A REMARKABLE AFRICAN MAPPING PROJECT TO BE CARRIED OUT BY FINNS

by K. Eranti [x]

The Department for International Development Co-operation in the Finnish Foreign Office has on October 21th, 1971 made an agreement with a Finnish consultant Finnmap & Soilwater about a surveying and mapping project to be done on the wide Serengeti area in Africa. According to the leader of the project, Mr. Sven Wik, Dipl.Eng., preliminary work has already begun. The purpose is to carry out the aerial photography in January, by which time the preliminary field work should be completed. According to the agreement the work has to be finished in three years.

This is the most extensive consultative mapping work ever undertaken by Finland. The estimate of costs for the whole project is more than $ 600 000. The mapping area is about 45 000 square kilometers. For the project, two Finnish expert engineering firms have formed a company, Finnmap & Soilwater.

Measuring of the basic network

There are five measuring groups, which have already begun their work. The groups use jeeps and sleep in tents. The State of Tanzania is building a basic camp for maintenance, and the work has

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already begun. Radiophones will be used for communication, and small airplanes are needed e.g. in the planning of the triangle network.

Aerial photography and handling of the photographic material

The aerial photography will be done with a Camera WILD RC 8 from an altitude of 12 kilometers. The scale will be approximately 1:65 000. A jet will be used for the photography. A field laboratory for the developing of films and making of contact copies will be built on the area. Other materials needed will be prepared in Finland.

Control Extension

The net of minor control points for the stereo mapping itself will be prepared by using the method of analytical triangulation developed in Finland. The actual measuring will be done with two precision stereocomparators PSK/Zeiss-Oberkochen. The measuring and computing will be performed by The National Board of Survey together with the Institute of Photogrammetry of the Helsinki University of Technology. A UNIVAC 1108 is available for data processing, so no difficulties will arise with the capacity of the computer, although the method of bundle adjustment is used.

Plotting

The type of instrument to be used in the stereo mapping is Autograph WILD A 8. The consultant has seven of these instruments.

Drawing and printing of maps

Maps will be drawn on the scale of 1:50 000 and the printing originals will be made in five colours. The State of Tanzania is responsible for the printing work.

People in charge of the project

Besides the leader of the project mentioned above, the work will keep a considerable number of Finnish experts busy for some time. On the other hand it gives an excellent opportunity to experience the problems of mapping in the developing countries, especially in Africa.

Aim of mapping

The Serengeti area is thinly populated and in many ways interesting. The natural park of Serengeti is for the most part included in the mapping area. Besides the Ngorongoro Crater, Serengeti is one of the best preserved reservations of wild animals in the world. The height of the country on the whole mapping area varies from 1000 to more than 3000 meters. The famous 6000-meter high Mount Kilimanjaro is quite near to the area. There is almost no road network at all. Probably the first aim will be to build roads and railways. These are needed for the development of tourism, for the inventory of natural resources, for the creation of a water supply system, for the advancement of farming and for other purposes typical to development aid. This is the first time that Finland has taken such a large part in development aid in the field of mapping technique, but it is obvious that, if the first attempt is succesful, it will not be the last.