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REPORT ON CARTOGRAPHIC ACTIVITIES IN MALI

Submitted by the Government of Mali

Cartographic activities in Mali since the Second United Nations
Cartographic Conference for Africa can be divided into three categories.

- I. Systematic basic mapping work;
- II. Special work;
- III. Work carried out by the Institut National de Topographie du Mali.

I. BASIC MAPPING WORK

This work, which includes small-scale vertical aerial photographic coverage, the establishment of the horizontal control network (astronomy) and the height control network (precise levelling) and the establishment of maps on the scales of 1:200,000, 1:500,000 and 1:1,000,000 is carried out by the French Institut Géographique National, under co-operation agreements concluded between the French and Malian Governments.

Although the initial programme, which consisted of covering the area of the national territory south of the 16° parallel North with regular maps, and the area north of this parallel with planimetric or topographical base maps, was completed in 1969, a considerable amount of work remains to be done. This includes:

- the gradual conversion of planimetric maps into standard maps;
- the revision of old maps;
- the completion of the very small-scale mapping programme (see IGN index diagram of 1st January 1972).

II. SPECIAL WORK

This category includes:

- work carried out by private enterprises and financed by the Malian Government;
- integrated mapping work.

These may be subdivided as follows:

Aerial work

Photographic coverage:

on the scale of 1:8,000; 771 km²
on the scale of 1:20,000; 170 km²
on the scale of 1:40,000 and 1:50,000; 62,769 km².

Ground work

Geodesy:

The following work has been carried out as part of the survey of the 12th parallel North:

- 809 km of traversing, comprising 58 traverse points, 29 of which are Laplace stations;
- 385 km of precise levelling;
- 80 gravimetric stations.

Direct survey

Scale 1:10,000 : 18,940 km².

Height completion of mosaics

Scale 1:10,000 : 46,905 hectares.

Shop work:

- Plotting of two dam sites;
- Assembly of about 22,447 km² of air photo mosaics on various scales;
- Preparation of half-tone films from the documents produced from direct surveys and completion of air photo mosaics;
- Establishment of maps on the scale of 1:50,000 covering an area of 2,000 km².

The work of plotting and establishing 52 sheets on the scale of 1:50,000 is now in progress; these documents, which show only the planimetry, are based on a TPR supported by the existing astronomical control network.

III. WORK CARRIED OUT BY THE INSTITUT NATIONAL DE TOPOGRAPHIE

Although not yet having the full complement of human and material resources provided for under its reorganization programme, which was described in the Mali paper submitted to the Tunis Conference, the Institut national has broadened the field of its activities appreciably since the 1966 Conference, and the Mali Government has been increasingly concerned with establishing the optimum working conditions for the Institute.

The training of senior and middle-level personnel is proceeding satisfactorily. If the projects falling within the framework of the

Three-Year Economic Recovery Plan are put into effect, the Institute should be in a position to carry out:

- all ground work;
- production of maps;
- photographic reproduction work.

The project relating to transport facilities has been completed and negotiations on the provision of these facilities have reached an advanced stage.

The Institut national de topographie, which at present comprises a central unit in the capital and a topographical unit in each of the five administrative centres of the economic regions of the country, carries out all cadastral and geographical work possible given the equipment at its disposal. Unfortunately, the service has no plotting equipment.

The main activities since the Second Conference can be summarized as follows:

1. Geodesy

- participation in the survey of that portion of the arc 12° North which passes through Mali under the agreements concluded between the Malian and United States' Governments;
- verifying or increasing the density of triangulation networks covering three urban centres, including the capital;
- maintenance and extension of the minor control networks of twelve urban centres, including the capital.

2. Cartographic work

The principal documents established are:

- plans on the scales of 1:5,000 and 1:10,000 covering three towns, including the capital and its environs;
- maps on the scale of 1:500,000 of the administrative regions - three regions have now been covered;
- administrative and road map of Mali on the scale of 1:1,000,000;
- the same map is now in preparation on the scale of 1:500,000.

The Institut national de topographie has also embarked on the survey for the tourist map of Mali, to be published by a foreign firm.

For the towns, the basic documents are either plans drawn from ground surveys or air photo mosaics. Updating is carried out either on the basis of a recent aerial photographic coverage or on the basis of a ground survey.

The final documents are reproduced in blueprint form.

3. Cadastral and town planning work

All cadastral and town planning work is carried out by the Institut national de topographie. The field operations related to the experimental cadastral survey have been completed.

Civil engineering work

Since 1970, the Institut national de topographie has expanded its activities in this sector, in which all major surveys were formerly carried out by foreign enterprises.

The principal operations carried out have been:

- (a) Preliminary survey for three aerodromes,
- (b) Completion of all topographical operations required for the feasibility studies of the Bamako - Segou and Bamako - Bougouni trunk roads (total length: 384 km).

This work was carried out over a period of two years:

- 1971 for the preliminary studies;
- 1972 for the project itself.

- (c) Topographic operations required for the planning of 290 km of tracks for the collection of agricultural projects.

Since this project extends over a number of years, the Institut national de topographie will continue the topographical surveys in its future programmes.
