

INTERNATIONAL CIVIL AVIATION ORGANIZATION

SOUTH AMERICAN REGIONAL OFFICE

## **SAM-AT Project**

# **Development Plan for the Sustainability of Air Transport Growth in the South American Region**

**Strengthen the Environmental Protection Capacity in  
the SAM Region Module**

Lima, March 2017

**XXX FUND  
PROJECT REVIEW COMMITTEE (PRC)**

**PROJECT TO STRENGTHEN THE ENVIRONMENTAL PROTECTION  
CAPACITY IN SAM REGION STATES**

**Proposal: ICAO SAM REGIONAL OFFICE**

## **1- General Information related to SAM Region**

### **1.1 SAM Regional Offices Responsibility**

1.1.1 Since 1948, ICAO's South American Regional Office headquarters are located in Lima, with the mission to provide assistance to all South American States, including Panama, in topics related with the development of international civil aviation.

1.1.2 Assistance to the South American States, upon which the Regional Office is accredited to, is provided through a programme of missions of assistance to States, the management of several regional technical cooperation projects, validation and audit missions to States to verify their compliance with ICAO standards and recommended practices (SARPs), as well as the implementation of the Regional Air Navigation Plan. To carry out this task, the Regional Office counts with a group of international experts in the safety, airport security, air navigation and technical cooperation fields.

1.1.3 In addition to the direct assistance provided to States and within a regional context, ICAO counts with an air navigation planning and implementation group (PIRG) acting within the Caribbean and South American Regions, GREPECAS, whose current structure, based on the development of programmes and projects, aims towards the enhancement of operational improvements, in alignment with the ICAO Global Air Navigation Plan (GANP).

### **1.2 Air traffic situation in the SAM Region<sup>1</sup>**

1.2.1 Overall, the SAM Region, according to IATA, has a total of 328 operating airports within its 14 States that handle domestic and international flights. Of these, ICAO places the number of international airports at 106. The total passenger flow to/from and inside the Region in 2015, according to data supplied by IATA, reached a figure of 190.4 million. This is barely 1.1% more than the previous year, due mainly to the reduction in Brazilian (-2.6%) and Venezuelan traffic (-14.8%).

1.2.2 It should be added here, however, that air traffic growth in the Region in the past years surpassed 6% (except in 2014, when it dropped to 2.8%), placing the average annual growth for 2010-2015 at 6.8%. During that period, Peru, Bolivia, Colombia, Chile and Panama spearheaded the growth of air traffic in the Region with average annual rates of 12.2%, 11.1%, 9.8%, 8.2% and 7.3%, respectively.

1.2.3 In terms of flight destinations, 70% of air traffic in the SAM Region consists of domestic flights within each of the 14 States. The remaining 30% corresponds to international flights, of which 26% were between the SAM Region's 13 countries and 1 territory (equivalent to 8% of the total

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<sup>1</sup> Source: IATA

traffic). As a result, 78% of the total air traffic consists of domestic and international passenger traffic within the SAM Region.

1.2.4 A total of 67 countries have direct connections to the SAM Region (including its 14 member States) via 794 international routes, of which 519 are direct, non-stop routes (a total of 52 countries with non-stop connections).

1.2.5 According to Boeing, cargo traffic in the SAM Region can be divided into two main markets: (i) SAM - North America trade and (ii) SAM - Europe commercial traffic. The SAM-North America market consists of approximately 1.1 million tons of cargo, where Chile, Colombia, Brazil and Peru account for almost 80% of the total volume transported. On the other hand, the SAM - Europe market reaches approximately 600 thousand tons, where Brazil, Argentina and Ecuador represent more than 70% of the total transported. Taking into account the 1.7 thousand tons of these two markets and using an average annual growth projection of between 4% and 5.5%, the total air cargo of the SAM Region with those regions would expand to an approximate range between 3.1 and 3.9 Million tons in total.

## 2- Environment issues involving global aviation activity

2.1 It is important to mention that the ultimate objective of the United Nations Framework Convention on Climate Change (UNFCCC) is to achieve stabilization of greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

2.2 In this context, the Kyoto Protocol, which was adopted by the Conference of the Parties to the UNFCCC in December 1997 and entered into force on 16 February 2005, calls for developed countries (Annex I Parties) to pursue limitation or reduction of greenhouse gases from “aviation bunker fuels” (international aviation) working through ICAO (Article 2.2).

2.3 However, it is necessary to recognize the vital role which international aviation plays in global economic and social development and the need to ensure that international aviation continues to develop in a sustainable manner; recognizing the progress made by ICAO in its implementation of the Climate Neutral UN initiative and the significant support provided by ICAO to the initiative, in particular through the development of a common methodology for calculating GHG emissions from air travel.

2.4 Assembly 37<sup>th</sup> has recognized that an annual energy improvement of 2% would not be sufficient to stabilize and then reduce the contribution of absolute aviation emissions to climate change and that the goals of greater ambition should be considered for sustainable development.

2.5 In order to collaborative to achieve the goal aspiration in the Climate Change matter, the 37<sup>th</sup> Assembly encourage States to submit their **action plans, which are** a voluntary planning and reporting tool for States to communicate information on their activities to address CO<sub>2</sub> emissions from international civil aviation to ICAO. The level of detail of the information contained in an action plan will ultimately enable ICAO to compile global progress towards meeting the goals set by Assembly Resolution A37-19, and reaffirmed by A38-18 and A39-2, outlining their respective policies and actions. Additionally, invite to those States that choose to prepare their action plans to submit them to ICAO as soon as possible, in order that ICAO can compile the information in relation to achieving the global aspirational goals, and the action plans should include information on the basket of measures (see **Appendix A**) considered by States, reflecting their respective national capacities and circumstances, and information on any specific assistance needs.

2.6 The ICAO 38<sup>th</sup> and the 39<sup>th</sup> Assembly have urged States to submit their Action Plans of CO<sub>2</sub> Emissions Reduction and update them every three years.

2.7 Regarding these issues, according to ICAO environment website, in the SAM Region the current status of implementation of this recommendation is:

States	Submitted	Date of updated
Argentina	Yes	Feb/2013
Brazil	Yes	Set/2016
Bolivia	No	
Chile	No	
Colombia	Yes	Aug/2012
Ecuador	Yes	Oct/2016
French Guyana	Yes	Jun/2015
Guyana	No	
Paraguay	No	
Panama	No	
Peru	No	
Suriname	No	
Uruguay	No	
Venezuela	Yes	Jun/2012

Source: [http://www.icao.int/environmental-protection/Pages/ClimateChange\\_ActionPlan.aspx](http://www.icao.int/environmental-protection/Pages/ClimateChange_ActionPlan.aspx)

2.8 In October 2013, the 38th Session of the ICAO Assembly adopted Resolution A38-18, which resolved that ICAO and its Member States, with relevant organizations, would work together to strive to achieve a collective medium term global aspirational goal of keeping the global net CO<sub>2</sub> emissions from international aviation from 2020 at the same level (so-called "carbon neutral growth from 2020"). The Assembly also defined a basket of measures designed to help achieve the ICAO's global aspirational goal. This basket includes aircraft technologies such as lighter airframes, higher engine performance and new certification standards, operational improvements (e.g. improved ground operations and air traffic management), sustainable alternative fuels, and market-based measures (MBMs).

2.9 Also, Assembly 38<sup>th</sup>, noting that with the implementation of non-MBM measures would be insufficient to achieve the goal of international aviation to grow with carbon neutral from 2020, considered it important to ask the Council to explore a global MBM scheme to complement the Package of suggested measures to help achieve the proposed objective and to present the proposal to the Assembly 39. This proposal was submitted to the Assembly 39 which approved it.

2.10 The ICAO 39<sup>th</sup> Assembly approved Resolution 39-3, presented in **Appendix B**, through which a Carbon offsetting and reduction scheme for international aviation (CORSIA) will be implemented. The key activity included in this Resolution a Global Plan to implement Market Based Measures (MBM) in order to offsetting the CO<sub>2</sub> emission from international aviation. This Plan includes three phases:

- a) **Pilot phase** applies from 2021 through 2023 to States that have volunteered to participate in the scheme. States participating in this phase may determine the basis of their aircraft operator's offsetting requirements from paragraph 11 e) i).
- b) **First phase** applies from 2024 through 2026 to States that voluntarily participate in the pilot phase, as well as any other States that volunteer to participate in this phase, with the calculation of offsetting requirements in paragraph 11 a).
- c) **Second phase** applies from 2027 through 2035 to all States that have an individual share of international aviation activities in RTKs in year 2018 above 0.5 per cent of total RTKs, or whose cumulative share in the list of States from the highest to the lowest amount of RTKs reaches 90 per cent of total RTKs, except Least Developed Countries (LDCs), Small Island Developing States (SIDS) and Landlocked Developing Countries (LLDCs), unless they volunteer to participate in this phase.

2.11 State Letter (SL) ENV 6/1-16/87 was issued to all ICAO Member States on 9 September 2016 inviting them to advise, preferably prior to the 39th Session of the Assembly, of their intention to voluntarily participate in the pilot phase of the scheme from 2021. According to the information available in the following website: <http://www.icao.int/environmental-protection/Pages/market-based-measures.aspx>, any State from SAM Region has expressed its intention to participate in the pilot phase or the first phase.

2.12 In order to ensure the implementation of CORSIA, it will be very important to build capacities in the States in order to strengthen all aspects related to Environmental Protection. These capacity building should be led by the ICAO SAM Regional Office in close coordination with HQs ENV Section, and take the form of development of new job profiles for States to create their own Environment Sections through regional seminars, technical teleconferencing, webinar or exchange of experiences between States.

2.13 According to Environments plan for CORSIA implementation, on 2018, the Council will approve the SARPs that will contain the MRV proposal and the SARPs will be applicable from January 1<sup>st</sup> 2019.

### 3- The Environment Branch inside of SAM Plan

3.1 The SAM Region is developing an Agenda for Air Transport for year 2035 as an evolution of the Bogota Declaration. The scope and importance of this Agenda are unprecedented. All the countries accept it and it applies to all of them, although taking into account the different realities, capabilities, and levels of development of each one, and respecting their domestic policies and priorities. These integrated and indivisible regional objectives and goals will benefit both developed and developing countries and conjugate four dimensions to ensure the sustained growth of air transport in the region as a driver for social and economic development.

3.2 The vision of this Plan is based on four main axes:

- **Connectivity:** The SAM Region envisages a region that offers the population greater access to the benefits of air transport through a higher level of **connectivity** amongst the peoples of the South American Region and between these and the rest of the world, thus fostering a greater commercial, social and cultural exchange.
- **Safety:** The SAM Region envisages a region that is a world leader in terms of **safety**, in strict compliance with international civil aviation standards, in a harmonized regulatory environment that permits taking advantage of economies of scale, allowing civil aviation authorities to effectively and efficiently offer a level of surveillance to its service providers,

without creating unnecessary costs to States and the industry, and building an environment that is conducive to the development of the air transport business.

- **Institutional Strengthen:** The SAM Region envisages that State entities responsible for ensuring the safe, orderly, and sustainable development of air transport will be **strong** and independent **institutions**, duly funded so as to ensure the recruitment, retention and professional development of the human talent required to fulfil their mandate, with ample use of electronic governance mechanisms, and in constant search for the most efficient forms of management.
- **Environment:** The SAM Region envisages an **environmentally** friendly aviation that exists in harmony with nature and protects wild flora and fauna and other species of living beings. Aeronautical activity in the SAM Region should be developed in harmony with the environment to ensure the sustainability of the airline industry. The SAM Region contemplates that a greener aviation will achieve that the preservation of the nature made it possible to continue developing and making greater progress in this field. Aviation activity, which is the driving force of the economy in several States, must take the lead in protecting the environment by implementing legislative measures relating to engine technology and fleet renewal, operational improvements, infrastructure improvements, green airports, and compliance with the ICAO targets for carbon dioxide reduction.

3.3 In order to comply with the Environment branch, the SAM Region sees the need to provide technical assistance to States with the objective of increasing the number of States that prepare and submit their Action Plans for CO<sub>2</sub> Reduction and, subsequently, mature an MRV system with a view to entering into the CORSIA scheme.

## 4- Project Objective

### 4.1 General Objective

That the SAM Region collaborates in a high percentage with the global ICAO aspirations that international aviation develops with neutral carbon from 2020.

### 4.2 Specific Objective

- By 2019, 8 States in the SAM Region should complete and submit to ICAO their CO<sub>2</sub> Reduction Action Plans.
- By 2019, ensure that at least 6 States of the SAM Region include in their national regulations and implement an applicable MRV system.
- By 2020, ensure that all States in the SAM Region complete, update and submit their CO<sub>2</sub> Reduction Action Plans.
- By 2020, ensure that at least 10 States of the SAM Region include in their national regulations and implement an applicable MRV system.
- By 2021, ensure that at least 3 States of the SAM Region participate voluntarily in the CORSIA Pilot Phase.
- By 2024, ensure that at least 10 States of the Region participate in the First Phase of CORSIA.

## **5- Activities to be developed within the Project**

5.1 The activities that are intended to be carried out through this Project are:

- Technical Assistance to Suriname on Action Plan and MRV.
- Technical Assistance to Guyana on Action Plan and MRV.
- Technical Assistance to Colombia on Action Plan and MRV.
- Technical Assistance to Chile on Action Plan and MRV.
- Technical Assistance to Paraguay on Action Plan and MRV.
- Technical Assistance to Panama on Action Plan and MRV.
- Technical Assistance to Peru on Action Plan and MRV.
- Regional Seminar in Lima regarding MRV.
- Regional Seminar in another State of the Region on Action Plan and CORSIA.
- Regional Seminar in Lima or another States on Green Airport.

## **6- Activities Schedule**

- Technical Assistance to Chile: Third quarter of 2018.
- Technical Assistance to Peru: Third quarter of 2018.
- Regional Seminar on MRV: Last quarter of 2018.
- Regional Seminar on Action Plan and CORSIA: June or July 2019.
- Technical Assistance to Colombia: First quarter of 2019.
- Technical Assistance to Paraguay: First four-month period 2019.
- Technical Assistance to Panama: First quarter of 2019.
- Technical Assistance to Suriname: Second quarter of 2019.
- Technical Assistance to Guyana: Second term of 2019.
- Regional Seminar on GREEN Airports: First quarter of 2020.
- Other technical assistance if it is required.

## **7- Budget**

The budget requested to implement all activities indicated is detailed in the following Table:

Missions	Air ticket	Pax	Total Air tickets	DSA	Days	Total	TA
Lima - Suriname	2025.4	1	2025.4	180	4	720	152
Lima - Guyana	1056.71	1	1056.71	260	4	1040	152
Lima - Bogota	750	1	750	180	4	720	152
Montreal - Bogota	2200	1	2200	180	4	720	152
Montreal - Suriname	1869.78	1	1869.78	180	4	720	152
Montreal - Guyana	1125.59	1	1125.59	260	4	1040	152
Rio de Janeiro - Asuncion	363.5	1	363.5	250	4	1000	152
Lima - Asuncion	782.5	1	782.5	250	4	1000	152
Panamá - Lima	576.39	1	576.39	250	4	1000	152
Montreal - Panama	625.14	1	625.14	250	4	1000	152
Montreal - Lima	2166.24	2	4332.48	250	10	2500	304
Montreal - Santiago de Chile	2483	2	4966	260	5	1300	304
Lima - Santiago de Chile	600	1	600	260	4	1040	152
<b>Fellowships</b>		<b>DSA</b>					
Beca 1	600	1225	1825				152
Beca 2	500	1225	1725				152
Beca 3	800	1225	2025				152
Beca 4	800	1225	2025				152
			<b>28873.49</b>			<b>13800</b>	<b>2888</b>
<b>Regional Seminar in Lima</b>							
Coffee Break for 60 participants	1500						
Interpretation (4 days)	5200						
Others	800						
<b>Total</b>	<b>7500</b>						
<b>Regional Seminar in other State of the Region</b>							
Coffe Break	1500						
Tickets and DSA	6000						
Interpretation (4 days)	5200						
Others	1200						
<b>Total</b>	<b>13900</b>						
Coffe Break	1500						
Tickets and DSA	6000						
Interpretation (4 days)	5200						
Others	1200						
<b>Total</b>	<b>13900</b>					<b>Grand Total</b>	<b>80861.49</b>