



ASSEMBLY — 36TH SESSION

ECONOMIC COMMISSION

Agenda Item 42: Other air transport issues

DEVELOPMENTS IN THE STATISTICS AND FORECASTING PROGRAMMES

(Presented by the Council of ICAO)

EXECUTIVE SUMMARY

This paper presents a progress report on ICAO's work in the fields of statistics, forecasting, economic planning and air carrier economics. Attention is drawn to continuing progress with the Integrated Statistical Database (ISDB) which has permitted the automation of processes and development of the data warehouse which has resulted in cost savings, effective quality controls, improved timeliness in reporting, and expanded coverage and functionality of the ICAO Statistics Programme.

Long-term forecasts of air traffic to 2025 were produced and medium-term forecasts covering the periods 2005-2007 and 2006-2008 were published as electronic documents. Regional Traffic Forecasting Group (TFG) meetings were held in the Asia/Pacific, Caribbean/South American and African Regions. Forecasting and economic analysis support continued to be provided to the Committee on Aviation Environmental Protection (CAEP).

The Council emphasizes the importance to the Organization of using performance measurement and assessment tools, including the proper alignment of the Organization's resources with the Strategic Objectives. In this context, ICAO's statistical databases, its forecasting capabilities and its resources in economic analysis will be valuable in supporting the development of requirements-driven and results-oriented programmes, services and expertise. ICAO's statistical databases will continue to be aligned, strengthened and harmonized to support implementation of the Strategic Objectives and trends and developments will be monitored on the basis of independent, accurate and up-to-date quantitative information.

Action: The Assembly is invited to:

- a) endorse the future work plan of the Organization in the fields of statistics and forecasting; and
- b) request Contracting States to cooperate with and support ICAO's work in these fields.

<i>Strategic Objectives:</i>	This working paper addresses the means of measuring and monitoring performance and of identifying trends indicating the need for, and impacts of, interventions, particularly in relation to Strategic Objectives A, C and D.
<i>Financial implications:</i>	The activities referred to in this paper will be undertaken according to priority with the resources available in the Budget 2008-2010.
<i>References:</i>	Doc 9848, <i>Assembly Resolutions in Force (as of 8 October 2004)</i> A36-WP/21 — Consolidated statement of continuing ICAO policies in the air transport field.

1. INTRODUCTION

1.1 ICAO's activities in the fields of statistics, forecasting, economic planning and air carrier economics are contained in Appendices B, C, and G of Resolution A35-18: Consolidated statement of continuing ICAO policies in the air transport field. Resolution A35-18 calls on the Council to develop and maintain long-term and medium-term forecasts of future trends and developments in civil aviation and addresses the requirements of the planning of air navigation systems and the assessment of the future environmental impact of civil aviation.

1.2 This paper summarizes key outcomes achieved since the 35th Session of the Assembly in accordance with A35-18, including improvements in efficiency made through automation and staff reductions and generation of additional revenue. In looking ahead, the paper identifies the potential of the Organization's statistical, analytical and forecasting resources to support the performance-based approach.

2. ICAO'S STATISTICAL DATABASES

2.1 The Integrated Statistical Database (ISDB) continued to be developed over the past three years. This major effort by ICAO provides Contracting States as well as the air transport industry at large with up-to-date and reliable worldwide civil aviation statistics. As a result, the Organization has been able to automate some data processing functions and to reduce staffing requirements. At the same time it has been possible to offer States and other clients a web-based interface and standardized reports. Through the cooperation of States and other reporting entities in making timely submissions of their reporting forms, ICAO has been able to make significant improvements in the timeliness and coverage of its reporting of civil aviation activity and trends. Approximately 90 per cent of total world scheduled traffic is now covered and most States and entities are submitting their forms electronically.

2.2 Access to the Aviation Statistics website is free of charge and limited to officials of national administrations of ICAO Contracting States and regional civil aviation organizations. Since the end of 2004, ICAO has offered, to third party users, access to the database subject to payment. ICAO provides air carrier data to the United Nations for its annual and quarterly publications and exercises leadership in the collection and distribution of aviation statistics in order to maintain uniform approaches and to reduce the burden of reporting.

3. TRAFFIC FORECASTING

3.1 Long-term forecasts to the year 2025 were developed in 2007 for scheduled airline passenger and freight traffic for the world and by region of airline registration. Global forecasts of aircraft movements as well as passenger traffic forecasts for major international route groups have also been generated. Medium-term, three-year forecasts are prepared for world scheduled airline passenger traffic only, in total, and by region of registration. The forecasts developed during the current triennium are for the years 2005-2007 and 2006-2008. In addition to traffic forecasts, an outlook, in general and global terms, of airline finances has been developed for each of the forecast periods. These forecasts were published as electronic documents in *Airline Traffic Forecasts and Financial Trends — 2005 to 2007* (Circ 308), and *Airline Traffic Forecasts and Financial Trends — 2006 to 2008* (Circ 312).

3.2 ICAO, in collaboration with the Airports Council International (ACI), convened a Global Air Transport Outlook Conference on 27-30 June 2006, including a half-day workshop on forecasting techniques and statistics which preceded the Conference. These events were organized on a cost-recovery basis and were attended by more than 200 participants.

3.3 The Secretariat continued to provide assistance to the regions in the development of forecasts and other planning parameters required or requested by the respective Planning and Implementation Regional Groups (PIRGs). Three Traffic Forecasting Group (TFG) meetings have been held in the Asia/Pacific, Caribbean/South American and African Regions. The work of these TFGs has been published in electronic form in *Asia/Pacific Area Traffic Forecasts 2006-2020* (Doc 9877), *Caribbean/South American Regional Traffic Forecasts 2004-2015* (Doc 9878), and *African-Indian Ocean Regional Traffic Forecasts 2004-2020* (Doc 9879).

3.4 Forecasting and economic analysis support continued to be provided to the Committee on Aviation Environmental Protection (CAEP), in particular to its Forecast and Economic Analysis Support Group (FESG). During the triennium, this support included participation in the drafting of the methodology to be used by the CAEP/FESG to forecast and model future air traffic levels as well as to provide regular traffic and fleet development updates to CAEP.

4. ECONOMIC ANALYSES AND PLANNING

4.1 In accordance with Appendix C of Resolution A35-18 a financial analysis tool was sent to States to assist in the implementation of CNS/ATM systems. This resource allows users to prepare business cases for improvements to air navigation systems in a standardized format. A regional workshop on the use of this tool was held from 23-to 27 July 2007 in the Asia and Pacific Regional Office in Bangkok, Thailand. In addition a secure website has been developed for the exchange of expertise in this field.

4.2 With reference to A35-18, Appendix G, studies continued to be carried out during the triennium on regional differences in international airline operating economics. This work provides a unique and fundamental source of data which is used by international government and airline organizations as well as by individual States for such essential tasks as evaluation of fare levels, analyses of operating economics and, more generally, the impact of regulatory change. In addition, data from these studies are used to establish factors to prorate the revenue from interline passenger journeys and to calculate the air mail conveyance rate. The Prorate Agency and the Universal Postal Union (UPU) provide financial contributions to ICAO in return for these services.

5. FUTURE WORK

5.1 The Council places considerable importance on Performance Management as an integrated component of the Business Plan and intends that performance indicators and assessment tools will allow monitoring of the progress of tasks as well as performance of the individuals involved in those related tasks. The introduction of performance measurement and assessment tools is of critical importance in assisting ICAO to monitor how well the Organization has performed, including the proper alignment of the Organization's resources with the Strategic Objectives. In this context, ICAO's statistical databases, its forecasting capabilities and its resources in economic analysis will be valuable in supporting the development of requirements-driven and results-oriented programmes, services and expertise.

5.2 Guidelines for employing economic analyses and statistical databases in supporting implementation of this approach in air navigation systems planning are provided in an unedited electronic document — *Manual on Global Performance of the Air Navigation System. Part I — Performance-Based Transition Guidelines* (Doc 9883). The manual emphasizes the need to define supporting metrics such as total cost and total distance flown with agreement required on common definitions for geographical areas, time periods and other categories for which data are collected and published. Doc 9883 deals with the need to establish harmonized methods and facilities for collecting, cleaning, storing, analyzing and disseminating performance data. In addition, a requirement is identified for the collection of data on current and past trends and patterns and the guidelines recognize that, for certain performance objectives, the performance targets are dependent on the traffic/demand forecasts. Doc 9883 envisages that analysts, as well as decision-makers, will benefit from using well-established cause and effect analysis methodologies/models that facilitate the identification of the main drivers impacting the performance of the system.

5.3 The Council will ensure that ICAO's work in its statistics and forecasting programmes also have relevance to other Strategic Objectives. For example, in applying the performance-based approach to all safety related work it is anticipated that there will be an expansion from monitoring compliance with technical standards to include a systems and performance based approach. It is recognized that the means of measuring and monitoring safety performance are critical to the future success of the ever-growing air navigation system.

5.4 The Council recognizes the need to harmonize definitions and to strengthen the quality and relevance of safety-related data maintained by ICAO and to use the Organization's analytical resources to shed light on where interventions will have the greatest impact. The Council intends for these activities to provide safety indicators designed to monitor progress in addressing critical safety risks and to show statistically significant improvement. The aim will be to identify serious, adverse circumstances and to permit timely, corrective actions to be taken. These activities will assist in the further development of performance objectives, definition of new performance objectives and identification of data needs. Accordingly, the Council will continue to seek fruitful ways to employ its resources in its statistics and forecasting programmes to pursue implementation of Strategic Objective A — Safety and, in a similar vein, to Strategic Objective B — Security.

5.5 ICAO's statistics and forecasting programmes also will support implementation of Strategic Objective C — Environmental Protection in the collection, generation, analysis, harmonization, exchange and dissemination of accurate and up-to-date aviation-related environmental data. In addition, they will provide information on trends in civil aviation and on the economic impacts of interventions designed to support environmental protection. In particular, support will be provided to the Forecast and Economic Analysis Support Group (FESG) which is tasked with developing and maintaining databases necessary to provide the framework, perform economic analyses, forecast fleet growth and support other working groups within CAEP.

5.6 The Council will continue to align, strengthen and harmonize its statistical databases to support implementation of the Strategic Objectives and it will monitor trends and developments on the basis of independent, accurate and up-to-date quantitative information. It will carry out work designed to develop a shared and consistent understanding of the future and of the impact of constraints and interventions. Furthermore, the Council will employ these resources to develop better ways to account for uncertainty and risks as these dimensions pertain to the forward-looking, performance based approach.