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CARTOGRAPHIC ACTIVITIES IN UGANDA FOR THE PERIOD 1988-1992

PAPER ON CARTOGRAPHIC ACTIVITIES IN UGANDA FOR THE PERIOD 1989 TO 1992
SUBMITTED BY THE GOVERNMENT OF UGANDA.

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1. INTRODUCTION:

The Department of Surveys and Mapping (formerly the Lands & Surveys Department) was established in about 1900 and developed rapidly into a well staffed department. Currently the Department is a major component of the Ministry of Lands, Housing and Urban Development and is mandated with the task of planning and carrying out all basic survey and mapping activities for the Country. The Department also co-ordinates and supervises all surveying and mapping activities carried out by other public and private institutions in the Country. It is virtually the sole source of basic topographic map data which are disseminated into the various economic sectors, where they serve as a basis for socio-economic planning and landuse studies, irrigation projects, water-resources development, geological exploration, transport and communications planning and management, physical planning and urban infrastructure studies.

Until independence in 1962 and as late as 1970, technical and operational assistance to the Department was provided by the British Directorate of Overseas Surveys (D.O.S), not only for the establishment of the country's basic surveying and mapping control, but also for the preparation, compilation and printing of the country's topographic and special purpose/subject maps. This programme stopped after the 1971 Military Coup. Thereafter, the Department has never received adequate funds to implement its role of providing the survey and mapping

infrastructure for the country. In particular, due to the lack of maintenance and repair, the equipment and infrastructure installed at the survey and mapping headquarters in Entebbe deteriorated, until by 1978, most of it could not be used. The situation was aggravated during 1979 when a large amount of movable equipment was looted from the headquarters building in Entebbe. Many of the Branch Offices located in the Districts and responsible for local cadastral surveys were looted or damaged or run down. Consequently, the Department came grinding to a halt. Since 1980, certain funds have been made available by the Government to maintain the equipment and to meet the operational expenses of the Department. However these fall far short of making the impact required to revive the Department to its original status and capability. As a result, no new mapping activities have been carried out in recent years and the stocks of topographic and thematic maps have not been replenished by re-prints and revisions, and have been rapidly depleted. Many of these maps are now out of date and badly need revision.

2. THE PROBLEM:

As a result of attaining a reasonable amount of rehabilitation in the economic and social infrastructure systems, Uganda has now entered the phase of executing developmental projects. Therefore in addition to making up-to-date maps available to the public and in sufficient quantities, the Department has to satisfy surveying and mapping requirements pertaining to many developmental projects which have sprung up in a relatively short time.

Apart from carrying out cadastral surveys and subsequently issuing the deed plans, the Department is being assisted, under a UNDP project, to make reprints of the 1:50,000 scale topographic map series. Under the same arrangement, map revision of the same map series is also being done using SPOT satellite images as a data source.

As can be seen, the Department has got enough work commitment. What has not been put in place is an arrangement for speeding up the process of map production so as to shorten the period between the initial data

collection in the field or in the photogrammetric machine, and the availability of the resulting map for use by the map users. In this respect, therefore, the Department is working towards the introduction of computer-based surveying and mapping techniques to replace the analogue techniques on which these services have been based for most of the Department's existence.

3. THE SOLUTION:

In a related development, the Department hopes to carry out digital mapping of 1:2,500 scale topographic maps covering the extended boundaries of Kampala City Council. This project is to be funded by the World Bank.

The National Biomass Study Project under the Forestry Department will make available, to the Department, digital data of the 1:50,000 scale topographic sheets covering about three-quarters of the whole country. This will be towards the end of 1993.

The above two projects will result in the creation of a digital data base involving the two basic mapping scales of the Department including a reasonably/trained personnel to sustain it. The Department will have started its journey towards the realisation of fully computerised surveying and mapping processes. What will be required then will be the funds to computerise the field processes and the expansion of the data base.

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4. THE PRESENT STATUS OF THE DEPARTMENT OF SURVEYS AND MAPPING:

The Department had been reduced to a quite poor state in terms of its physical facilities and equipment due to the events of the last twenty years. Consequently it has at present only a very limited capacity to carry out surveying and mapping operations. Because of its vital role in helping to revive the country's economic situation, it has been the subject of various inspections, missions, reports, etc. by the Regional Centre for Services in Surveying, Mapping and Remote Sensing (RCSSMRS) and by various United Nations Agencies, especially the United

Nations Development Programme (UNDP). A UNDP Senior Technical Adviser in Surveying and Mapping issued a detailed report (Guitzwiler, 1988) which proposed a project for the rehabilitation of the Department - at least to a certain extent - and this is currently being implemented.

The buildings of the Department's Headquarters located in Entebbe are quite sound and the photogrammetric instruments are in fair condition. A good number of Cartographic equipment has been replaced and the map reproduction and printing facilities are now operative though partly obsolete. With regard to surveying equipment, the number of instruments available is inadequate, i.e. insufficient in quantity rather than non-existent and there is a grave lack of four-wheel drive vehicles for field work.

The Survey Training School which trains most of the Department's technical staff via a 3 - year technician Diploma course not only lost its accommodation during the period of unrest but was looted clean. It is in particular need of aid and refurbishment, but it would be true to say that the entire Department (which in 1988 still had a staff of approximately 500 persons) needs rehabilitation and strengthening across the whole range of its surveying and mapping activities. The current UNDP project has made a start on this task, but very much more investment and aid will be required to bring the Department to a fully operational level state, including the provision of technical/professional level training abroad to fill the gaps created by the events of the last twenty years.

In 1990 the UNDP appointed a Chief Technical Adviser who began working in the Department and some technicians were sent to Norway for training in the interpretation and use of satellite imagery for mapping. Also some other staff belonging to the Department have benefitted from 8 scholarships as part of the UNDP assistance. 4 of these were at technician level while the other 4 were at the level of postgraduate. Three UNV (United Nations Volunteer) personnel arrived to support the Chief Technical Adviser. One of these was concerned mainly with photogrammetry; the other of the two with Cartography. The third volunteer was to assist the printing section. The Uganda Government

together with the UNDP are refurbishing the buildings in which the main part of the Department is housed in Entebbe.

Thus a start has been made on the rehabilitation of the Department but as noted above, an enormous amount of work still has to be done to complete the task.

5. CONCLUSION:

As you might be aware, up till the 1971 Military Coup, Uganda was probably one of the best situated countries in Africa in respect of its map coverage. Unfortunately the aftermath of the coup, with the nasty events that followed, resulted in an almost total lack of maintenance of Uganda's map series. Very great changes have taken place on the ground during this period yet these/not been recorded on the relevant maps. have/ Thus the problem of map revision is one of the items at the very top of the agenda for Uganda's Department of Surveys and Mapping.