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NATIONAL REPORT

Lesotho

As this is the first report to be presented at such a Conference a brief description of cartographic activities in Lesotho will be given.

Most cartographic work in Lesotho is carried out by the Surveys Division of the Department of Lands, Surveys and Physical Planning in the Ministry of the Interior.

1. GEODESY

A second order triangulation network was established by the British Directorate of Overseas Surveys (DOS) in the early 1950's. In subsequent years, the re-adjustment of this, the breakdown to third order networks where required were all done by DOS. They also established Reference Marks in all the 16 urban areas declared under the Land Act 1979, and are used mainly for cadastral surveys.

In 1979 five Doppler fixes were made by the British 512 Specialist Team Royal Engineers, and they have been found to meet ADOS standards and specifications.

2. PRECISE LEVELLING

A line of precise levelling was observed by DOS during 1977-79. This line runs through the Lowlands from Makhaleng in the South through Mohale's Hoek, Mafeteng, Morija, Maseru, Teyateyaneng, Maputsoe to Ficksburg Bridge in the North. It is connected at both ends to Fundamental Benchmarks in the Republic of South Africa. Adjustment has revealed poor closure and analysis has shown that the closure could be improved if a 42Km section of the line can be re-levelled. This has not been done because of lack of equipment and manpower. Provisional values which meet most requirements are used.

3. AIR PHOTOGRAPHY

All aerial photography in the country is done by foreign agencies.

<u>Scale</u>	<u>Date</u>	<u>Coverage</u>
1/60,000	1975/76	Whole country
1/20,000	1979/80	Lowlands only
1/11,000	1978-85	All 16 Urban areas

#### 4. BASIC TOPOGRAPHIC MAPPING

Most topographic maps in the country have been produced by DOS.

<u>Scale</u>	<u>No. of sheets</u>	<u>Coverage</u>
1/250,000	2 (N & S)	Whole country
1/50,000	60	Whole country
1/20,000	80	Lowlands only
1/500,000	1	Whole country
1/12500	1	Maseru (Capital)
1/5,000 & 1/2,500	Monochrome line maps, covering all urban areas	
1/2,500	Orthophoto maps, covering most urban areas	

#### 5. CADASTRAL SURVEYS

The execution and processing of cadastral surveys have occupied almost the total resources of the Division since the introduction of new Land and associated Survey legislations in 1979 and 1980 respectively. Most applications for conversion of title from the old to the new system result in a requirement for field survey and many newly planned residential and industrial layouts have been dealt with in all parts of the country. Unfortunately the Department's facilities are centralised and it has not yet been possible to open regional offices.

#### 6. TRAINING

There is no institution in the country offering training in any cartographic discipline. Several Basotho have received training to degree or diploma level in Kenya, United Kingdom, Netherlands and Canada.

7. THE MAP PRODUCTION UNIT PROJECT

The Department of Lands, Surveys and Physical Planning, Ministry of Interior, in Maseru, Lesotho and the Swiss Development Cooperation started this year a technical cooperation to establish a Map Production Unit within the new premises of the Department in Maseru.

Three sections are being built up to cover the following main activities:

a) The Photogrammetric Section for

- graphical and digital photogrammetric plotting at all scales
- aerial triangulation
- automatic drawing of large scale maps and map sheet preparation

b) The Photographic and Reproduction Section for

- contrast compensated printing of paper copies and diapositives from aerial photography
- enlargements of aerial photography
- contact copies, enlargements and reductions of line- and photo-maps and their automatic processing

c) The Cartographic section for

- fairdrawing, coatscribing, typesetting and mounting ...

In the beginning the work programme shall focus on the revision of the existing 1/50 000 basemaps and the 1/2500 and 1/5000 maps of urban areas.

For these activities a limited number of staff has already be trained during the past years. Further training will be conducted on the job. Additional staff will have to be employed to build up an adequate structure to cope with all this work.

For archive and public consultancy purposes a photolibrary and a map library are being built up. An easy and quick reference system to available aerial photography and maps is essential to assist customers in making their choice.

Those phases in the mapping process which require special equipment, being not available, will be subcontracted. This would be:

- the flying of aerial photography
- the orthophoto projection and
- the printing

The present status of the project allows for:

- contrast compensated printing of papercopies and diapositives of aerial photography
- small and medium scale graphical photogrammetric plotting
- simple graphical enlargements and reductions of linemaps
- cartographic drawings, typesetting and mounting, the coatscribing is being introduced now.

The evaluation of equipment and installations to acquire will be terminated soon.

In addition to the two experts provided by the Government of Switzerland, provision is made for:

- training abroad and
- making available short term consultants.

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