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BRIEF SUMMARY OF AIR TRANSPORT IN EASTERN AFRICA

(Prepared by ICAO)

Part I - Air Transport

Part II - Air Navigation Services

P A R T I

AIR TRANSPORT

1. In much the same way as air transport generally was developed in other remote and isolated areas of the world, regional and local services in East Africa were organized after long-distance air routes through the area had been well established. Imperial Airways flights linked London with the Union of South Africa prior to 1935 with stopping places in Uganda, Kenya, Tanganyika and Mozambique. While this represented great savings in transport time for Europe, the service was not introduced primarily as a measure for the economic development of the region.

2. In Portuguese East Africa, local air services were begun in December 1937 by Divisão de Exploração dos Transportes Aéreos, established by the colonial Government of Mozambique. The main network of regional services was developed by two airline companies set up after the last war: Ethiopian Air Lines in late 1945, following an agreement between the Government of Ethiopia and Trans World Airlines, and East Africa Airways Corporation in 1946, organized jointly by the territorial Governments of Uganda, Kenya, Tanganyika and Zanzibar. These airlines were charged primarily with providing scheduled domestic services but they also engaged in international and charter operations.

3. With the exception of Somalia, where regular internal air service is practically non-existent, air transport in East African territories has experienced varying degrees of growth during the past decade. On the basis of traffic returns received by ICAO, all three airlines referred to above have recorded significant gains in the number of passengers and in the volume of freight and mail carried, as shown in the following:

Divisão de Exploração dos Transportes Aéreos (DETA)

(Total scheduled services)

	<u>Passengers carried</u>	<u>Passenger- kilometres</u>	<u>Freight tonne- kilometres</u>	<u>Mail tonne- kilometres</u>
1952	13,383	10,292,000	155,000	53,000
1960	34,511	27,089,000	447,000	166,000
1962-1960	+ 158%	+ 163%	+ 188%	+ 213%

Ethiopian Air Lines (EAL)

(Total scheduled Services)

	<u>Passengers carried</u>	<u>Passenger- kilometres</u>	<u>Freight tonne- kilometres</u>	<u>Mail tonne- kilometres</u>
1951	36,795*	25,448,000*	1,683,000**	33,000
1960	103,689	104,811,000	3,770,000	501,000
1951-1960	+ 182%	+ 312%	+ 124%	+ 1,418%

* Includes passenger traffic on non-scheduled flights.

** Includes excess baggage.

East African Airways Corporation (EAAC)

(Total scheduled services)

	<u>Passengers carried</u>	<u>Passenger- kilometres</u>	<u>Freight tonne- kilometres</u>	<u>Mail tonne- kilometres</u>
1954	93,427	37,358,000	1,227,000	171,000
1960	149,419	194,466,000*	3,486,000	1,227,000
1954-1960	+ 59%	+ 425%	+ 184%	+ 647%

* Route kilometres of EAAC's international services have increased sharply since 1955.

4. The most notable increase appears to be in the volume of air mail transported. Gains in passenger and cargo traffic have also been considerable both numerically and in percentage figures. But the increases would have little meaning unless they could be shown in relation to the transport requirements, particularly in reference to air transport, of the territories

concerned. One of the difficulties in preparing this report has been the lack of first-hand information concerning these requirements. In some areas, it may not be possible at all to make an objective and proper assessment of the transport needs until sectional difficulties of an economic and political nature are overcome.

5. It is nevertheless generally recognized that to develop a modern exchange economy for East Africa, it is essential to improve facilities for the rapid movement of people and goods and to open up potentially productive areas to local and export markets. Efforts in this direction have been seriously handicapped by physical difficulties in the region, the slowness and the general inadequacy of rail and road facilities, and the very high cost of providing and maintaining such facilities. Given the speed of the aeroplane and its independence of physical and climatic conditions, air transport may be the only means of solving some of the pressing transport problems in East African territories, of developing local and regional traffic and of gaining access to new areas.

6. Ethiopian Air Lines, for example, performs precisely these functions in a country where many areas are inaccessible by road or are poorly served by existing surface transport systems. The airline's international operations to Europe, North and West Africa link Ethiopia's agricultural economy with world markets and form an important source of national revenue. Between 1955* and 1960, cargo carried on EAL's international flights rose from 1,900,000 to a little less than 3,000,000 tonne-kilometres, and air mail, from 100,000 to nearly 500,000 tonne-kilometres, while domestic air cargo averaged about 730,000, and internal air mail, 5,000 tonne-kilometres per annum. Revenue from cargo now accounted for about one-fifth of the airline's total operating receipts. The number of passengers carried on EAL's international routes also increased, from 34,370 in 1955 to 63,040 in 1960, as compared with 40,650 domestic passengers for the latter year.

7. Another example is East African Airways Corporation. It was set up to provide a high frequency network of inter-territorial air services between Kenya, Uganda, Tanganyika and Zanzibar. The surface transport systems in these territories being by now reasonably well organized, EAAC fills the need for a fast, year-round service for passengers and cargo, provides connecting services with surface transport, and opens remote areas to communication and development. Since 1956, EAAC's international routes have been extended to Johannesburg, London, Karachi and Bombay, and traffic on these routes has expanded rapidly. Notwithstanding this, the number of passengers carried on the airline's internal services exceeded that on international services by a ratio of 2 to 1 in 1960 (105,024 as against 44,395). On the other hand, the volume of international air cargo has steadily increased (88,000 to 2,460,000 tonne-kilometres from 1954 to 1960) while cargo traffic between the territories has remained at the yearly figure of a little more than 1,000,000 tonne-kilometres.

8. A large part of EAAC's services are in Tanganyika where deficiency of transport facilities was thought to be the most serious in this area. A recent survey indicated, however, that the main services by land, water and air connect every locality of the territory, and their existing capacity is not being utilized in full.** Most of EAAC's internal services in Tanganyika are in fact operated below capacity; their earnings, constituting less than 10% of the airline's total revenues, do not fully cover actual operating costs.*** Nevertheless, the operation provides a reliable service

* 1955 is the first year for which separate figures for EAL's domestic and international operations are available.

** International Bank for Reconstruction and Development, The Economic Development of Tanganyika: John Hopkins Press (1961). p.272.

*** Ibid., pp.292-293.

to local points and remote places of the territory, and as such, is essential to the economic development of Tanganyika.

9. Whether or not to maintain air services of the kind described is largely a matter of government policy and policy making in this field is usually closely associated with the question of cost. In some areas, balancing transport costs against economic advantage to the community may be a prime factor in planning transport facilities where the demand for transport is highly seasonal due to the predominance of perishable agricultural products. If their delivery to markets is unduly delayed, for example, the consequent loss of supply may result in a curtailment of production. It is in this and other areas of transport demand where the cost to the community of a loss of national product may be greater than the cost of transport that the advantages of the aircraft's speed and its independence of physical conditions may be properly evaluated. In cases where the total amount of traffic to be carried is small, it may be more economical in the long-run to continue paying the high unit cost of air transport than to bear the fixed charges of a road or railway requiring a very much greater volume of traffic to justify its construction.

B I B L I O G R A P H Y

1. East Africa Royal Commission 1953 - 1955 Report
Comd. 9475; HMSO, London (1955).
2. International Bank for Reconstruction and Development,
The Economy of the Trust Territory of Somaliland;
Washington, D.C. (1957).
3. International Bank for Reconstruction and Development,
The Economic Development of Tanganyika; John Hopkins
Press, Baltimore (1961).
4. U.S. Department of Commerce, Business and Defence Services
Administration, World Survey of Civil Aviation -
AFRICA; U.S. Government Printing Office, Washington,
D.C. (1960).
5. William A. Hance, African Economic Development;
Harper & Bros., N.Y. (1958).
6. World Airline Record, 5th Edition; Roadcap & Associates,
Chicago (1955).
7. Institut du Transport Aérien, Some Reflexions on Transport in Africa
(May 1960).

P A R T II

AIR NAVIGATION SERVICES

Introduction

As for other forms of public transport, Air Transport requires the establishment of an extensive coordinated ground organization for safe, regular, and efficient operations. General requirements in this matter are well known and include many facilities, services, and administrative arrangements such as air traffic services, communications networks, meteorological offices which may be provided and operated by Government agencies or other agencies providing and operating them under arrangements with the Government concerned.

It is important that the total system of facilities is carefully planned. Each State should contribute to the system to the extent that the pattern of air routes embraces its territory, and with sufficient coherency with its neighbours, that the total complex of air navigation facilities and services offers an adequate integrated ground support machinery without entailing cost out of proportion to each State's need for air transportation.

In the process of planning such a balanced system the role of ICAO is vital.

Co-ordination of planning the Air Navigation Support Systems of the world has been one of the important functions of ICAO since its inception. In the early days of the Organization, it was recognized that the operational and technical problems inherent in the application of practices and procedures established by the Organization and in the provision of aids to air navigation were not common to all areas of the world. The required studies of these problems were undertaken on the basis of local consultation with States on an individual area basis in preference to treatment on a world wide basis. Accordingly, planning of the necessary facilities and services has for a number of years been done in eight Air Navigation Regions, one of which embraces the African continent and the adjacent Indian Ocean area.

Representatives from all countries concerned, those in the region as well as those having airlines operating through it, have prepared a detailed plan which, while based on the requirements of international air operations, includes many facilities and services which are of direct benefit for domestic air operations in each State, for transportation purposes as well as for other functions.

The development of the provision of the facilities and services in Africa has progressed fairly rapidly. The following table illustrates the present state of affairs; it is derived from the ICAO Regional Plan for Africa and the adjacent Indian Ocean area.

International aérodromes	Air traffic control centres and aerodrome control towers	Search and rescue facili- ties	Com- muni- ca- tions cir- cuits	Non- direc- tional beacons	Meteo- rologi- cal offices	Omni- direc- tional radio ranges	Instrument landing systems
15	Req'd. 18 Impl. 16	R. I. 19 18	R. I. 27 21	R. I. 31 29	R. I. 14 10	R. I. 11 2	R. I. 1 1

The table shows, for some eight States and territories from Ethiopia to Mozambique the degree to which various facilities and services considered specifically necessary for international air operations have been provided. It will be noted, that most of the principal units have been established, such as Air Traffic Control, Meteorological and Search and Rescue Centres. More conventional ground facilities such as ground communications channels and conventional navigation beacons are generally available. Modern navigation aids, involving major capital investment and maintenance cost are slow in coming. Another major factor here is the dearth of skilled personnel. The problems encountered in the provision of the needed services are discussed in some more detail in the following paragraphs.

Problems in the provision of ground services

Personnel recruitment and training

The main problems in the provision and maintenance of ground services for air transport operations in the area arise in connexion with the provision of staff necessary for supervision, operation, and maintenance of facilities and services and with detailed planning, procurement and installation of equipment. These are essentially matters for States individually; however, much might be achieved by international co-operation and co-ordinated efforts particularly in the fields of training of personnel.

One important factor which should be watched closely is whether or not the present resources in terms of personnel, funds, equipment, etc. will continue to be available after further dependent territories become sovereign States. Services in these territories are in large part being maintained and operated by European personnel, many of whom may not remain.

Whilst training programmes are being conducted or are planned, problems encountered or likely to arise relate to difficulties in finding recruits with suitable educational background and to retaining in the services those that are trained eventually, because of the comparatively low salaries offered.

The Air Navigation facilities and services

From the operational point of view it is gratifying to note that as shown above for international operations, progress has been made in the development of a number of aerodromes in the area. Certain States are planning new aerodromes, fully equipped, which are designed to meet the requirements of all new types of aircraft.

In the field of air traffic services, flight information is being provided throughout the area. There is, however, an urgent need to step up the introduction of air traffic control on the air routes on which jet aircraft operate. This operational requirement is generally recognized and the current Regional Plan requires that air traffic control be provided on most of the international air routes traversing the area. Largely because

of lack of qualified personnel and of such other factors as the lack of static free communications and navigational aids, the progress of implementation in this regard is far from satisfactory.

With the increase of jet traffic in the area, the demands on communications services and on their personnel have become more stringent. The aeronautical fixed telecommunication network is the nerve centre for the aeronautical services. Delays in the receipt of messages exchanged over the network have, therefore, an immediate adverse effect on them. Excessive transit times in the exchange of messages continue to be among the more serious deficiencies in the Region. This is due to the slow progress that is being made in converting manual circuits to radioteletype operation while in-station handling at many communications centres still leaves much to be desired.

The efficiency of the ground/air communications services is impaired, particularly in tropical zones, by the high noise grade, and in some centres trained personnel are not available in adequate numbers. There are other shortcomings in the handling of messages, resulting in undesirable delays.

Much effort is still required on the part of States to improve their meteorological facilities with particular emphasis on the network of observations in the upper air. Some States are taking action to increase these observations; but the difficulties currently experienced in preparing accurate upper air and upper wind forecasts stem, to a large extent, from a lack of standard practice in several States. Difficulties in intercepting meteorological broadcasts have their adverse effect on the preparation of weather charts and forecasts.

Meteorological data needed for each air operation is often not received in time and some steps are being taken to improve communications systems for this purpose.

Finally, although the necessary centres have generally been created, several States have not yet established an effective search and rescue organization. Immediate efforts are necessary by States to co-ordinate the use of all the equipment and public services that are available for this purpose and to arrange with neighbouring States for mutual assistance in search and rescue.

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