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East Africa High Commission:
(12) The East African Meteorological
Department

Washington, D.C.
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Mr. Walter S. Rogers
Institute of Current World Affairs
522 Fifth Avenue
New York 36, New York

Dear Mr. Rogers:

The weather forecasting and other routine and special meteorological services are provided throughout the three East African mainland territories and Zanzibar by the East African Meteorological Department. The separate territorial governments have no comprehensive meteorological services of their own. The comparatively short time since meteorological observations of any kind were undertaken in the East African area has made it especially important that statistics of rainfall, temperature and other conditions be rapidly accumulated to provide a better basis for seasonal or cyclical predictions. Public, commercial, and government demands for immediate practical forecasting have further accented in practice these more routine functions, and the difficulty of obtaining suitable staff (prior to the year 1952) prevented the Department from undertaking a number of more specialized projects.

The East African Meteorological Department was one of the then existing services listed to be taken over by the High Commission upon its establishment at the beginning of 1948. At the time of takeover the organization consisted of a central forecast office at Eastleigh Airport, Nairobi, and territorial offices at Dar es Salaam and Entebbe. The meteorological services had been controlled during the war years preceding (1939-1948) by the Air Ministry, and with reassumption of control by the Department extensive negotiations regarding the division of the financial burden among the concerned territorial governments became necessary. Since the takeover the Department has been reorganized, with a staff establishment being gradually filled to nearly authorized strength.

The Director of the Department is administratively responsible to the Administrator to the High Commission. At the head of the Department there are, under the Director, a Scientific Assistant to the Director, and an Assistant Director. The functional subdivisions are General Administration, the library, Climatology, Equipment and Printing, and the Electronics Section. The central Forecast Office at Eastleigh Airport is also included in the list of functional subdivisions located near the Headquarters. Territorial offices are located in Dar es Salaam and Entebbe and are responsible, respectively, for forecasting in Eastern Tanganyika and in the Uganda-lake Victoria area. The territorial offices also are responsible for climatological studies and for the general administration of meteorological services within their areas.

At the end of 1952 the senior staff establishment was practically complete, with a Director, Assistant Director, 7 meteorologists, 13 meteorological assistants, a Librarian and 3 other European staff. African staff was somewhat below establishment (137 instead of 152) but the Asian staff was in excess, with five hirings against the African vacancies (48 against an allotted 43). From 1948, the year of takeover, the European staff had grown from 15 to 25, the combined African and Asian total from 163 to 185. A training school for African Meteorological Observers was opened in 1950 with reported good results, but had to be closed in 1951 because of shortage of instructional staff.

Besides office space and staff housing, the Department has in its charge a large quantity of scientific equipment, for which no centralized store and repair facilities existed as late as the end of 1952. This includes electronic equipment such as radio-sonde, radar wind instruments, and a radar precipitation detector. A Seismograph instrument also is operated. To facilitate rapid dissemination of information a small printing unit is directly owned and operated. Standard lists of equipment are installed at many small outlying temperature and rainfall stations. "First Order" stations have a complete set of facilities including autographic instruments, pilot balloon equipment, and communications equipment or arrangements. "Second Order" stations, staffed by non-Europeans, have equipment adequate for the making of synoptic observation.

The expenses of the East African Meteorological Department were met in 1948-1950 by contributions from the three East African mainland territories, Zanzibar, Egypt, India and Mauritius. In 1948 and 1949 86.7 percent of the contributions (£17,650 of £20,350 each year) came from the four East African territories; in 1950 94.3 percent came from these territories (£45,000 of £47,700). Of the East African contributions each year about 37 percent was from Kenya, 34 percent from Tanganyika, 26 percent from Uganda, and about 3 percent from Zanzibar. Egypt contributed £2,400 (11.8 percent of the total contributions in 1948 and 1949 and 5 percent in 1950), Mauritius £200, and India £100 each year. A contribution by the Ministry of Civil Aviation was mentioned in the 1952 Annual Report, and a grant of £5,500 to cover the costs of a proposed new headquarters building was made.

The Meteorological Department provides a fairly comprehensive range of information and services to government departments, to the Press, and to commercial interests and the general public of the area. Military and Naval units stationed in East Africa, merchant shipping in the Indian Ocean also are regularly served. The organization and partial administration of a net of collecting stations, the preparation and distribution of meteorological bulletins, a certain amount of observations in geismology and terrestrial magnetism also are carried on. Though of lower priority than forecasting and warning services of immediate value, a limited amount of specialized meteorological and geophysical research also is maintained.

The area of East Africa and part of the Indian Ocean comprise the zone, allotted by international agreement, throughout which the Department is responsible for providing forecast services. Through 1952 the forecast responsibility continued to form a major activity of the Department. Three forecast centers were located in or near the respective territorial capitals, a central forecast office at Eastleigh Airport near Nairobi and two subordinate offices at Entebbe and Dar es Salaam. The Entebbe office was enlarged in operation and an additional

European was posted there to provide full services when a jet-aircraft passenger service was routed through Entebbe, and in 1952 throughout the East African area special procedures and equipment were introduced to meet the requirements of increasing numbers of jet aircraft.

Forecasts for the agricultural communities and for the public were usually issued 24 hours in advance, with weekly prognostications in more general terms, the former being disseminated through the daily press and by radio broadcast, the latter reproduced on paper and distributed by mail. Special forecast services have been provided for special purposes, serving such diverse interests as the local automobile association, white hunters, horticulturists, film units, and radio engineers. Routine weather transmissions are provided for shipping in the Indian Ocean with cyclone warnings, and a daily broadcasting service gives weather forecasts daily to ships in the waters off the East African coast.

The Department is building up a body of climatological data by systematic collection from the network of stations, with particular emphasis on rainfall records. Some records lending themselves to presentation in a statistical bulletin are issued by the East African Statistical Department.

Though no organized program of research had been initiated in the years leading up to 1953, several specific items of more immediate interest were investigated. These studies included a series of experiments in the artificial stimulation of rain by means of aircraft and silver iodide or dry ice; an investigation of 1920-1949 records to assess any detectable long term rainfall trends in East Africa (with a summary of the findings published in a report); and an assessment of maximum theoretical rainfall intensity under East African conditions of temperature and humidity for the advice of drainage, mining and irrigation projects. Efforts (beyond the rainfall trend study above) were made to find more reliable criteria for the prediction of seasonal rainfall; a detailed study was made of an unusual cyclone in the area of Lindi in April of 1952; an isohyetal map showing mean annual rainfall and another indicating the areas of mean vapor pressure were prepared during 1952; an investigation of atmospheric condition in relation to the effects which could follow air borne pollution by copper smelting operations was completed and reported upon for the Uganda Government and Kilembe Mines Ltd. in 1952.

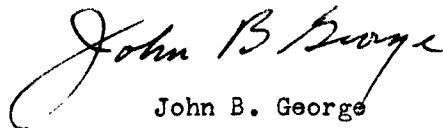
Geophysical investigations included the maintenance of a seismograph, and an ionosphere recorder. During 1952 C. D. & W. funds were allotted to cover the construction of a non magnetic building and purchase geo-magnetic equipment to be installed. The project was reported in hand by the end of the year.

The Department claims active cooperation with international meteorological organizations. The Department Director during 1952 was President of the Regional Association for Africa of the World Meteorological Organization, attending the September 1952 meeting in that capacity. The Director also attended the fifth meeting of the Southern Africa Air Transport Council in Pretoria in January 1952. Earlier meetings and conferences at which the Department was represented included: the African-Indian Ocean Region meeting of the International Civil Aviation Organization in 1949; the African Regional

Scientific Conference in Johannesburg during the same year; the 1950 combined meeting of the International Meteorological Organization and the International Civil Aviation Organization in Paris; the Inter-Territorial Conference on Hydrology and Water Resources in Nairobi, 1950; and the First Congress of the World Meteorological Organization at Paris in 1951. Numerous other conferences and committee meetings were attended.

In addition to the participation in international organizations, continuously close liaison with other weather services is claimed. Liaison with services in the United States, Canada and Australia were particularly mentioned. Close cooperation with territorial government and High Commission departments in East Africa, especially with Posts and Telegraphs and various hydrological and agricultural departments, was also reported.

Sincerely,



John B. George

P.S.

Sources

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