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**Agenda Item 9: Air Transport Matters**

**ICAO'S WORK FOR ECONOMIC DEVELOPMENT OF AIR TRANSPORT**

(Presented by the Secretariat)

**EXECUTIVE 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.

<b>Action:</b>	The action required by the Conference is in paragraph 3.
<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective <i>Economic Development of Air Transport</i> .

**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 centre of their 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 air the 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) are highlighted below. Many of the tasks were undertaken by the Air Transport Regulation Panel (ATRP) under the direction of the Air Transport Committee (ATC), some of which are still continuing.

2.1.2 **ICAO's long-term vision for air transport liberalization.** The Council adopted the long-term vision in June 2015, which has been disseminated to Member States (State letter 2015/54), as an inspirational guide for the pursuit of their liberalization goals. States are encouraged to give regard to, and apply the vision in their policy-making and regulatory practices.

2.1.3 **Market access, air cargo and air carrier ownership and control.** At the Fifteenth Meeting of the Air Transport Regulation Panel (ATRP) held in April 2019, a draft Convention on Foreign Investment in Airlines and a draft international agreement to facilitate further liberalization of air cargo services were presented. Based on the Panel recommendations, the ATC:

- a) endorsed the continuation of the work to finalize the development of the draft Convention on Foreign Investment on Airlines;
- b) decided to cease the work related to the development of an international agreement related to air cargo services; and
- c) tasked the ATRP to build a better understanding of the benefits and challenges of liberalization and barriers to opening market access both in terms of passenger and cargo services, and in particular, to identify what States need to assist them in pursuing liberalization and development of air transport.

2.1.4 **Fair competition.** The Secretariat developed and continuously updated the compendium of competition policies and practices in force nationally or regionally. Now covering 129 States, or 68 per cent of the ICAO membership, this compendium is available at: <http://www.icao.int/sustainability/compendium/Pages/default.aspx>.

2.1.5 **Consumer protection.** A database on States' consumer protection rules and regulations (<https://www.icao.int/sustainability/Pages/ConsumerProtectionRules.aspx>) has been enhanced to include regulatory practices to assist passengers in case of flight disruptions (i.e. flight cancellation, flight delay, and denied boarding due to overbooking). In the matter of responses to, and coordination of, massive airport/airline disruptions, the Secretariat continues to gather information on States' and industry's best practices on national emergency plans and airlines/airports contingency plans.

## 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 constrained. ICAO has therefore been working with Member States on the financing of development of quality aviation infrastructure.

2.2.2 Its work continues 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 will be presented to the 40th Session of the 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.**

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 service.

## 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.

2.3.2 **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.

2.3.3 **ICAO single set of long-term traffic forecasts.** The long-term traffic forecasts were updated using 2015 baseline. **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.

2.3.4 **Forecasting application.** A new 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.

2.3.5 **Aviation Satellite Account.** 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. Upon formal approval by the ATC, the finalized ASA methodological framework document will be submitted for the official endorsement by the UNSC.

## 2.4 **CASE STUDY: DOMINICAN REPUBLIC**

2.4.1 As part of ICAO’s continuing efforts to assist Small Islands Developing States (SIDS) for aviation development, the Secretariat and Dominican Republic conducted a study on the impact of air transport policy changes on the national economy of the Dominican Republic. It seeks to demonstrate more generally the economic benefits realized when States choose to make aviation a priority sector in their national development planning and policies. A meeting was held in April 2019 in Dominican Republic to finalize the case study along with the underlying models that are used to predict the before and after effects of policy initiatives to the State GDP. The detailed case study will be highlighted in the upcoming Assembly and ICAO events in the future.

## 2.5 **AIR TRANSPORT FUND**

2.5.1 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>

2.5.2 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.

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## APPENDIX A

### 1. STATE OF AIR TRANSPORT OF THE NORTH AMERICA, CENTRAL AMERICA AND CARIBBEAN (NACC) STATES<sup>1</sup>

1.1 Air carriers of the States in the NACC region (21 States to which the ICAO NACC Office is accredited) represented 24 per cent of the world passenger traffic measured in revenue passenger-kilometres (RPKs), and recorded an annual +4.6 per cent growth of in 2017. Airlines in the region carried 1 011 million passengers in 2017 (+3.7%, compared with 2016).

1.2 With 1 552 billion RPKs performed in 2017, airlines of the United States accounted for 83 per cent of total passenger traffic performed by airlines in the NACC region. Airlines in Canada and Mexico accounted for 12 per cent and 5 per cent, respectively. These three States in the region recorded a growth of +3.3 per cent, +10.3 per cent, and +16.1 per cent in RPK in 2017, respectively. Several carriers in the region demonstrated double-digit growth in RPKs and contributed to the passenger traffic growth in the region such as Air Canada (+11.5%), Spirit Airlines (+13.3%), and Aeromexico (+17.2%).

1.3 Around 36 per cent of the passenger traffic performed (in RPK) by airlines in the NACC region is international. International traffic of the region increased by +5.8 per cent in 2017. This growth was supported by the double-digit growth of Canada (+12.2 per cent) and Mexico (+22.8 per cent). United States is the largest domestic market in the world with 39 per cent share of the world domestic traffic, and recorded an annual growth of +3.6% in 2017.

1.4 Airlines in the NACC region expanded their capacity in available seat-kilometres (ASKs) by +4.6 per cent in 2017. The capacity in ASK increased by +5.8 per cent for international services and by +3.9 per cent for domestic services.

1.5 The passenger load factor remained stable in 2017 (83.1%), reaching 81.1% for international services and 84.2% for domestic services.

1.6 Cargo traffic performed by carriers of NACC accounted for 20 per cent of the world freight traffic measured in freight tonne-kilometres (FTKs), and recorded an annual growth of +8.9 per cent in 2017, an improvement from the +2.4 per cent increase in 2016. Over 61 per cent of the air freight traffic performed by NACC carriers is international. Carriers of United States represented 91 per cent of the total freight traffic of the region, and registered a growth of +7.6 per cent.

1.7 Revenue tonnes-kilometres (RTK) performed by airlines in the NACC region represented 23 per cent of the world total RTK, and grew +5.6 per cent in 2017. International RTK of the region grew by 7.8 per cent in 2017. Information on the ranking of States' RTKs for international scheduled air services can be found in the Annual Report of the Council.

1.8 Aviation is not only a major engine of economic growth for States, by increasing their tourism and facilitating world trade. Air connectivity is indispensable for tourism in many States in the NACC region, especially Least Developed Countries (LDCs, i.e. Haiti) and Small Island Developing States

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<sup>1</sup> 2018 data will be available at the time of the DCA meeting. The update will be provided separately.

(SIDS, i.e. thirteen Caribbean States). In 2017, aviation supported USD 31 billion in tourist spending across the Caribbean region. This amount would be sufficient to cover public spending on healthcare and education in the entire Caribbean region.

## 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 seven route groups affecting NACC States. The fastest growing route group in NACC is North America – Central South West Asia, which is estimated to grow at around +5.9 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 North America region is expected to grow at around +2.8 percent annually trailing the global estimate by +1.1 percentage point.

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## APPENDIX B

### 1. AIR TRANSPORT MEETINGS

1.1 **ICAO Air Transport Symposium (IATS):** The Fourth 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 (IWF):** As an outcome of the 2018 IWF, a *Declaration to Promote Connectivity through the Development and Sustainability of Air Transport in the Pan-American Region - Vision 2020-2035* was adopted. This Declaration aims to promote investment for the development of civil aviation through the establishment of a framework commitment to collaborating in the sustainable growth of air transport in Pan-American Region for the next 15 years.

1.4 This year's event, in its fifth edition, will be held in at ICAO Headquarters in Montréal, Canada from 22 to 23 September 2019. In addition to advancing the priorities of the aviation sector in global, regional and national agendas in support of the ICAO *No Country Left Behind* (NCLB) initiative, the event with the theme "Innovation in Aviation"—will provide key insights on establishing supporting framework that can incentivize entrepreneurs and "start-ups" for innovation, mobilize resources for research and development (R&D) and the roll-out of new technologies.

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 Jordan, from 2 to 6 December, 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](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](https://www.icao.int/sustainability/Documents/Declarations%20and%20Statements/ActionPlan_English.pdf))