



WORKING PAPER

TENTH SESSION OF THE STATISTICS DIVISION

Montréal, 23 to 27 November 2009

Agenda Item 1: Civil aviation statistics — ICAO classification and definition

SCOPE OF THE ICAO STATISTICS PROGRAMME AND RELATED ACTIVITIES

(Presented by the Secretariat)

SUMMARY

The purpose of this paper is to provide a description of the ICAO statistics programme and its use for achieving ICAO forecasting and economic analyses activities as developed by the Organization.

Action by the division is in paragraph 5.

1. INTRODUCTION

1.1 The need for complete, comprehensive and reliable aviation statistics is recognized by the Chicago Convention in 1944 and Article 67¹ defines the ICAO mandate to receive, and therefore collect data from each Contracting State. In parallel, Article 54 requires that the Council request, collect, examine and publish information relating to the operation of international air services, while Article 55 stipulates that the Council may conduct research into all aspects of air transport which are of international importance and communicate the results of its research to the Contracting States.

1.2 In addition to these requirements of the Chicago Convention, the ICAO Statistics Programme is addressed in Appendix B of Assembly Resolution A36-15, *Consolidated statement of continuing ICAO policies in the air transport field*. More specifically, the Council is requested to, *inter alia*, examine on a regular basis the statistical data (referring to “statistics on airline operations”) collected by ICAO in order to meet more effectively the needs of the Organization and its Contracting States and to establish the necessary metrics to monitor the performance of the Organization in meeting its Strategic Objectives, notably Safety, Efficiency and Environment.

2. COLLECTION AND DISSEMINATION OF STATISTICS

2.1 Administration and management of the programme

2.1.1 The regular Statistics Programme of ICAO is established and administered by the Council whose authority is required for any modification in the structure and content of the programme.

¹ Each Contracting State undertakes that its international airlines shall, in accordance with requirements laid down by the Council, file with the Council traffic reports, cost statistics and financial statements showing among other things all receipts and the sources thereof.

Usually, modifications to the programme whether additions, deletions or other adjustments, are on a regular basis considered by the Council on the recommendation of its subordinate body, the Air Transport Committee (ATC). The Committee makes its recommendations by taking into account the proposals of its two advisory bodies on statistical matters — the Statistics Division and the Statistics Panel.

2.1.2 All Contracting States are invited to participate in the Statistics Division which is convened to review and make recommendations on the entire Statistics Programme. The Tenth Session of the Statistics Division (STA/10), to be held at ICAO Headquarters in Montréal from 23 to 27 November 2009, will carry out a comprehensive review of the current Statistics Programme in order to provide recommendations to the Council, by taking into account the conclusions of the Fourteenth Meeting of the Statistics Panel (STAP/14) convened in March 2009.

2.1.3 Having noted the level of implementation of STA/9 recommendations, STAP/14 reviewed the Statistics Programme and acknowledged events both within the Organization and in the world at large, necessitating the review of the Organization's data requirements. The adjustments recommended by STAP/14 include improvements in the existing collections, analysis and dissemination of data through active participation of Contracting States, cooperation and coordination with other organizations, the adoption of new ICAO classifications and definitions, as well as new data collections.

2.1.4 The efficient management of the Statistics Programme is enabled by the regular studying of users' needs and the capabilities of each provider, which assists the Council in adjusting this programme as required by changing circumstances. This function involves the timely collection, processing, analysis, estimation, and dissemination of civil aviation data relating to commercial air carriers, airports, air navigation services and civil aircraft on register.

2.2 Contents of the current Statistics Programme

2.2.1 Statistics of **commercial air carriers** (i.e., scheduled airlines and non-scheduled operators) are collected in a number of subject areas, the scope and frequency of which vary according to the size of the operator (in terms of traffic or fleet) and the types of services provided. The following data, collected for commercial air carriers, are available on-line:

Traffic: These statistics are collected in Form A on a monthly or annual basis, according to the size of the carrier, and they provide measures of aircraft activity, passenger, freight and mail traffic, for both scheduled and non-scheduled services of an air carrier. Form A-S, which is similar in content to Form A, collects the total commercial air carrier traffic and capacity data produced by the air carriers of a State. The main purpose of Form A-S is to capture additional operational information for each State, in particular, those related to aircraft kilometres, departures and hours flown. Such data are important when assessing the needs for airspace, airport and air navigation systems and the rate of aircraft accidents.

Fleet and Personnel: Annual data collected in Form D cover the number, capacity and utilization for each type of aircraft in the airline's fleet and expenditures for personnel, by category.

Financial Data: The revenues and expenses of airlines and their assets and liabilities are reported annually in Form EF.

Traffic flow: Two series of traffic flow statistics are collected in respect of the international scheduled services of airlines, i.e., on-flight origin and destination (Form B) on a quarterly basis and traffic by flight stage (Form C) on an annual basis.

2.2.2 For **international airports**, selected by States in accordance with an established formula, monthly traffic statistics are collected in quarterly reports (Form I). Data collected through Form I is restricted to the main international airports of a State, and hence do not cover the over-all airport system of a State. Therefore, a summary traffic data for all the airports in a State are collected in Form I-S. In parallel, airport financial data (revenues, expenses and net capital investments) are reported in Form J.

2.2.3 The financial data relating to **air navigation services** (revenues, expenses and net capital investments) are collected annually in Form K. Corresponding traffic statistics that are the number of flights moving through a flight information region or upper information region (FIR/UIR) are collected in Form L.

2.2.4 In Form H, Contracting States report the number of **civil aircraft on the national register** as of 31 December each year, since 1961.

2.2.5 It is noteworthy that since September 2002, ICAO implemented the Integrated Statistical Database (ISDB) system to more efficiently collect, process and disseminate all the aviation statistics submitted by Contracting States through the ICAO Statistics Programme. As the new database is web-enabled, ICAO Contracting States and regional organizations are able to access the data therein via the Internet, through a standard browser. These data can be purchased by third parties on a request basis.

3. **THE STATISTICS PROGRAMME: THE NECESSARY TOOL FOR ICAO ECONOMIC ANALYSES AND FORECASTING ACTIVITIES**

3.1 **Economic analyses activities**

3.1.1 The Statistics programme provides the traffic exposure data necessary to derive trend level indicators related to Safety, Efficiency and or Environmental Protection, which are required to manage the sustainable development of civil aviation activities. In addition to the safety analysis achieved through cross-linkages with external and internal databases such as the European Co-Ordination Centre for Aviation Incident Reporting Systems (ECCAIRS) database and the ICAO Universal Safety Oversight Audit Program (USOAP) database, statistics also form the basis for any specific economic study, as required. The provision of guidance to States on cost/benefit analysis and business cases for planning and implementation of air navigation systems and related systems, including communication navigation surveillance / air traffic management (CNS/ATM), is a typical example of the kind of use that can be derived from statistics. In conformity with Appendix G of Assembly Resolution A36-15 — *Consolidated statement of continuing ICAO policies in the air transport field*, ICAO economic analyses activities also produce periodical studies on regional differences in international airlines operating economics with a view to assisting States in the assessment of the impact of regulatory change. These studies are also used to support environmental planning, to assess the effectiveness of measures for the implementation of the Strategic Objectives and to support proration of passenger revenues from interline journeys, the later being useful to as it will be used by all International Air Transport Association (IATA) members.

3.2 **Forecasting activities**

3.2.1 Air transport forecasts are needed for most analyses and planning applications related to civil aviation. ICAO's current forecasting activities are governed by Appendix C of Assembly Resolution A36-15 — *Consolidated statement of continuing ICAO policies in the air transport field*. In

conformity with this Resolution and the preceding relevant resolutions, the Secretariat has been developing long-term and medium-term global and regional forecasts of passenger and freight traffic by region of airline registration, as well as passenger traffic forecasts for major route groups and global aircraft movement forecasts. A crucial element in the achievement of any forecasting activities is the availability of the relevant data, and ICAO is uniquely placed in this respect, due to its extensive and comprehensive Statistics Programme. In the context of its forecasting activities, the Secretariat supports the regional traffic forecasting groups (TFGs) in four ICAO regions (Africa and Indian Ocean, Asia/Pacific, Caribbean and South America and Middle East) by providing them regional passenger/freight traffic flows and aircraft movement forecasts and other planning parameters enabling the planning and implementation regional groups (PIRGs) and States to optimize decision-making as envisaged in the Global Air Navigation Plan. On the environmental perspective, an active support is also given to the work of committee on aviation environmental protection (CAEP), in terms of forecasting and economic analysis activities.

3.2.2 A review of ICAO forecasting activities was conducted in 2008 with a view to ensure a better alignment with ICAO Strategic Objectives and to enhance the value of the forecasts to their users. The review led the Secretariat to conclude that there is a need to produce a single set of ICAO forecasts providing a harmonized ICAO vision of the future of civil aviation. A new forecasting scheme based on econometric modeling through a bottom-up approach is now being implemented.

3.2.3 Based on these various outputs, ICAO is able to issue manuals and other guidance material to assist States in their aviation statistics, forecasting and economic planning activities.

4. ASSISTANCE TO CONTRACTING STATES

4.1 Several Statistics Divisions have considered that benefits might be derived from short visits to States by experts in aviation statistics, who would study the local circumstances, determine necessary statistical functions and provide initial guidance to airlines, airports and government personnel in carrying out these functions. Notably it has been recognized that many States need manpower training and short-term expert assistance for the organization and development of their aviation statistics.

4.2 Statistical workshops are conducted by ICAO in the regions of the world and they constitute a continuous, systematic effort to improve the quality of aviation statistics submitted to ICAO. These informal workshops, usually held at the rate of one a year, provide those responsible in administrations, airlines and airports for the preparation of statistics for ICAO, an opportunity to work out solutions to practical problems through pooling of experience and ideas.

4.3 A more recent initiative is a short-term familiarization and training programme called “on-the-job statistical training” which is provided at ICAO Headquarters. Delegates from Brazil, Dominican Republic, Romania and a large number of African States have already used this opportunity which is open to all ICAO Contracting States.

5. ACTION BY THE DIVISION

5.1 The division is invited to note the information contained in this paper