



WORKING PAPER

ASSEMBLY — 39TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 22: Environmental Protection – International Aviation and Climate Change – Policy, Standardization and Implementation Support

THE DISTRIBUTION OF OFFSETTING OBLIGATIONS UNDER THE GMBM

(Presented by Brazil)

EXECUTIVE SUMMARY

One of the main design elements of the Global Market-based Measure (GMBM) for international aviation is the distribution offsetting obligations (para.9 of the draft Assembly Resolution). This working paper aims to summarize some of the technical arguments in support to the adoption of the 100% sectoral approach, whose advantages have been extensively discussed during the EAG, the GLADs and the High Level Meetings. Brazil invites the Assembly to decide on a distribution of offsetting obligations that avoids market distortions and disproportionate burden to some region's international air traffic development.

Action: The Assembly is invited to:

- a) reaffirm ICAO's commitment to the Chicago Convention principle of non-discrimination.
- b) take into account the technical arguments described below in regards to the adoption of the 100% sectoral approach.
- c) decide on a distribution of offsetting obligations that avoids market distortions and disproportionate burden to some region's international air traffic development.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective E - Environmental Protection.
<i>Financial implications:</i>	No additional resources requested.
<i>References:</i>	<ul style="list-style-type: none">• ICAO Resolution A38-18: Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate Change.• Report on the Results of the High-Level Meeting on a Global Market-Based Measure Scheme (HLM-GMGM) – 24/05/12

1. INTRODUCTION

1.1 The 38th Assembly resolution requested the Council to develop work on the technical aspects and the environmental and economic impacts of possible options for a global Market Based Measure - MBM Scheme. According to the Resolution A38-18, the Global MBM should take into account the non-discrimination principle and special circumstances and respective capabilities of Member States. Brazil has constructively engaged in shaping proposals on this issue and welcomes the President of the Council's initiative in presenting the draft Assembly resolution text on the GMBM.

1.1 One of the main design elements of the GMBM is the distribution of offsetting obligations (para.9 of the draft Assembly Resolution). The draft Assembly Resolution presented by the President of the Council proposes the 100% sectoral approach as the basic calculation for the distribution. Despite the broad support for the 100% sectoral approach, the issue remains unresolved. This working paper aims to summarize some of the technical arguments that support its adoption, as discussed during the EAG, the GLADs and the High Level Meetings.

2. TECHNICAL ARGUMENTS IN SUPPORT TO THE 100% SECTORAL APPROACH

2.1 **Market maturity.** A standard way of classifying the “maturity” of a market is by using the value of income elasticity for the market (the responsiveness of traffic to changes in income). In mature markets, the income elasticity of the demand for air transport is low, i.e the demand for air transport does not change significantly when income rises. On the other hand, in markets where a high maturity level has not been achieved, the demand for air transport tends to grow whenever income rises. In countries with non-mature markets, there is a high growth potential, as a considerable part of the population has no access to international transportation due to income restrictions. The economic development that generates increasing per capita income tends to be accompanied by greater air transport demand. The Air Transport Aviation Group-ATAG published a study, on July 2016, which demonstrates the projected average annual growth rate for international traffic by region, from 2014 to 2034, as illustrated in Figure 1.

Figure 1 – Projected annual growth rate for international traffic by region, 2014 - 2034

AFRICA	5.4%
ASIA- PACIFIC	5.1%
EUROPE	3.6%
LATIN AMERICA & CARIBBEAN	4.7%
MIDDLE EAST	6.0%
NORTH AMERICA	2.7%
APEC	3.9%
EUROPEAN UNION	3.6%
SMALL ISLANDS STATES	4.9%
DEVELOPING COUNTRIES	5.0%
OECD	3.5%
WORLD	4.3%

Source: Aviation Benefits Beyond Borders - ATAG¹

¹ <http://aviationbenefits.org/> page 18.

2.2 The study shows that the international air traffic to and from developing countries tends to have a growth rate slightly higher than the world average and significantly higher than mature markets. Therefore, if the obligation distribution is based on individual growth rates, the airlines from countries with non-mature markets will carry a higher burden than the ones from countries with mature markets, therefore impacting the growth potential of non-mature markets. The adoption of the 100% sectoral approach helps addressing that unbalance. It is important to avoid that the distribution of offsetting obligation imposes a disproportionate burden on countries with international aviation development potential, while affecting relatively less countries with mature markets, which historically have contributed most to emissions from the aviation sector.

2.3 The method for distribution of offsetting obligations would set the rate (sectoral, individual or mixed) to be multiplied by the operators emissions increase (an average of the last three years). With the 100% sectoral approach, the rate would be the same for each carrier and an operator's obligation would be calculated only according to its emission's share, which approximately reflects its market share. This will avoid that the obligation distribution imposes a disproportionate burden on countries with international aviation development potential. If an individual approach were to be employed, the operator's obligation would be calculated based on its emission share and on its emission growth, creating additional burdens and market distortions.

2.4 **Incentives for CO2 emissions reduction.** One of the alleged arguments for the adoption of a more individual approach relies on the fact that incentives for CO2 emissions reduction would be bigger than the incentives created by the 100% sectoral approach. There are some important caveats to that argument. First, the main incentive for CO2 emissions reduction is fuel costs, which can amount to 40% of an air carrier's overall costs. Civil aviation is already an efficiency-driven sector. For a company to remain competitive it has to invest in measures to guarantee the highest fuel efficiency possible. That is why an offsetting scheme for the sector is considered necessary to complete the basket of measures, until sustainable alternatives such as biofuels do not reach a competitive commercial price.

2.5 **Market distortion.** The discussion on GMBM for international aviation should balance the historical responsibilities of States in relation to climate change and the principle of non-discrimination. Brazil understands that the principle of non-discrimination between operators, part of the Chicago Convention, is essential to avoid market distortions in international civil aviation. Member States undertook a lot of effort during the negotiations to safeguard the principle of non-discrimination among air carriers and avoid market distortions. Brazil has contributed to the reconciliation of historical responsibilities and non-discrimination by supporting the idea that all air carriers should have equal treatment when operating on the same route.

2.6 During the EAG/15 meeting, on January 2016, CAEP presented the results of a series of analyzes conducted on the MBM design elements. One of the analyses carried out at the request of the Council was a comparison of the potential market distortion across schemes for offset obligation distribution. CAEP's conclusions are reproduced below²:

“Effect of Distribution Schemes:

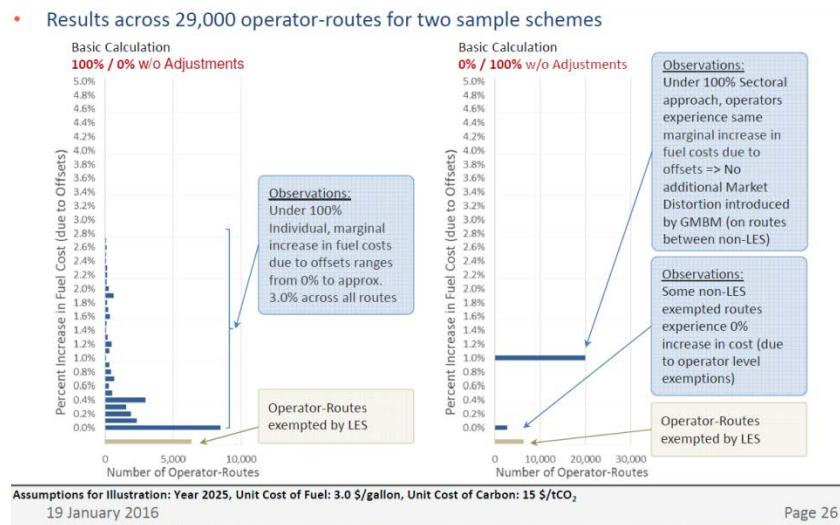
- ***Minimum difference in relative cost due to offsets across routes is achieved with 100% sectoral (all routes see the same impacts);***
- ***Largest spread/differences in cost due to offsets observed for 100% individual and Accumulative Approach;***
- ***The extent of market distortion is limited and directly related to the price of the offset.”***

² CAEP Technical Analyses to EAG/15 (January 2016) - [Summary](#) and [Appendix](#) . At: http://www.icao.int/Meetings/HLM-MBM/Pages/background_information.aspx

According to CAEP’s conclusions, the use of an individual approach would generate more market distortions, with a large difference in relative offsets costs across routes. Besides that, in the same route, two air carriers could have different offset obligations, leading to significant market distortions. The adoption of the 100% sectoral approach can avoid that situation, since all routes (and all operators in the same route) would see the same impacts.

2.7 Figure 2 shows CAEP’s study that compared two schemes for offset obligation distribution: the first one with a 100% individual approach and the second with a 100% sectoral approach.

Figure 2 – Comparison of Schemes



Source: CAEP-ICAO

The comparison demonstrates that the 100% sectoral approach for offsetting obligation distribution has the least chance of creating distortions, including for fast growers and new entrants. It is therefore the most appropriate way of preserving ICAO’s principle of non-discrimination while taking into account countries’ special circumstances and respective capabilities – "differentiation without discrimination".

3. ACTION BY ASSEMBLY

3.1 The Assembly is invited to:

- a) reaffirm ICAO’s commitment to the Chicago Convention principle of non-discrimination.
- b) take into account the technical arguments described below in regards to the adoption of the 100% sectoral approach.
- c) decide on a distribution of offsetting obligations that avoids market distortions and disproportionate burden to some region’s international air traffic development.