



WORKING PAPER

ASSEMBLY — 40TH SESSION

ECONOMIC COMMISSION

Agenda Item 33: Economics of Airports and Air Navigation Services – Policy

**REPORT ON DEVELOPMENTS REGARDING THE ECONOMIC ASPECTS OF
AIRPORTS AND AIR NAVIGATION SERVICES**

(Presented by the Council of ICAO)

EXECUTIVE SUMMARY

This working paper reports on the work accomplished by ICAO regarding economic aspects of airports and air navigation services, following decisions of the 39th Session of the ICAO Assembly. Efforts were made on developing guidance to address economically non-viable airports, updating and refining existing policies and guidance, providing new guidance and tools to support investment decisions on financing aviation infrastructure, and modernizing the *Tariffs for Airports and Air Navigation Services* (Doc 7100). The paper also presents the future work plan in this field (a part of the economic regulatory framework and technical assistance work programmes), focusing on the continued update and development of relevant policies, guidance and tools, and raising awareness on their implementation by States and services providers.

Action: The Assembly is invited to:

- a) review the work accomplished by ICAO in paragraph 2;
- b) endorse the Organization's work programme as presented in paragraph 3; and
- c) consider the information contained in this paper for the update of Assembly Resolution A39-15, Consolidated statement of continuing ICAO policies in the air transport field.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective — <i>Economic Development of Air Transport</i> .
<i>Financial implications:</i>	The activities referred to in this paper will be undertaken subject to the resources available in the 2020–2022 Regular Programme Budget and/or from extra budgetary contributions, including the Voluntary Air Transport Fund (TRAF).
<i>References:</i>	Doc 10075, <i>Assembly Resolutions in Force</i> (as of 6 October 2016) Doc 10078, <i>Report of the Economic Commission of the 39th Session of the Assembly</i> Doc 9082, <i>ICAO's Policies on Charges for Airports and Air Navigation Services</i> Doc 9161, <i>Manual on Air Navigation Services Economics (Fifth Edition)</i> Doc 9562, <i>Airport Economics Manual (Third Edition)</i> Doc 9562, <i>Airport Economics Manual (provisional Fourth Edition)</i> https://www.icao.int/Meetings/A40/Pages/documentation-reference-documents.aspx A40-WP/17-EC/2, Financing for Quality Aviation Infrastructure Development A40-WP/22-EC/7, Consolidated statement of continuing ICAO policies in the air transport field ICAO Business Plan 2020–2022

1. INTRODUCTION

1.1 The work of the Organization related to economic aspects of airports and air navigation services was carried out pursuant to the relevant decisions of the 39th Session of the Assembly. Focus of the work was on addressing issues related to economically non-viable airports, updating existing policies and guidance, providing new guidance and tools to support investment decisions on financing aviation infrastructure, and modernization of the *Tariffs for Airports and Air Navigation Services* (Doc 7100). In addition, ongoing work is being conducted on examining further guidance on cost recovery for the provision of airport and air navigation services.

2. WORK ACCOMPLISHED BY ICAO

2.1 **Management and operation of economically non-viable airports.** One of the outstanding items since the Conference on the Economics of Airports and Air Navigation Services (CEANS, 2008) is the development of guidance on the management and operation of airports which are not economically viable but are necessary, as part of an integrated transport network, for the safety and security of international air transport, as well as for socio-economic purposes and other national strategic interests in terms of social obligations of providing nationwide connectivity and essential services.

2.2 The economically non-viable airports face some inherent difficulties such as low volume or lack of passenger and/or cargo traffic demand, outdated infrastructure, and the generation of insufficient aeronautical revenues to meet their operational costs. Furthermore, private investors do not express interest in airports with no or very limited commercial opportunities, and therefore limited potential to generate non-aeronautical revenues. Consequently, airport authorities may not be able to ensure the sustainable operations of these airports despite the need to manage the air traffic safely, securely and efficiently.

2.3 One increasingly common solution to overcome these challenges is managing and operating a group of airports within an “airport network” model. The form of airport network has several advantages, including better management of capacity and use of resources throughout the network, reducing operating costs owing to the economies of scale and scope, and easier access of all airports to capital markets. The network approach could involve cross subsidization from profitable to non-profitable airports, and therefore it is important to ensure that the four key principles in *ICAO’s Policies on Charges for Airports and Air Navigation Services* (Doc 9082), namely non-discrimination, cost-relatedness, transparency, and consultation with users, as well as more specific provisions in the policies, are observed.

2.4 To address issues related to airport network and taking into account the concerns on cross-subsidization, specific guidance was developed by the Airport Economics Panel (AEP) with a view to ensure that support to economically non-viable airports, in the context of airport networks, is provided in a manner consistent with the policies in Doc 9082. This guidance is finalized and will be reflected in the Fourth Edition of the *Airport Economics Manual* (Doc 9562), a preliminary version is available as reference material to the Assembly).

2.5 **Update and refinement of ICAO’s policies and guidance.** The 39th Session of the Assembly requested “*the Council to continue to develop ICAO’s policy and guidance material with a view to contributing to increased efficiency and improved cost-effectiveness in the provision and operation of airports and air navigation services, including the foundation for a sound cooperation*

between providers and users” (A39-15, Doc 10075 refers). Following this request, comprehensive update and amendments were made to existing policies and guidance material.

- a) **definitions of “differential” and “modulated” charges.** Clarifications were made to address the confusion of definitions of these terms. The finalized text will be incorporated into all the relevant ICAO documents, including Docs 9082 and 9562;
- b) **update of the Third Edition of Doc 9562.** A full review of the manual was conducted to identify guidance text which may be irrelevant, unclear and/or contradictory, and on the clarification of the definitions of aeronautical and non-aeronautical activities (the preliminary Fourth Edition of Doc 9562 refers); and
- c) considering the changes made to the policies and guidance in Docs 9082 and 9562, the Air Navigation Services Economics Panel (ANSEP), with support from the AEP, was tasked to **update the Fifth Edition of the Air Navigation Services Economics Manual (Doc 9161).**

2.6 **Guidance and tools to support investment decisions of financing aviation infrastructure.** Efforts were made on providing practical guidance and tools to assist States in conducting analysis to support financing airport and air navigation infrastructure. The following additional guidance and tools were developed and can be used by policy-makers, economic planners, aviation stakeholders and financial institutions when considering investment options for aviation infrastructure development:

- a) **guidance material on operational incentives** was developed and will be included in the relevant ICAO document, considering a proposal presented to the Thirteenth ICAO Air Navigation Conference (AN-Conf/13) in regards to listing possible operational incentives during the development of new air traffic management (ATM) concepts;
- b) **guidance material on business case, cost-benefit analysis, economic impact analysis and cost-effectiveness analysis** was at the final stage of development. It aims at providing detailed explanation on how to use and undertake these assessment techniques to evaluate economic and financial analysis of major aviation infrastructure projects. The guidance also takes into account the recommendations made by the Multi-disciplinary Working Group on the Economic Challenges Linked to the Implementation of the Aviation System Block Upgrades (MDWG-ASBU); and
- c) a **new online cost-benefit analysis (CBA) application** was developed for analyzing investments for identified aviation infrastructure projects, based on the work of the MDWG-ASBU (<https://d-iasdex.icao.int/CBA/>). The CBA application allows users to evaluate and benchmark costs and benefits of different investment options for the defined project. Several analyses are included in the application such as net present value (NPV), internal rate of return (IRR) and cost-benefit ratio. Member States will be given access to the CBA application with guidance on using the tool.

2.7 Furthermore, the third and fourth ICAO World Aviation Fora (IWAF) also recommended approach to be taken by States to address challenges in aviation infrastructure financing. Information in this regard is provided in A40-WP/17-EC/2, *Financing for Quality Aviation Infrastructure Development*.

2.8 **Modernization of Tariffs for Airports and Air Navigation Services (Doc 7100).** With the objective of improving ICAO's service by providing Member States a user-friendly and practical tool to analyze airport and air navigation services charges, an *online application of Aero Tariff* was developed to convert the paper-based Doc 7100 into a web tool. The new application provides an analytical platform in the formulation and benchmarking of airport and air navigation charging policies.

2.9 Further enhancements are being made to the application such as the integration of Automatic Dependent Surveillance–Broadcast (ADS–B) data for the calculation of air navigation services charges by Flight Information Region (FIR). States are encouraged to use the Aero Tariff online application and submit electronically modification on charges (<https://data.icao.int/AeroTariffs>).

2.10 **Guidance on cost recovery for the provision of airport and air navigation services.** In light of the rapid increase in the use of the unmanned aircraft system (UAS) and its fast-growing market, an analysis was conducted on possible actions to address the *economic aspects especially regarding the charging for the operations of the UAS*. More in-depth analysis are being made to assess the usage of the UAS and its impact, as well as to examine the variety of possible cost-recovery mechanisms and/or approaches for providing air navigation services to the UAS, on a fair and equitable basis.

2.11 The provision of aeronautical meteorological service for international civil aviation is expected to undergo a transformation over the next decade, consistent with air transport modernization envisioned in the ICAO Global Air Navigation Plan (GANP) and its ASBU methodology. Ongoing work is being carried out together with the Meteorology Panel (METP) on providing advice on *potential mechanism to address an issue on the cost recovery for provision of aeronautical meteorological service* for international civil aviation in a consistent manner with ICAO's key charging principles and in coordination with the World Meteorological Organization (WMO).

3. **FUTURE WORK**

3.1 Considering the ongoing work presented above and as described in the ICAO Business Plan 2020-2022, the focus and priority of future work in the area of economics of airports and air navigation services (a part of the economic regulatory framework and technical assistance work programmes) will be placed on the continued update and development of relevant policies, guidance and tools. The Organization will also focus on raising awareness of ICAO's policies and guidance with emphasis on their implementation by States and services providers under the *No Country Left Behind* (NCLB) initiative. In this regard, the use of online tools will be promoted to States in considering investment decisions on the development and modernization of aviation infrastructure in addition to the work proposed in A40-WP/17-EC/2, *Financing for Quality Aviation Infrastructure Development*.

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