

FACILITATION OF TRANSPORT AND TRADE IN LATIN AMERICA AND THE CARIBBEAN

Transport and aviation policy in Latin America and the Caribbean in the context of sustainable development

Background

Throughout its hundred-year history, commercial civil aviation has simultaneously been a driver and an outcome of trade and global connectivity. While the first commercial airline carried 1,205 people in 1914, about 3.3 billion passengers and 51.5 million tons of cargo, with a total value of US\$ 6,460 billion, were transported by air in 2014 (IATA, *Economic Performance of the Airline Industry*, 2015).

Even if several studies have been carried out on the significance of air transport for national and regional economies,¹ there is still a lack of recognition of the aviation sector's (real and potential) contribution to sustainable development in the region, or of the implications of this approach for public policies. The main goals of the High Level Expert Workshop on air transport and policy, organized by ECLAC in collaboration with the Latin American Civil Aviation Commission (LACAC) and the Civil Aviation Board of Chile and held in Santiago from 15 to 18 June 2015, were to encourage reflection on this issue and to evaluate the challenges for air transport policymaking.

This *FAL Bulletin* summarizes the main ideas shared at the seminar, presents the general context of air transport development in Latin America and the Caribbean and addresses issues related to commercial aviation policies, airport management, the environmental effects of air transport, and facilitation and security in the aviation sector. The main conclusions of the event are presented in the final section.²

This *FAL Bulletin* reviews the main ideas shared at the workshop of high-level experts on transport and aviation policy, held from 15 to 18 June 2015 in Santiago. The event was organized by the Latin American Civil Aviation Commission (LACAC), the Civil Aviation Board of Chile and the Economic Commission for Latin America and the Caribbean (ECLAC).

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The opinions expressed in this document are those of the authors and do not necessarily reflect those of the Organization.



For Latin American countries, see the studies carried out by International Air Transport Association (IATA) and Oxford Economics [online]: http://clacsec.lima.icao.int/2013-publicaciones/estudioIATA-Oxford.htm.

² The event programme and presentations are available at [online]: http://clacsec.lima.icao.int/Reuniones/2015/ SemChile-TPA/conv.html#PRESENTACIONES.

Background information on air transport in Latin America and the Caribbean³

Several studies have shown that the Latin American and Caribbean region continues to face an array of challenges, a reality which is reflected in the region's modest logistic performance in an increasingly demanding global market for passenger and cargo transport. Particularly evident factors are the persistent inadequacy of transport infrastructure, the failure to exploit the competitive advantages of different modal choices, the insufficient use of technology and innovation, a rise in negative externalities and a lack of security and facilitation of procedures and processes.

Based on this assessment, ECLAC —in its proposal to the region— considers that to achieve the necessary changes to infrastructure and transport services, transport-related public policies need to be transformed into authentic State policies that transcend economic and political fluctuations and which are based on a long-term vision for the sector. The adoption of an integrated approach that addresses issues of infrastructure and logistical quality, together with the effective regulation of services, greater sustainability in the sector and the facilitation of processes, is fundamental to this transformation. It is equally necessary that all the dimensions of sustainability —economic, social, environmental and institutional— are incorporated at every stage of policymaking.

One direct implication of this integrated and sustainable approach relates to the traditional organization of the transport sector, which is generally conceived in terms of specific modes of transport. The required public policy shift is that of adapting a co-modal approach, seeking efficiency in the modal distribution of transport services through the optimal use of all means of transport and possible combinations thereof, resulting in journeys that are efficient and sustainable from start to finish in terms of individual operational needs and total cost to society. This involves exploiting the advantages offered by each mode of transport in the overall context of an integrated logistics and mobility system at the national level. In this context, air transport, as one of the main means of local and international connectivity and as a factor in the territorial integration and socioeconomic development of countries, deserves special consideration.

As highlighted by LACAC, air transport provides 58.1 million jobs worldwide, transports around 2.97 billion passengers annually and contributes US\$ 2.4 trillion dollars to the world economy (equivalent to 3.4% of global GDP).

Demand for air transport is closely tied to economic growth and is therefore expected to continue to increase in Latin America and the Caribbean. According to data from the Civil Aviation Authority of Colombia, global passenger traffic doubled in the last 10 years, while cargo traffic increased by 25% in the same period. Demand for passenger transport in Latin America and the Caribbean has surged, with Central America recording the fastest growth between 1992 and 2014 (21.64%), followed by South America. Conversely, North America's share of the international market diminished, while that of Europe held steady. The international cargo segment followed a similar pattern; South America's market share almost tripled in the same period, with average annual growth of 8.4% between 1992 and 2014, followed by Central America and Europe. North America's share of the total cargo transport market gradually decreased from 75.7% in 1992 to 63.3% in 2014.

According to the latest projections from the Global Passenger Forecast Report, published by the International Air Transport Association (IATA) in October 2014, the number of passengers is expected to reach 7.3 billion in 2034, more than double the number transported in 2014, with an average annual growth rate of 4.1%. Latin America is projected to grow by 4.7% annually, with Brazil as one of the five fastest-growing passenger transport markets in the world. In terms of country pairs, Asian and South American destinations are expected to be the fastest growing markets.⁴

Providing an adequate response to this rising demand, ensuring not only efficiency but also security and the management of resulting externalities, is one of the key challenges for public policies in the region. In a context of globalization, all stakeholders in air transport (passengers, airlines, cargo carriers and airports) enter into a dynamic, interdependent and complementary relationship. Air transport policies must therefore address, in addition to the appropriate regulations, aspects related to the security, access, ownership and oversight of air carriers, consumer protection, fair competition, safeguards, taxes and other charges on air services, economic aspects of airports and air travel services, multimodal transport, new technologies, and so on.

International institutions such as the International Civil Aviation Organization (ICAO) play a fundamental role in the development of a global framework for aviation activity. Also vital are the regional institutions, particularly LACAC, which serves as an important platform for promoting the development of civil aviation in Latin America, with the aim of integrating the regional air transport market.

³ This section is based on the presentations given by the representatives of ECLAC, LACAC and the Governments of Chile and Colombia during the first session of the workshop.

For more information see [online]: http://www.iata.org/pressroom/pr/pages/2014-10-16-01.aspx.

II. Commercial aviation policies⁵

Access to airspace is an issue that is directly related to the sovereignty of States. Currently, international aviation markets are not perfectly competitive because of the different agreements on freedoms of the air that exist between countries. According to the representative of the Civil Aviation Board of Chile, the countries of the region are still engaged in active discussions on whether open or protected markets are the best policy. This has led States to pursue bilateral and multilateral negotiations in the hope of arriving at an agreement on freedoms of the air.

According to the Secretary of LACAC, some Latin American countries such as Chile, Uruguay and Paraguay have an open transport policy, others such as Colombia, Guyana, Peru, the Plurinational State of Bolivia and Suriname have a flexible policy, and some such as Argentina and the Bolivarian Republic of Venezuela have a more restrictive policy. In that sense, the representative of LACAC underlined the importance of the Multilateral Open Skies Agreement signed by the Governments of Brazil, Colombia, Chile, the Dominican Republic, Guatemala, Honduras, Panama, Paraguay and Uruguay in 2010. The LACAC representative considered it crucial that the region pursue a common policy, as has been achieved in Europe with its integration and open skies reform. He also stressed the importance of coordinating air transport policies with the development of the tourism sector, since it is not productive to have an open policy in one sector, while others remain closed. A more open air transport policy would directly benefit States (by improving connections with the outside world), the industry (by enabling the operation of more routes), consumers (by bringing down fares) and lastly the economy and trade in general. The importance of fair competition and the role of States in implementing competition laws were also mentioned.

Representatives of Chile and Colombia shared the experiences of their respective countries with regard to the open skies policy that has been applied in recent years. In the case of Chile, commercial air policy is underpinned by five principles: free access to markets, freedom to set prices, minimum State intervention, liberalization of ownership and control, and stable regulations. The representative from Colombia, meanwhile, stated that although that country had adopted an open skies policy, it was currently in a position of gradual liberalization, and deemed it necessary to protect its domestic industry from foreign competition until it is ready for healthy competition. At present, Colombia's cargo transport market is more open than that of passenger transport. Lastly, the speakers agreed that air service liberalization had provided a boost and benefits for the industry, noting the experiences of countries where this policy has been successful and others where it has not. It was suggested that the organizations in attendance should incentivize analytical studies in this area, with a view to improving future policy decisions in this area.

III. Airport management⁶

In the past, airports were simply providers of infrastructure, primarily interested in ensuring that the needs of national airlines were met, while being financed and controlled by the State. As such, they were considered natural monopolies. During the 1990s, a trend for the liberalization and privatization of airports emerged. Faced with growth in air traffic and the need to invest in airport infrastructure, States sought to respond through privatization, corporatization or concession, thus transforming airport management into a business, providing diversified activities for clients with different needs. With the liberalization of air transport and growing competition between airlines, airports switched from being reactive to proactive entities, even competing among themselves for market share.

There is currently no single mechanism for airport management, with governance and ownership structures differing even within countries. According to data from Airports Council International (ACI), 74% of the world's airports are publicly owned, 19% are public-private partnerships and 8% are fully privately owned.

Measured by annual passenger traffic, the airports of Latin America can be classed as follows: 71% are small (fewer than 1 million passengers per year), 19% are medium-small (between 1 and 5 million), 8% are medium-large (between 5 and 15 million) and 2% are large (over 15 million passengers per year), with the latter accounting for 60% of all passengers. Given that 5 to 15 million passengers is the optimum airport capacity in terms of cost, operating costs are a significant financial concern for more than 90% of airports.

Global data from ACI show that each passenger spends an average of US\$ 20 in airports, although in Latin America the figure is US\$ 14.40, of which US\$ 9.40 is aeronautical revenue and US\$ 5.10 non-aeronautical revenue. Consequently, there is potential to improve revenues, especially in non-aeronautical streams such as food and retail. Latin America has the lowest expenditure on staffing, at 27% of total spending, compared with

⁵ This section is based on presentations given by LACAC and representatives from the governments of Chile and Colombia at the second Session.

⁵ This section is based on presentations given by ECLAC, Airports Council International and representatives of the governments of Argentina, Ecuador, Mexico, Paraguay and Uruguay during the third session of the workshop.



a global average of 35%. The "other" category, which includes spending on technology, also accounts for 27% of total expenditure in Latin American airports (compared with a global average of 17%). As a result, only 33% of airports are profitable, and the remainder survive thanks to cross-subsidies or funding from large airports.

Nevertheless, changes in airport management have generally facilitated increased competition between airports, owing to the efficiency gained by reducing operating costs and attracting local traffic. The changes have also contributed to the emergence of new airlines, new goods and new routes, as well as partnerships between airports, sharing methods of operation, attracting customers and earning their loyalty.

Build-operate-transfer (BOT) contracts are the most common form of concession in Latin America, and their duration is based on a set number of years or the fulfilment of revenue targets in which minimum returns to the operators are generally not guaranteed. Aeronautical revenues are usually regulated, while airports are free to set prices for non-aeronautical revenue streams. At the same time, experiences of airport concessions have varied significantly in different Latin American countries.

The representative of Mexico highlighted the strategy of awarding concessions to groups of airports, in which a highly profitable airport supports others with smaller returns, as is the case with the Cancún group. Given the concessions strategy in Mexico, the airport operator reduces the risk by realizing projections of future demand for passenger services, since this demand will determine non-aeronautical revenues and the likely return on investment in infrastructure, although every airport should be efficient and profitable.

The experience of Ecuador shows that airports do compete when they have global and local markets close by. This is the case with Guayaquil and Quito airports, which compete for passengers and cargo from nearby cities that do not have access to an international airport. Accordingly, the airport that develops the best network of routes in conjunction with the airlines will attract the most business. The National Director of Airports of Chile stated that concessions had allowed the country to quadruple public investment in airport infrastructure over 10 years. He explained that reaching total concession revenue earlier than planned causes problems for the State, since it is not yet prepared for a new bidding process, and as such a fiveyear extension of the period in which to meet the revenue target was under consideration. The latest concession for the Arturo Merino Benítez International Airport that serves Santiago and the surrounding area included an investment trigger, dependent on the demand for embarking passengers.

Uruguay faces the challenge of maintaining its national airport system (12 international airports, although not all offer regular international flights, and 4 domestic airports). Two international airports operate under concessions, and the main concern is to keep the rest of the network operational for the social benefits and wellbeing of the communities served.

The discussion related to airport concessions in the region revealed that each concession is different and that only a code of good practice (and nothing more ambitious) can be created at the regional or global level on the basis of national experiences. The technical prowess and knowledge acquired by each State can be used as an input for others that are engaged in concession processes. The well-being and social inclusion generated by each airport depends on the economic development of the country. The increasing use of airport infrastructure is leading to the emergence of new challenges such as passenger education, strategies to inform them of their rights and more transparent transport contracts.

The success of concessions is subject to increases in air traffic and policies adopted in other sectors, such as air service liberalization or tourism development. For that reason, it is vital that countries draw up national plans that set out their fundamental priorities for airports —better connectivity or greater floor space— and act in accordance with a comprehensive and strategic infrastructure development plan.

IV. Environment⁷

Aircraft are now 90% quieter and 70% more efficient than they were in 1960. Despite this, aviation is estimated to be responsible for 2% of all greenhouse gas emissions, equivalent to 697 million tons per year.

⁷ This section is based on the presentations by the representatives of ECLAC, the Latin American and Caribbean Air Transport Association (ALTA) and the Governments of Chile, Guatemala, Mexico, Paraguay and Uruguay during the third session of the workshop.

Carbon dioxide emissions from the burning of fossil fuels by aircraft have been under consideration since the first United Nations Framework Convention on Climate Change (UNFCCC). Under the Kyoto Protocol, the obligation to limit or reduce the effect of greenhouse gases only applies to the countries included in annex 1, which made explicit reference to international air transport and handed responsibility for emissions to ICAO. LACAC has been very active in organizing the exchange of experiences and opinions between Latin American countries, with a view to presenting the region's perspective in international negotiations.

Environmental targets have been set for civil aviation based on the following four elements: technological improvements with more efficient aircraft, optimization of operational actions such as take-offs and landings, compensatory Market-based Measures (MBMs) and the use of biofuels. The discussion during the seminar focused on the latter two instruments.

A. Market-based measures

MBMs are regulatory economic instruments for internalizing negative externalities through emissions trading and offsetting. Given that reductions achieved through technological and operational improvements alone are insufficient, MBMs are the preferred mechanism of ICAO to meet the target of carbon neutral growth from 2020 onward.

For this purpose, ICAO is currently studying a model for emissions trading, considering only CO_2 emissions and using the growth recorded in the last three years as a baseline. The model includes all international flights and individual and collective use of carbon offsetting. Adjustments are applied for rapidly growing airlines and those that adopt emission-reducing technology. This scheme, which is still subject to change, will become compulsory in 2020.

The crucial issue in this context is how to optimize MBMs to benefit the region, since they do not take account of the geographical positions of countries, some of which are located farther from major markets. This could reduce the number of direct flights to these markets, potentially resulting in a loss of competitiveness for Latin American airlines. According to the LACAC representative, the distance and weight of the aircraft are included as parameters for calculating flight protection taxes and levies, which could be an alternative to the MBM charges.

Experts on the matter drew attention to the fact that MBMs provide a unique opportunity for innovation, despite the possible absence of a global consensus owing to different

national interests. The representative of Guatemala, which is currently an environmental focal point for LACAC, stated that prior regional agreements could facilitate a global agreement, provided that the regional positions fit into a global framework with upper and lower limits to guide the proposals. In that regard, LACAC proposed an approach based on three fundamental elements. First, take ownership of the carbon footprint; second, ensure that environmental policies do not hold back growth in Latin America; and third, do not allow the aviation sector to be used to offset emissions from other sectors.

The Latin American and Caribbean Air Transport Association (ALTA) considered the defence of the region's aviation industry its primary concern, not only to protect economic growth but also because of the social benefits of air travel, since alternative modes of transport are nonexistent for many Latin American destinations. According to the representative of ALTA, Latin America (the second fastest growing region in air traffic) possesses one of the youngest aircraft fleets, while investment in infrastructure has risen and remains on the increase. The region has advantages in mitigation measures, and its investments must be defended. ALTA believes that mitigation indicators should be discussed when other regions match the levels attained by Latin America. The region's countries have been working on MBM policies, but there is a need for criteria to be aligned in the framework of ICAO.

The representative of ALTA also stated that components related to operational and technological measures should be incorporated into the work of the "Strawman" group set up by the Council of ICAO. During the debate, the representative of Mexico said that her country had achieved good results with biofuels and that Central America has restructured its routes through Performance Based Navigation (PBN) procedures. Both are important measures but need to be more widely implemented and better funded. It was also pointed out that MBM models use the current price of carbon credits, without price simulations for when there is greater demand for offsetting, which could become a trade barrier to the aviation market.

To date no tax has been levied on fuel, owing to the existence of some legal considerations such as bilateral agreements that provide exemptions in this area. In any case, a fuel tax would limit growth as a result of being more expensive and less efficient than an MBM, and could be detrimental to competition. At the same time, such charges or duties could facilitate the creation of a green fund in the aviation sector, to be reinvested in research, biofuels, procedures and operational measures.

Lastly, while some experts considered that the negotiation of a global agreement could be subject to delays, there was a general agreement among the participants that reaching a proposal on a regional position would strengthen the presence of their governments and industries in global negotiations and would facilitate the search for partners and allies.

B. Biofuels

Produced from renewable biomass, biofuels can be used as a direct substitute for fossil fuels: in other words, aeroplanes do not require modifications in order to use them and they can be mixed with fossil fuels.

Some experts believe that, for the time being, aviation biofuels and MBMs are the only ways of reducing CO₂ emissions in the long term, since the aircraft machinery and the energy density required for flight mean that liquid fuel is the only realistic option for commercial aviation. Despite various criticisms of the disadvantages associated with biofuels, they do offer economic benefits (such as reducing the aviation industry's dependence on oil price fluctuations). Moreover, biofuels have the advantage of higher energy content, are more environmentally friendly (with potential emission reductions of up to 80%) and deliver social gains, since they are produced from crops and are thus linked to creating jobs in the agriculture sector.

However, a productive aviation biofuel industry does not yet exist, making biofuels six to nine times more expensive than fossil fuels. As a result, there is not enough economic space to force airlines to use biofuels, despite them being a good solution to the environmental problem.

The Sustainable Aviation Fuel Users Group was founded in 2008 with a view to sharing initiatives and projects to boost the growth of biofuels. Together, its members account for 32% of global demand for aviation fuel. The development of biofuels has encountered various problems, such as the underproduction of raw materials, the absence of a refinery infrastructure and the lack of a legal framework and the funding needed to expand biofuels. Biofuel production also demands that environmental standards be enforced throughout the production chain, through certifications that force refiners to minimize pollution at all stages of the process, from farmers in the primary sector to the review of environmental, social and economic aspects, thereby avoiding "dirty" biofuel production.

The presentations and discussions concluded that without a set of economic, financial, regulatory and other measures to promote the industry's development and incentivize the use of biofuels by airlines, the potential of biofuels will remain untapped in the region.

V. Airport facilitation⁸

Airport facilitation falls within the more general framework of trade and transport facilitation, focusing on the simplification, harmonization and standardization of the procedures and information flows required for the transportation of goods and passengers. The main aim of facilitation is to save time and reduce transaction costs. Traditionally addressed under a series of agreements, codes and recommendations set out by the United Nations and specialized organizations for particular modes of transport, operations or geographical areas, facilitation received a massive boost and a global framework with the signing of the Trade Facilitation Agreement of the World Trade Organization in 2014. However, in practice, the success of the facilitation reforms depends heavily on much more than a legal framework, and requires a commitment from public and private agencies, institutional arrangements, regional cooperation and, lastly, resources and training.

The legal and substantive foundation of air transport facilitation is the 1944 Convention on International Civil Aviation (also known as the Chicago Convention), in which article 22 refers to the facilitation of formalities, consisting of the adoption of practicable measures to facilitate and expedite aircraft navigation and to prevent any unnecessary delays to aircraft, crews, passengers and cargo. Annex 9 of the Convention defines standards and recommended practices on facilitation, including minimizing the time spent on border checks, minimizing inconvenience when applying administrative controls and requirements, maintaining optimal levels of security and lawful practices, promoting the exchange of information between key operational actors, implementing technologies to improve the effectiveness and efficiency of airports, and using risk management. Some regulations are particularly important, such as the introduction of a system of advance passenger information (API), the issuance of only machine readable passports, the removal of the requirement (for cargo transport) to manually produce supporting documents and the establishment of procedures whereby they can be produced by electronic means, and the obligation to consult the competent authorities prior to any modification or planning of infrastructure. Other topics related to ICAO facilitation include the clearance and sojourn of aircraft, public health measures, persons with disabilities or limited mobility, and unruly passengers. Annex 9 also encourages the establishment of national air transport and airport facilitation committees and the coordination of facilitation activities.

³ This section is based on presentations by the representatives of ECLAC, LACAC and the Governments of Chile and Paraguay during the fourth session of the workshop.

Implementing ICAO regulations requires a strong national commitment. In Chile, annex 9 was reviewed, regulation by regulation, by all competent authorities, in order to identify the provisions that could be incorporated into the national regulations and the work needing to be carried out on measures that are presently ineffective. The process spanned 4 years, with 16 services involved in harmonizing the regulations, thus demonstrating the complexity of adopting this annex within each country.

Service quality, the resolutions developed by LACAC and ACI in relation to quality control and its management, and the various global and national initiatives for measuring the quality of airport services, are all issues that are closely related to the issue of facilitation.

Lastly, air transport facilitation has always gone hand in hand with operational security concerns. Annex 17 of the Chicago Convention has three principles: the security of operations, maintaining the regularity of operations, and cost effectiveness. The working groups on aviation security (AVSEC) and facilitation (FAL) of ICAO and LACAC were merged in 2011 with the aim of improving the security and facilitation of air transport operations, promoting coordinated work at the international and local levels. The group reconciles the interests that exist between facilitation and security, since there are activities that are common to both AVSEC and FAL, such as automatic baggage handling, API, biometric identification and the processing of cargo with electronic manifests (known as eCargo). Every five years, ICAO, through its Universal Security Audit Programme, assesses airports' compliance with annex 17 and some annex 9 regulations, specifically with regard to the facilitation of machine reading, cargo handling and passports. ICAO also strengthens the exchange of information, experiences, procedures and best practices in aviation security and facilitation, enabling the standardization of security in Latin America.

VI. Challenges to boost connectivity and the standardization of air transport policies in the region⁹

The final discussion on challenges for enhancing the development of air transport in the region emphasized a series of cross-cutting elements that should guide national policies and the contributions of global institutions,

including the United Nations, ICAO and IATA, and their regional bodies such as ECLAC and LACAC.

First, it was stressed that the key link between the development of the air transport sector and the sustainable development goals, especially in the current context of the post-2015 development agenda, could only be established and made visible through a comprehensive overview of the sector's contribution to economic growth and the social and environmental impact of air connectivity. National transport, logistics and mobility policies should therefore be based on the recognition of the role of the transport sector in the different dimensions of the agenda, from the reduction of poverty and inequality to the fight against climate change. In formulating and implementing policies, it is users of airport services, as well as society as a whole, that should be the focus of concern and of the strategies adopted.

The discussion also acknowledged the importance of an integrated and sustainable approach, addressing the quality of infrastructure and logistics, the effective regulation of services, the economic, social and environmental sustainability of the sector, and the facilitation of processes. One particular challenge, albeit not the only one, is the provision and maintenance of high quality infrastructure in order to attain the desired connectivity levels. To achieve this, aviation policies must include a strategy for infrastructure funding and the use of concessions and other types of public-private partnership that may allow the region to bridge its infrastructure gap.

Lastly, attention was drawn to the advances made in regional integration and the integration of air transport in particular. To keep pace with the demand for air transport, there is a need for a regional framework that is harmonized and compatible with global regulations that prioritize operational security, public policies, economic aspects, environmental protection and other related issues. A gradual and incremental opening of the aviation markets is expected, respecting national interests and concerns but progressing towards a common space. In this context, the intervention of organizations such as ECLAC, LACAC, ALTA, IATA and ACI is crucial, as they work with their member States to improve the quality of public policies, facilitate the exchange of best practices, promote the use of common standards and progress towards commitments and concrete actions in regional integration.

⁹ This section is based on the panel discussion during the final session of the workshop, attended by ECLAC, LACAC, IATA and national experts.