



**DIRECTORS GENERAL OF CIVIL AVIATION-MIDDLE EAST REGION
FIFTH MEETING (DGCA-MID/5)**

(Kuwait, 4-6 November 2019)

Agenda Item 8: Economic Development of Air Transport

ICAO'S WORK ON ECONOMIC DEVELOPMENT OF AIR TRANSPORT

(Presented by ICAO Secretariat)

SUMMARY

This paper reports on ICAO's priority work under the Strategic Objective – Economic Development of Air Transport, summarizing the Organization's work related to air transport policy and regulation, as well as infrastructure management and its funding/financing. It also presents ICAO's work related to aviation data and analysis, which focuses on big data, business analysis tools and air traffic forecasts.

1. INTRODUCTION

1.1 The Economic Development of Air Transport is one of the five Strategic Objectives established by ICAO. It aims at fostering a sound and economically-viable civil aviation system that provides the freedom to travel affordably, enhances economic efficiency and transparency, facilitating access to funding for aviation infrastructure development, promoting technology transfer and capacity building to support the growth of air transport for the benefit of all stakeholders.

1.2 As described in the draft ICAO Business Plan for 2020-2022, the ultimate goals of this Strategic Objective are to remove impediments to economic sustainability of air transport and to elevate the priority given to aviation on the issue of funding and financing. States can use aviation as an effective development tool by placing it at the center of the national/regional development framework and international financing for development, resulting in: a) improving air connectivity; b) creating more competitive business opportunities; c) increasing consumer's benefits and choices; and, at the same time, d) reducing financial burden and costs in performing their regulatory oversight functions. The delivery of the results with respect to this Strategic Objective will contribute to the growth and efficiency of the air transport sector and the global economy, as well as the expansion of trade and tourism.

2. DISCUSSION

2.1 AIR TRANSPORT POLICY AND REGULATION

2.1.1 The main achievements made by ICAO in the follow-up work to the Sixth Worldwide Air Transport Conference (ATConf/6, 18-22 March 2013) was reported to the 39th Session of the Assembly held from 27 September to 7 October 2016), which noted the achievements, including the main ones highlighted below, and endorsed the continuing work programme. The follow-up work has been conducted by the Air Transport Regulation Panel (ATRP), which held its Fifteenth Meeting (ATRP/15) in Montréal from 9 to 11 April 2019.

2.1.2 **ICAO's long-term vision for air transport liberalization.** The 40th Session of the ICAO Assembly endorsed a range of items supporting the long-term vision and urged *all Member States to give regards to, and apply, the ICAO long-term vision for international air transport liberalization in policy making and regulatory practices*. In a recent survey conducted by the ICAO Secretariat on liberalization of international air transport to receive feedback from Member States on experiences gained and/or issues encountered in the application of the long-term vision in their regulatory practices, 94% of the respondents confirmed that they applied the ICAO long-term vision in their policy-making and regulatory practices. Eighty-five per cent of the total respondents recognized that they were inspired by the long-term vision.

2.1.3 **Market access, air cargo and air carrier ownership and control.** The 40th Session of the ICAO Assembly requested the Council to:

- a) undertake further work to build a better understanding of the benefits and challenges of liberalization and barriers to opening market access, so that further consideration could be given to the development of a multilateral approach at the appropriate time; and
- b) address the remaining issues of concern to be able to make progress towards a Convention on Foreign Investment in Airlines, which aims to liberalize air carrier ownership and control on a multilateral basis in line with the *ICAO Long-term Vision for International Air Transport Liberalization*.

2.1.4 **Fair competition.** The Secretariat developed and has continued to update the compendium of competition policies and practices in force nationally or regionally. The data now covers 129 States, or 68 per cent of the ICAO membership. The compendium is available at <http://www.icao.int/sustainability/compendium/Pages/default.aspx>.

2.1.5 **Consumer protection.** The Secretariat has continued to monitor the experiences of Member States in the application of the ICAO high-level, core principles on consumer protection in their policy-making and regulatory and operational practices. A database on States' consumer protection rules and regulations has been developed and is available at (<https://www.icao.int/sustainability/Pages/ConsumerProtectionRules.aspx>). Additionally, the Secretariat is currently gathering information on States' and industry's best practices on national emergency plans and airlines/airports contingency plans on assistance to passengers in case of massive airport/airline disruption.

2.2 INFRASTRUCTURE MANAGEMENT

2.2.1 As highlighted in Appendix A, the rapid air traffic growth will continue to place an increased pressure on existing aviation infrastructure. Without an appropriate level of timely investment and the harmonized action by multiple States to modernize and expand aviation infrastructure, the use of aviation as an economic development driver will be severely constrained. ICAO has therefore been working

with Member States on the financing of development of quality aviation infrastructure, especially through the annual ICAO World Aviation Forum (IWAF) — a platform that brings together States' policy makers, development partners, and investment and financial institutions.

2.2.2 ICAO continued its work in developing and updating policies in the area of airport and air navigation services economics, as well as financing and management, through the Airport Economics Panel (AEP) and the Air Navigation Services Economics Panel (ANSEP). The main outcomes of the Seventh Joint Meeting (AEP-ANSEP/7, March 2019) are summarized below.

2.2.3 **Update of ICAO's guidance on airport and air navigation services economics.** The preliminary Fourth Edition of the *Airport Economics Manual* (Doc 9562) is being finalized and has been presented to the 40th Session of the ICAO Assembly as reference material. A comprehensive review of the *Manual on the Air Navigation Services Economics* (Doc 9161) will be carried out by the panels.

2.2.4 **Development of guidance and tools to support investment decisions of financing aviation infrastructure.** A stand-alone guidance material on business case, cost-benefit analysis (CBA), economic impact analysis and cost-effectiveness analysis is at the final stage of development. In addition, a new online CBA application was released for analysing investments for identified aviation infrastructure projects.

2.2.5 **Modernization of Tariffs for Airports and Air Navigation Services (Doc 7100).** Enhancement was made to the online application of Aero Tariffs (<https://data.icao.int/aerotariffs>) which converts the paper-based Doc 7100 into a web tool. The application provides an analytical platform in the formulation and benchmarking of airport and air navigation charging policies.

2.2.6 **Examination of further guidance on cost recovery for the provision of airport and air navigation services.** Working groups were established by the panels to carry out tasks to assess and provide advice on possible cost-recovery mechanisms and/or approaches for providing air navigation services for unmanned aircraft system (UAS) operations, as well as the provision of aeronautical meteorological services.

2.3 AVIATION DATA AND ANALYSIS

2.3.1 **ICAO Statistics Programme.** The business process reengineering was completed to modernize the ICAO Statistics Programme as part of the Enterprise Data Management (EDM) initiative. This modernization aims to harmonize different sources of data at the organizational level, using standard reference tables and taxonomies by creating a holistic repository of cross functional data.

2.3.2 **Joint projects with partners.** To increase its data analysis capacity, ICAO has renewed its Memorandum of Understanding (MoU) with the International Transport Forum (ITF) at the Organization for Economic Co-operation and Development (OECD) and continues to establish agreements with academic and research institutions. Several joint projects are progressing; for example, with the Universal Postal Union (UPU) and the UN Conference on Trade and Development (UNCTAD) focusing on the multimodal relationship between e-commerce, liner shipping and air cargo, and identifying regulatory and other constraints that contribute to the low share of air cargo in the rapidly growing e-commerce market.

2.3.3 **Big data.** The growing velocity and quantity of data and the evolution of new technologies for analyzing such "big data" are transforming aviation data analytics. Since 2016, ICAO has been gradually expanding activities related to big data, namely: a) Market Intelligence Data Transfer (MIDT); b) Automatic Dependent Surveillance-Broadcast (ADS-B); and c) Commodity and Trade (COMTRADE) and e-commerce transactional data (E-com). These three data sets represent an all-encompassing coverage of traffic and operational data at a very high level of granularity and detail.

2.3.4 ICAO single set of long-term traffic forecasts. The long-term traffic forecasts were updated using 2015 baseline. The results indicate that global passenger traffic will grow at +4.3 per cent annually to 2035. Twenty route groups outpace the global growth, including 3 route groups affecting MID States. The fastest growing route group in MID is Central South West Asia - Middle East, which is estimated to grow at around +6.8 per cent annually. Global freight traffic is expected to grow at +3.9 per cent annually over the same time period as passenger forecasts. The Middle East region is expected to grow at around +5.7 per cent annually.

2.3.5 Aviation personnel forecasts. As part of the work undertaken under the Next Generation of Aviation Professionals (NGAP) Programme, licensed aviation personnel forecasts were also developed. Projections revealed that globally 620,000 pilots and 123,000 air traffic controllers will be needed in 2036; consequently 492,000 new pilots and 94,000 new air traffic controllers will have to be trained.

2.3.6 Forecasting application. An advanced traffic forecast application (<https://data.icao.int/trafficforecast>) generates customized traffic and operational forecasts at different levels of granularity (by route, city-pair, airport-pair, etc.). The application also has the ability to forecast the requirements of licensed personnel for each Member State. The Secretariat is currently working with the traffic forecasting groups to develop flight information region (FIR) level forecasts using ADS-B big data.

2.3.7 Aviation Satellite Account. Notwithstanding the socio-economic benefits brought by aviation, its importance to national economy appears not to be fully understood by States and the public due mainly to the acute shortage of reliable economic information related to aviation. While some researches and analyses were made to estimate the contribution of aviation to gross domestic product (GDP) and jobs, there has been no internationally-agreed methodological framework to measure them. Consequently, the credibility, reliability, robustness and accuracy of such estimations are often questioned and challenged.

2.3.8 A methodological framework of Aviation Satellite Account (ASA) can measure the contribution of aviation to national economy in line with the System of National Accounts (SNA) adopted by the United Nations Statistical Commission (UNSC). The term “satellite account” refers to an account that is closely linked to the SNA, but is not bound to employ exactly the same concepts or restricted to data expressed in monetary terms. A satellite account covers a specific industry or sector of particular importance to national economy, and shows elements that are invisible in the national accounts.

2.3.9 Upon formal approval by the ATC, the finalized ASA methodological framework document will be submitted for the official endorsement by the UNSC.

2.4 AIR TRANSPORT FUND

2.4.1 The Air Transport Fund, established in 2014 by ICAO (State letter 2014/32 refers), serves as a mechanism for the collection and use of voluntary contributions from States and other donors to support ICAO’s activities in the air transport field: <http://www.icao.int/sustainability/Pages/TRAF.aspx>

2.4.2 The outstanding projects to be possibly undertaken by ICAO under the voluntary contributions of the Air Transport Fund include the “Air Transport Eliminating Poverty: ICAO’s Essential Services and Connectivity Improvement (ESCI) Scheme”, “iPLAN: Planning for Travel Disruptions”, “Business Aviation: A Productive Booster”, “Air Freight Indices”, and “Targeting Cargo Theft and Delay”.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

- a) support ICAO's work for Economic Development of Air Transport;
- b) encourage States to apply and follow ICAO's policies and guidance in the air transport field in their regulatory practices;
- c) encourage States to provide statistics required by ICAO in a timely manner;
- d) encourage States to use ICAO data, tools and analysis; and
- e) encourage States to actively participate in the ICAO upcoming meetings.

APPENDIX A

1. STATE OF AIR TRANSPORT OF MIDDLE EAST (MID) REGION

1.1 Air carriers of the States in the MID region (15 States to which the ICAO MID Office is accredited) represented 9 per cent of the world passenger traffic measured in revenue passenger-kilometres (RPKs), and recorded an annual +4.0 per cent growth of in 2018. Airlines in the region carried 235 million passengers in 2018 (+1.5%, compared with 2017).

1.2 Ninety-five per cent of the passenger traffic performed (in RPK) by airlines in the MID region is international. International traffic of the region increased by +4.3 per cent in 2018. This growth was supported by growth of Emirates (+4.6%), Qatar Airways (+5.8%) and Saudia Airlines (+10.6%).

1.3 Airlines in the MID region expanded their capacity in available seat-kilometres (ASKs) by +3.9 per cent in 2018. The capacity in ASK increased by +4.2 per cent for international services and decreased by -3.3 per cent for domestic services.

1.4 The passenger load factor remained stable in 2018 (74.2%), reaching 74.0% for international services and 77.5% for domestic services.

1.5 Cargo traffic performed by carriers of MID accounted for 14 per cent of the world freight traffic measured in freight tonne-kilometres (FTKs), and recorded an annual growth of +4.8 per cent in 2018. Over 99 per cent of the air freight traffic performed by MID carriers is international. Carriers of the United Arab Emirates and Qatar represented 89 per cent of the total freight traffic of the region.

1.6 Revenue tonnes-kilometres (RTK) performed by airlines in the MID region represented 10 per cent of the world total RTK, and grew +4.9 per cent in 2018. International RTK of the region grew by +4.5 per cent in 2018. Information on the ranking of States' RTKs for international scheduled air services can be found in the Annual Report of the Council.

2. FORECASTS

2.1 The results of the new ICAO long-term forecast indicate that global passenger traffic will grow at +4.3 per cent annually to 2035. Twenty route groups outpace the global growth, including 3 route groups affecting MID States. The fastest growing route group in MID is Central South West Asia - Middle East, which is estimated to grow at around +6.8 per cent annually. Global freight traffic is expected to grow at +3.9 per cent annually over the same time period as passenger forecasts. The Middle East region is expected to grow at around +5.7 percent annually.

APPENDIX B

1. AIR TRANSPORT MEETINGS

1.1 **ICAO Air Transport Symposium (IATS):** The Fourth ICAO Air Transport Symposium (IATS) was held in Incheon, Republic of Korea from 8 to 10 May 2019 (<https://www.icao.int/Meetings/iats2019/Pages/default.aspx>). The symposium discussed:

- a) promoted the socio-economic benefits of liberalization and the establishment of good regulatory practices and governance;
- b) encouraged States and regions to make use of ICAO's long-term vision for international air transport liberalization in their regulatory practices; and
- c) created more awareness of ICAO's policies and guidance on economic regulation of international air transport.

1.2 IATS/4 also built upon the **ICAO Air Transport Meeting** hosted by the Civil Aviation Authority of Guyana in November 2018, with the theme of promoting connectivity for sustainable air transport development. This meeting adopted the *Declaration on Sustainable Air Transport Development* (<https://www.icao.int/Meetings/AT-DEV2018/Pages/Declaration.aspx>) whereby States were committed to actively pursuing liberalization of international air transport, supporting the growth of air cargo services, and collaborating to improve air connectivity.

1.3 **ICAO World Aviation Forum (IWAF):** The Fifth ICAO World Aviation Forum (IWAF/5) was held at ICAO Headquarters in Montréal, Canada on 23 September 2019, one day prior to the 40th Session of the ICAO Assembly. With the theme of *Innovation in Aviation*, this year's IWAF was a special edition which focused on both technological and regulatory-process innovations, in parallel with the ICAO Innovation Fair which showcased a range of new technologies and ideas that are being applied, or have the potential to be applied, to aviation.

1.4 To make the Forum more interactive and action-oriented, the panel discussion format used at the previous IWAFs was replaced with the new structures including Ministerial Roundtable sessions and a dedicated programme to Ministers and heads of international organizations. The formal review and discussion during the Ministerial Roundtable led to the agreement on the *Outcome Statement*, which is available at: <https://www.icao.int/Meetings/iwaf2019/Pages/Declaration.aspx>.

1.5 **Air Cargo Development Forum:** ICAO held its second Air Cargo Development Forum in Zhengzhou, China from 5 to 7 September 2018. The Forum addressed emerging issues in the development of air cargo such as:

- a) integrating new technologies (e.g., Blockchain, unmanned aircraft systems, and digitization);
- b) addressing the infrastructure investment needs of the air cargo community; and
- c) improving the fragmented and cumbersome air cargo supply chains to increase air connectivity, taking into consideration the need for intermodal development.

1.6 The Forum proposed solutions to these issues, as well as identified regulatory and operational challenges (e.g., restricted capacity) to the growth and full liberalization of air cargo and e-commerce (<https://www.icao.int/Meetings/IACD2018/Documents/Outcome.pdf>).

1.7 **ICAO Air Services Negotiation (ICAN) event:** The Eleventh [ICAN](#) was held in Nairobi, Kenya from 10 to 14 December 2018. The event was attended by delegates from 71 States/territories; 470 formal and informal bilateral meetings were conducted, which led to the signing or initialling 420 agreements and arrangements. As of the end of 2018, a total of 142 States (representing 74 per cent of ICAO membership) have utilized this facility at least once. ICAN2019 will take place in Aqaba, Jordan, from 2 to 6 December 2019, and will be hosted by the Civil Aviation Regulatory Commission.

1.8 **The First ICAO/UNWTO Ministerial Conference on Tourism and Air Transport in Africa:** In recognizing the strong interdependence between air transport and tourism, ICAO and the World Tourism Organization (UNWTO) took actions, including:

- a) identification of opportunities and challenges that foster the development of connectivity and seamless travel in the African continent; and
- b) enhancement of common understanding and responses to business imperatives through strengthening dialogue between the two sectors.

1.9 The conference adopted the *Ministerial Declaration on Air Transport and Tourism Development in Africa* (https://www.icao.int/sustainability/Documents/Declarations%20and%20Statements/Ministerial%20Declaration_Cabo%20Verde_English.pdf) and the *Framework for a Plan of Action for Air Transport and Tourism Development in Africa (2019-2021)* (https://www.icao.int/sustainability/Documents/Declarations%20and%20Statements/ActionPlan_English.pdf)

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