area (PA) to multiple PA regime. To achieve multiple PA past records of traffic routing were used.

2.4 Past records of AFI traffic routing



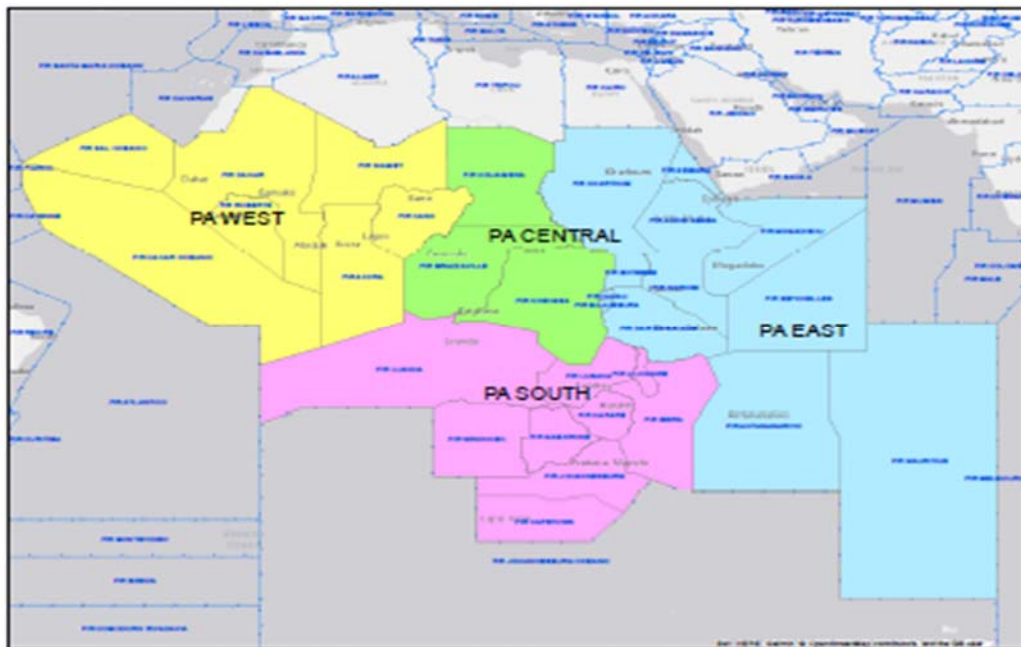
2.5 Four PAs have been proposed



2.6 The allocation process entailed manual allocation process



2.7 The manual multiple PA allocation translated to;



2.8 The net result being, out of the 55 series of SSR Codes available for allocation, the team was able to increase number of series allocated from 116 to 132 (13.8% increase).

2.9 The new multiple PA SSR code allocation regime and the Code Management Plan (CPM) presented in **Appendix A** was accepted by AAO – SG in June 2018.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Consider and approve the AFI multiple PA SSR Code allocation system accepted by AAO – SG for use by AFI FIRs/Blocks of airspace;
- b) Consider and approve the implementation in AFI of the SSR Code allocation proposal; and
- c) Request AAO and IIM SG joint meeting to be held in order to upgrade ATM equipment and or activate functions in accordance with the technology improvement plan and interoperability criteria developed by the IIM/SG.

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