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ASSEMBLY — 41ST SESSION

EXECUTIVE COMMITTEE

Agenda Item 24: Technical Assistance Programme

**UPDATE ON THE AVIATION INFRASTRUCTURE GAP ANALYSIS IN THE AFI REGION
AND SEAMLESS AIRSPACE ARCHITECTURE FOR THE AFI REGION**

(Presented by the African Civil Aviation Commission (AFCAC) on behalf of 54 Member States²)

EXECUTIVE SUMMARY

This paper reports on the 2019 Aviation Infrastructure for Africa Gap Analysis, conducted in response to ICAO Council Decision, C-DEC 24/7, on the implementation of the Declaration and Framework for a Plan of Action for Development of Aviation Infrastructure in Africa. The ICAO Gap Analysis was conducted based on responses to the survey questionnaire obtained from only 26 States and was supplemented by data from the ICAO database. It also provides an outline of a Seamless Airspace Architecture for the AFI Region.

*Strategic
Objectives:*

*Financial
implications:*

References:

Report of the ICAO 2019 Aviation Infrastructure for Africa Gap Analysis workshop
APIRG/22 Report

1. INTRODUCTION

1.1 Reference is made to decisions of APIRG/22 and RASGAFI/5 Joint Sessions and outcomes of the 22nd Meeting of the AFI Plan Steering Committee (Kampala, Uganda, 15 May 2019), including the 2019 Aviation Infrastructure for Africa Gap Analysis which was conducted by the AFI Plan

¹ English and French versions provided by AFCAC.

² Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Egypt, Eritrea, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Togo, Tunisia, Uganda, United Republic of Tanzania, Zambia and Zimbabwe.

Secretariat in response to ICAO Council Decision (C-DEC 24/7) on the implementation of the IWAF/3 Declaration and Framework for a Plan of Action for Development of Aviation Infrastructure in Africa.

1.2 The Gap Analysis exercise covering Airports, Air Navigation Services, and Aircraft fleet capacity and equipment was conducted accordingly, and its outcome validated through a workshop held in Abuja, from 19 to 21 March 2019. The Workshop was attended by the President and Representatives of the ICAO Council, Air Navigation Commission, with 173 delegates from 22 States and various stakeholder Organizations.

1.3 While considering the findings of the survey conducted in 2019, it must be noted that the impact of the COVID-19 Pandemic has had a profound effect on the aviation industry since 2020, which could impact negatively on the base information to be used for future feasibility.

2. DISCUSSION

2.1 For the purpose of the exercise, information was gathered by ICAO regional offices through a detailed State survey, and complemented with material from the ICAO database and other sources. As a result, the following outcomes were discussed-

2.2 International Airports

2.2.1 70% of international Airports not certified; b) 35% of international Airports with inadequate pavement strength; c) 42% of international Airports with insufficient emergency plans/perimeter; d) 20% of international Airports with inadequate Rescue and Fire Fighting Services (RFFS) capacity; e) 18% of international Airports without adequate passenger/cargo terminal capacity; f) 18% of international Airports with insufficient apron capacities; g) 17% of international Airports with deficient electrical power systems; h) 15% of international Airports without adequate airfield lighting systems; i) 9% of international Airports facing runway/taxiway dimension problems; and j) 8% of international Airports without adequate screening and Machine-Readable Travel Documents (MRTD) equipment.

2.3 Air Navigation Services

2.3.1 35% of international Airports without PBN; b) 95% of States have no ATM Master plan; c) 95% of AFTN networks implemented; d) 15% ATS Message Handling Systems (AMHS) implemented; e) 5% ATS Inter-Facility Data Communications (AIDC) implemented; f) 50% Controller-Pilot Data Communications (CPDLC) coverage; g) 0% implementation of VHF Data Link; h) 97% Ground aids/GNSS navigation systems implemented; i) 3% augmented GNSS (SBAS) implemented; j) 64%SSR-S,57%ADS-C,16%ABS-B,3%MLAT implemented; k) 78%e-AIP, 70% e-TODD, 80% AIS/AIM Plans implementation; l) Availability rate of OPMETs increased to 97% over time; andm) Implementation of Volcanic Ash contingency procedures is at a very low stage of about 36%.

2.4 Airlines

2.4.1 Low connectivity - 27% of services among African States; b) Direct traffic from SAATM States is mainly to Europe and intra-Africa, while traffic from SAATM to other regions is carried mainly through connecting flights; c) In terms of international frequencies, 76% of the intra-Africa market served by African carriers; d) In terms of origin-destination passengers, for 14 African States, over 50% of international passengers are carried by African carriers; e) Airlines of all African States had an average

load factor of 70.8% in 2017 (lower than the world average of 82%); and f) 27 African States are party to Cape Town Convention.

3. CONCLUSION

3.1 Though not conclusive, the ICAO Infrastructure Gap Analysis highlighted that African States and African Regional Economic Communities (RECs) should take specific actions, in cooperation and coordination with the AUC, NPCA, AfDB, UNECA, AFCAC, the African Airlines Association (AFRAA) and international partners to:-

- a) develop aviation infrastructure programmes and plans at national/regional levels based on a robust business case analysis, commensurate with the level of predicted traffic growth, and consistent with the ICAO Global Plans;
- b) align and integrate national and/or regional aviation infrastructure programmes and plans with an appropriately-balanced development of transport modes, including multi-modal and urban planning initiatives, and also link them with national and/or regional development plans and budgets;
- c) include the aviation sector in the overall planning, development and implementation of continental infrastructure programs and projects under the integrated, corridor development and spatial development approach of infrastructure development for bankability, effectiveness, maximum development impacts, sustainability and for the industrialization of the continent;
- d) ensure the inclusion of major aviation infrastructure projects in the PIDA Priority Action Plan (PAP) for 2020 – 2030 and forging-African economic cooperation and international assistance platforms such as the Tokyo International Conference on African Development (TICAD);
- e) promote cooperation and compatible decision-making among transport authorities and other ministries in charge of related portfolios, including finance, economic planning, energy, environment, trade and tourism;
- f) consolidate planning and development efforts for aviation, tourism and trade infrastructure, whenever possible, while harmonizing regulatory frameworks and balancing the benefits of these economic sectors;
- g) determine strategic infrastructure targets that are consistent with the ICAO Global Plans by conducting gap-analyses between forecasted demand and current capacity and according to national and regional needs;
- h) balance long-term uncertainty for infrastructure investment with the need to adjust to short-term priorities and funding constraints for successful project delivery;
- i) establish project monitoring and evaluation frameworks using a data-driven approach;
- j) build capacity of soft infrastructure, especially within the framework of the Move Africa initiative, as investment in quality aviation infrastructure development requires simultaneous enhancement in human capacity and is completely dependent on each other;
- k) identify and develop skills required for the preparation of aviation-related PIDA-PAP projects through the establishment and implementation of capacity building

strategies, taking advantage of the existing intra-African training capacity and the assistance of partners, such as TICAD;

- l) The development of guidance material by ICAO to assist States and Regions in preparing aviation Master plans be expedited;
- m) States and RECs utilize available guidance material from ICAO and the results of the gap analysis to prepare national and regional Aviation Master Plans;
- n) APIRG finalizes the development and adoption of the remaining parts of the AFI Air Navigation Plan, and ensure continuous monitoring of aerodrome and air navigation deficiencies;
- o) The aviation infrastructure gap assessment methodology be aligned with that of State Safety Programmes on the ICAO iSTARS Online Tool, with overall indicators to give level of progress of States; and
- p) APIRG and States prioritize air navigation related projects taking due account of prevailing targets, including SAR organization, AIS/AIM and PBN implementation.

3.2 The Aviation Infrastructure for Africa Gap Analysis conducted by the AFI Plan Secretariat is an important step towards the identification and development of programmes and plans at national/regional levels based on a robust business case analysis, commensurate with the level of predicted traffic growth, and consistent with the ICAO Global Plans.

3.3 Given the devastating impact of COVID 19, it would be important to validate whether the information outlined above would still be appropriate to utilize as a base for a continental master plan for the seamless airspace to be established.

4. **RECOMMENDATIONS**

4.1 The Assembly is invited to:

- a) note the information provided in this Information Paper, the gaps identified in aviation infrastructure pertaining to APIRG Airspace and Aerodrome Operations Sub-Group (AAO/SG) activities and propose appropriate actions; and
- b) note the impact of COVID-19 on the African Aviation Industry and urge AFCAC, REC and States to conduct a validation of findings in terms of the baseline; taking into account the impact of the COVID Pandemic on the infrastructure-; including human capital availability. to ensure that there won't have a skewed outcome.

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