International Civil Aviation Organization
CAR/SAM Regional Planning and Implementation Group (GREPECAS)

WORKING PAPER

GREPECAS/20 — WP/38
28/10/22

Twentieth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/20)
Salvador, Brazil, 16 – 18 November 2022

Agenda Item 2: Global and Regional Developments

AIRPORT EFFICIENCY PROGRAM

(Presented by IATA)

EXECUTIVE SUMMARY	
This working paper presents a proposal to implement an Airport Efficiency Program with the aim to optimize the use of installed airport infrastructure in the CAR/SAM States, as well as to enhance the benefits provided by the implementation of Enroute and TMA´s new airspace concepts.	
Action:	Suggested actions are presented in Section 3.
Strategic Objectives:	• Air Navigation Capacity and Efficiency • Economic Development of Air Transport • Environmental Protection
References:	• Global Air Navigation Plan • Reports of SAM/IG meetings • Reports of NACC/WG meetings

1. Introduction

1.1 There is a close relationship between runway operations efficiency, aircraft separation applied by TWR/Approach Control and Airspace Design. An optimization of runway occupancy time, the application of the High-Intensity Runway Operations (HIRO) Concept and departures from RWY/TWY intersections are examples of preconditions to the optimization of separation standards between arrivals, departures, and arrivals/departures. These enhanced separation standards will allow an optimum airport acceptance rate and, in consequence, a reduction of airborne/ground holdings, a decrease of radar vectors, and better flight profile. In this sense, the application of Airport Efficiency Program could be considered as a previous requirement for a successful implementation of Enroute and TMA´s new airspace concept.

1.2 An optimization of operations in the vicinity of the airports, via the mentioned reduction of separation between aircraft, with a focus on the runway capacity, also provides optimum use of the airport infrastructure, allowing the correct prioritization of investments in the airport. For example, in case of a better use of the runway capacity, it is very likely the convenience of investing firstly in a Passenger Terminal or Apron instead of investing in a new runway.

2. Analysis

2.1 There are several concepts/tools that can be applied separately or in sets to achieve the optimization of Runway Operations:

a) Runway Occupancy Time Reduction Program;
b) High-Intensity Runway Operations;
c) Reduced Runway Separation Minima (RRSM);
d) Take-off from intersections;
e) Preferential Runway Concept;
f) Use of Omnidirectional Departures; and
g) Independent Parallel Operations (Approaches and Departures) under VMC

2.2 All these procedures have the objective of reducing the runway occupancy time, allowing a reduction of separation between arrivals, between departures and between arrivals/departures, increasing runway capacity and efficiency, as well reducing ground and airborne holdings. The reduction of separation on the final approach could be divided into two main categories:

a) Reduction of separation on final approach with take-off between two arrivals (single or mixed runways); and
b) Reduction of separation on final approach between successive approaches (runways used just for arrivals).

1.3 It is important to note the importance of optimizing the use of the airport infrastructure, via the application of different separation standards/procedures under different meteorological conditions (VFR, Marginal VFR and IFR) and the application of a robust ATFM Plan.

1.4 There are already examples in the Region, which could be used as benchmarks for other States, such as:

a) High-Intensity Runway Operations (HIRO) in Porto Alegre International Airport (SBPA) – AIC A 11/22
b) Independent Approaches under VMC in SCEL - AIP-CHILE VOLUMEN I /AD 2.9-8 - 22 APR 2021
c) Segregated operations under VMC in SBGR – AIP Brazil AD 2 SBGR 1-21 06 OCT 22

1.5 Both NACC/Airspace Optimization Task Force and SAM/Airspace Study and Implementation Group inserted the analysis and implementation of Airport Efficiency Program. in their working program. In this sense, it will be important that States interested in such implementation use this program to optimize holistically all operations in the airport, TMA and Enroute.

3. Suggested actions

3.1 The Meeting is invited to:

a) take note of the information presented in this working paper; and

b) urge States to implement an Airport Efficiency Program in the main airports to optimize holistically all operations in the airport, TMA and Enroute, in coordination with NACC/Airspace Optimization Task Force and SAM/Airspace Study and Implementation Group.

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