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UNITED NATIONS  
ECONOMIC COMMISSION FOR AFRICA

REPORT ON A MISSION TO SIERRA LEONE  
(26 October - 20 November 1983)

by

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Addis Ababa

This report is the sole responsibility of the writer. It has been submitted to the Department of Technical Co-operation, United Nations, which may alter or supplement these findings.



## I. Introduction

1. Summary. On arrival in Freetown the Regional Adviser found that pre-census activities were at a standstill awaiting UNFPA's written approval of funding assistance for SIL/83/PO1 (Population Census). The Resident Representative cabled UNFPA New York, however, and 3 days later approval was received but with a reduced budget, i.e. \$690,479 instead of the \$950,594 requested.
2. The census enumeration is scheduled for December 1985 and a government budget has been approved in principle for the current financial year. But the Director of CSO noted that he could not begin census activities, and in particular the recruitment of census personnel, until he had a building allocated by the Office Accommodation Committee as a Census Office.
3. Efforts were made during the mission to locate suitable local cartographic personnel for the Census Office, and an initial cartographic work programme was discussed.
4. The Regional Adviser prepared a request for cartographic equipment, and in consultation with the Director of CSO prepared a vehicle request with full specifications. A request was also made out for the supply of a set of film positives for maps of the rural areas; this should be forwarded to the Directorate of Overseas Surveys (DOS) UK.
5. The mission ended with the Director of CSO, the Deputy Resident Representative and the Regional Adviser meeting the Minister of Development and Economic Planning. The Minister indicated that the Head of State attached great importance to both the planning and execution of the census and noted that initial publicity would be given to the country before May 1984. In reply the delegation pointed out that unfortunately the project was already behind schedule and preparations could not begin in earnest until a Census Office and the census machinery had been set up. To this the Minister stated that he would be calling a full meeting of interested parties in December 1983 after his return from overseas and asked the Director of CSO to prepare an aide-mémoire of the priority issues in the meantime.
6. The Minister was concerned that there was a shortfall of some \$260,000 in the UNFPA budget and was, therefore, worried about the cost of the Land Rovers proposed as project vehicles. The Minister noted that he would make a decision on the vehicles order at the forthcoming meeting.
7. In reply the delegates noted that their concern was that the number of vehicles had been reduced from 10 in the draft request to 6 in the approved UNFPA budget. Although the government budget has provision for two vehicles for supervision purposes, it is clear that a reduction in the availability of transport for the field mapping teams could have a direct bearing on the duration of the field work, and perhaps on the enumeration date.
8. The Director of CSO and the Regional Adviser noted that they thought it may be possible to substitute some project fellowships for more vehicles. The reasoning behind this was that it was proposed to use mainly trained cartographic personnel and to have the Regional Adviser carry out training duties while on mission. Furthermore the UN Data Processing Adviser who is shortly expected for the Strengthening of CSO project (SIL/79/002) could train computer staff.



9. But at a meeting in ECA Addis Ababa with the Chief of the Africa Branch of UNFPA, the Deputy Chief of Statistics Division and the Regional Adviser in Demographic Statistics, this idea was ruled out. It was indicated that training was an important part of UNFPA policy and substitutes of this type should, therefore, not be made.

10. The mission. The mission was undertaken with the concurrence of the Central Statistics Office, Freetown, and may be seen as a follow-up to an initial mission in July 1982 when the prospects for starting preparatory cartographic activities at that time were discussed.

11. The terms of reference of the current mission may be defined as:

- (a) to assist in identifying suitable local cartographic personnel who could be recruited or transferred to the Census Cartographic Unit;
- (b) to advise on an initial census cartographic work programme, i.e. activities that could begin before the arrival of the UNFPA equipment;
- (c) to prepare a request for maps from DCS (Annex II)
- (d) to prepare a request for cartographic equipment (Annex III);
- (e) to set out suggested vehicle specifications (Annex IV).

## II. Consultations

12. During the mission discussions were principally held with the persons whose names are given in Annex I.

## III. Background

13. Enumeration Area Size. The estimated population by the end of 1985 will be about 3.6 million. The proposed average EA size is 1000 persons, which may be higher than ideal, but will help in keeping enumerator costs down. There will be, therefore, about 3,600 EA's and 720 Supervisor's Areas, with the 1974 EA boundaries being adhered to where possible. A pilot census is to be held in December 1984 and the EA situation should become clearer then.

14. Administrative Structure. There are three provinces - Northern, Southern and Eastern - and the Western Area. The Western Area is divided into Greater Freetown and the Western Rural Area. The three provinces are sub-divided into twelve districts and the districts divided into 147 chiefdoms.

15. Recent Demographic Publication. There were 75 urban areas recorded in the 1974 census (localities with more than 2,000 persons). These are listed in a July 1983 publication entitled "The Population of Sierra Leone - An analysis of Population Census Data" by Armand C. Thomas, Acting Director of the Demographic Research and Training Unit at Fourah Bay College, Freetown.



16. Census Commissioner. A Presidential Order giving the census data and appointing a Census Commissioner and Committee has not yet been published, though it is expected this will be done in early 1984. A high-powered personage is needed for the Commissioner's post in order that policy decisions and census needs are attended to as quickly as possible. The Director of CSO noted that he would be acting as Chief Census Officer (Census Administrator).

#### IV. Progress

##### a. Personnel for the Census Cartographic Unit

17. Senior Staff. It was realised during the Regional Adviser's previous mission that it would be ideal if a UN Census Cartographer could be appointed to the project. The Director of CSO pointed out, however, that given the shortage of available funds it was unlikely that UNFPA would be in a position to support a general Census Adviser and a Data Processing expert in addition to a UN Cartographer. And given this situation, the Director noted, he preferred to have a Census Adviser and a Data Processor.

18. The Director proposes to recruit an experienced cartographer on local contact who will in effect supervise the CSO Cartographer and other staff. In addition, the Regional Adviser would be available to backstop the mapping programme.

19. The person in mind for recruitment is the former Chief Cartographer at Surveys and Lands Division (Mr. Moses Pratt). After leaving Surveys in 1972 he supervised field operations for the 1974 census, and from 1975-81 worked on the Ministry of Agriculture/FAO Land Resources Project. He then retired, but has since expressed interest in participating in the next census.

20. The Director of CSO, who worked on the 1974 census, and the Regional Adviser - who has talked to the retired Cartographer on a number of occasions - feel that he will be suitable for the job. In fact nobody else that the Regional Adviser spoke to locally seems to have the same experience plus the required supervisory capabilities. What is certain is that the present CSO Cartographer, although experienced, cannot be relied on to undertake the supervision of this large operation as he does not have the necessary drive and is beset with personal problems.

21. It would obviously be cheaper for the government to transfer a senior person from another department rather than recruit from outside. So these points on the necessity for the recruitment of the retired Cartographer were raised during the meeting with the Minister. After listening to the details the Minister enquired as to whether the retired Cartographer was "still in working order". When he was assured he was the Minister provisionally agreed to the recruitment. The funds of course would be coming from the government census budget.

22. To augment the two senior persons the Director of CSO and the Regional Adviser propose that, initially at least, an experienced person be transferred from another government department to the Census Cartographic Unit for the duration of the project. In addition, one or two junior persons could perhaps be transferred and given on-the-job training. If found suitable they might understudy the CSO Cartographer and be sent for fellowship training overseas, though this may depend on the course timetable and progress in the census project itself. It is important that the unit is built up gradually and extra personnel are absorbed into the work with the minimum of **disruption** to the supervisory staff.



23. An experienced and interested person was located in the Cartographic Section of Land and Water Development Division of the Ministry of Agriculture and Forestry. The section has a Senior Cartographer as well as a Cartographer and some assistants. The Cartographer (Mr. Roland Boye) studied at the Moscow Institute of Engineers and Geodesy, Aerial Surveying and Cartography from 1970-75 on an M.Sc. course. His thesis was entitled "Compilation of the Population Map of West Africa (Population Density and Growth)".

24. As the Land Resources project is closing at the end of the year this may be an opportune time to begin enquiries about a transfer for him. The Director of CSO indicated that he would be taking the matter further with the Director of the Division.

25. Visits were also paid to the Department of Geography and to the Demographic Research and Training Unit at Fourah Bay College. The Senior Cartographer in the Department was now working on his own so could not be considered for transfer, but he noted that his former assistant who left in 1981 to join a meditation group may now be interested in a **contract**. At the Demographic Unit the Acting Head noted that he could recommend the 4th year student who drew the maps for the census analysis book mentioned in para 15.

26. At the Surveys and Lands Division, the Director noted that he could not release any of his experienced staff as Surveys were planning to set up a map revision section next year, but he indicated that one or two of his retired senior cartographic staff may be interested in a contract. It may be difficult, however, to arrange funds for contract purposes from the government budget other than for the retired Cartographer proposed as supervisor for the census Cartographic Unit.

b. Initial Census Cartographic Work Programme

27. In the course of discussions with the Director of CSO it was indicated that it would not be necessary to wait until the UNFPA cartographic equipment and vehicles had arrived before preparatory cartographic activities could begin. There are, in fact, a number of tasks that can be started now, and with the local purchase of some basic stationery items the cost would be very small. But in order to explain the purpose of the first activity, the map inventory, it will be necessary to write a few words about the film positives:

28. Film positives. As mentioned in the summary it is proposed that a film positive of each of the 1:50000 sheets for the rural area maps be obtained from UK. This will enable the Cartographic Unit to print any number of copies required on the existing Blu-Ray plan printing machine, or on the photocopier (see equipment list).

29. The Director of Surveys and Lands has indicated that he would not object to the positives being made when DOS ask for his permission because, he pointed out, he had been informed of the proposal and its purpose by the Regional Adviser. The reason that the request is being put to DOS is that **the negatives of the plates are stored there**. The Director thought in fact that DOS were shortly moving offices and they may want to send the negatives to Sierra Leone for lack of space in UK. For the same reason Surveys and Lands Division would prefer the negatives to remain in the UK. Because the series is now old and out of date it is not planned to print any more copies in UK - hence the request for the film positives, as it will be many years before new maps are available.



30. Having the film positives will mean that Census Office will have not have to rely on Surveys and Lands existing (remnant) stocks of printed maps. It will also save having to draw all the maps, and being on film the positives can be printed onto ammonia paper which has a much larger format than photocopy paper.

31. But it may take some months for the films to arrive, and until they do Census Office will have to buy maps from Surveys and Lands on an Interdepartmental Transfer (IDT). The price, per copy, in 1982 was Le2-00 (US\$0.80c) though it may be more now. Because in these initial stages Census Office will be dependent on Surveys and Lands it is important that an inventory be done at the earliest opportunity.

32. The Map Inventory. Survey and Lands Division does not issue a Map Catalogue, as is customary, but only a 2 page list which is not very informative and is out of date. It is, therefore, necessary to find out exactly what maps are available and in what quantities. The Cartographic Unit also needs to know the dates, the scales and the coverage of the maps.

33. The map inventory was initiated by the Regional Adviser and the CSQ Cartographer during the mission but the Head Storeman at Surveys and Lands provided insufficient information. It is suggested that by first contacting the Director of Surveys and Lands, further efforts be made to obtain the details required, which are as follows:

- (a) Map Inventory, Rural Areas 1:50000 Sheets. The Cartographic Unit needs to know which sheets Surveys and Lands have between 1-10 copies of i.e. the exact number of copies in short supply. Census Office can then purchase them before they go out of stock altogether.
- (b) Map Inventory, Urban Areas 1:2500 and 1:1250 Sheets (Excluding Freetown). The Cartographic Unit needs to know the number of sheets covering each place (about 12 centres) and which sheets Surveys have between 0-10 copies of, i.e. the sheets which are in short supply. The Unit also needs to know the actual sheet numbers available so the sheet limits can be plotted out on the 1:50000 series to see where additional photo information may be required.

For example:

Bo Township - scale 1:2500 - Number of sheets, 15.

Sheet No.      No. of copies available-where between 0-10.

1234	4
1235	✓ (tick if more than 10)
1236	7
1237	Out of stock

and so on.....

- (c) Map Inventory, Freetown. Three scales were produced: 1:2500, 1:6250 and 1:10000. The first two would be used as enumerator's maps and the latter for supervisors. Again, the Cartographic Unit needs to know the number of sheets in each series, and which sheets Surveys have been 0-10 copies of, i.e. the sheets which are in sheet supply. The Cartographic Unit also needs to know the sheet numbers so that the extent of each series can be seen at 1:50000.



34. It should be remembered that no film positives were requested for the urban areas. This was because:

- (a) The Director of Surveys and Lands noted that "some" film positives were already available. Their existence should be checked;
- (b) It was not known how many sheets there are for each place, so no calculation of costs for film positives could be made;
- (c) Urban area maps with their large details are generally simpler to draw for junior staff, though they make take as long to draw as rural maps.
- (d) The urban mapping is printed in only one colour (black) and the format is smaller, which makes them easier to photocopy.

35. The absence of film positives means that:

- (a) Complete sets of prints have to be purchased for use in the field, or;
- (b) One copy of each has to be purchased so that it can be traced for reproduction in the Blu-Ray ammonia printing machine. These can then be used in the field;
- (c) The resulting up-dated maps can either be traced and printed on the Blu Ray, or to minimise drawing, a master print can be amended and printed on the photocopier.

36. Collection of Base Material. A shortage of time precluded the Regional Adviser making visits to other than the offices previously mentioned. It is suggested that the following places be visited where more information may be obtained.

- (a) Ministry of Works. (Mr. Taylor-Lewis). For maps or overlays of new road alignments (e.g. Bo-Kenema). Where there are new roads, villages move to be beside the road, or have to move from their original site due to road construction;
- (b) Geological Surveys (Mr. Squire). For new base maps of Northern Province from DOS (scale not known). There may also be some suitable person available for transfer to Census Cartographic Unit;
- (c) Division of Housing, Town and Country Planning (Mr. Njiaye). For information on Town Planning Areas (present and proposed) and plans of new housing areas;
- (d) Freetown City Council. For information on Freetown ward boundaries, street names and house numbers. (Freetown is fortunate in having a good system of street and house identification);
- (e) Electoral Commission. For village lists, street lists etc. These would have to be updated in the field, but will provide a basis for cross-checking purposes;
- (f) Ministry of Energy and Power, who reportedly have a drawing office;



- (h) Fourah Bay College (Mr. Nelson). A return visit to the Department of Geography. Apparently students have made field maps as part of their course practical work and this should be investigated.

37. Compilation of Base Maps for Rural Areas. The 1:50000 maps date from 1951-61, but more recent air-photography of the whole country was taken by IGN (France) for the Ministry of Agriculture/FAO in 1975-76. The negatives are still in France but the Ministry of Agriculture's Land and Water Development Division have a print of each photograph in their air survey section (called Remote Sensing Section). 1:70000 photography was produced in infra-red and black and white and 1:120000 in black and white only. The 1:70000 infra-red would possibly be the easiest to interpret. New information (i.e. between 1951-61 and 1975-76) should be transferred from the photographs to the maps. This may save time and petrol in the field later on. Air photographs will not show the names of villages but they will show their positions which can be later verified.

38. The Land Resources Officer in the air survey section, or her assistant, could perhaps be asked to assist with the laying out and plotting from the photographs. Villages, roads and tracks can be plotted off the 1:70000 photos onto tracing paper and enlarged to 1:50000 on the Grant Projector in the nearby Cartographic Section. The Cartographer proposed for transfer to Census Office or the retired Cartographer should know how to do this.

39. Short Cut. The former FAO Project Manager (Mr. D. Schwaar) produced four "Roads and Settlements" maps at 1:250000 from the 1:70000 photography. A brief search was made for his original compilation work at 1:70000 but it could not be found. Efforts should be made to locate its whereabouts - if it still exists - as this would save having to do the plotting work from the photographs all over again.

40. Alternatively the final 1:250000 maps can be used, but they may have been generalised with reduction from 1:70000 to 1:250000. An examination of a few sample photographs together with the relevant area of the Settlement Map will tell if it is suitable for enlargement. In densely populated areas in particular, generalisations may have been made and in sparsely populated areas the very small settlements may have been omitted.

41. Compilation of Base Maps for Urban Areas. On the walls of the Air Survey Section there are a series of enlarged single air-photos at 1:12500 of 13 of the main urban areas. They were enlarged from the 1:70000 black and white photography. Only one print exists of each place and again there are no negatives, but the Land Resources Officer agreed that the photographs could be traced for census purposes as long as the work is done in her office. Photographs are available for:

- |              |   |
|--------------|---|
| 1. Yengema   | 8. Rokupr                                 |
| 2. Sefadu    | 9. Magburaka                              |
| 3. Bonthe    | 10. Bo                                    |
| 4. Port Loko | 11. Kenema                                |
| 5. Kabala    | 12. Kambia                                |
| 6. Moyamba   | 13. Lunsar (?) - No identification label. |
| 7. Njala     |   |



42. Each one should be taken off the wall in turn and all the details, particularly buildings, roads and tracks, should be plotted in pencil onto tracing paper. They can later be drawn in ink for use as supervisor's maps. Some of these places are already covered by the 1:2500 and 1:1250 Surveys and Lands township series dating from 1948-74. In these cases the 1:12,500 photos or the tracings should be checked against the older maps, and new details plotted on them by enlarging the 1:12500 tracings (in sections) to 1:2500 or 1:1250 on the Grant Projector.

43. A grid and orientation can be obtained on the 1:12500 tracings by enlarging the relevant parts of the 1:50000 series (or reducing the 1:2500 and 1:1250 maps) to 1:12500 and thereby obtaining the best possible detail fit in the circumstances. Border lines, grid ticks, grid numbers, title boxes and a north point can then be drawn on later in ink.

44. Equipment Required. The items needed for all these preliminary operations, and for their storage, are very simple. The following is suggested for local purchase under the government census budget as it was available in Freetown at the time of the mission. The quantities shown are sufficient for **two** persons. If more staff are utilised the quantities should be increased accordingly.

(a) From: Standard Stationery,  
Lightfoot Boston Street, Freetown

<u>Quantity</u>	<u>Item</u>	<u>Cost</u>
1	Roneo Vickers 4 drawer filing cabinet	Le. 1600
4 rolls	Canson Tracing Paper 1:10x20m at Le.35	Le. 140
2 rolls	Sellotape - 1" at Le.8	Le. 16
2 rolls	Masking tape - 3/4" at Le.12-80	Le. 25.60
6	Velos 900 Dawn 20 Rubbers at 0.60c	Le. 3.60
6	Berol pencils, Grade F at 0.95c	Le. 5.70
6	Berol pencils, Grade 4H at 0.95c	Le. 5.70
2	Staedtler Pencil Sharpeners at Le2.50	Le. 5.00
2	Rulers, plastic, 1 foot at Le.2.00	Le. 4.00
		<u>Le. 1805.60</u>

(b) From: N.K. Eter,  
(Stationers) 9 Howe Street, Freetown.

<u>Quantity</u>	<u>Item</u>	<u>Cost</u>
1	Steel Storage Cupboard (large) with lock and two keys	Le. 1700.00
	Total Cost	Le. 3505.60 (US\$1,402.24)

## V. Conclusion

45. Methodology for the Production of Census Maps. It will be recalled that the first draft of the project request was sent to New York in September 1981 and the date proposed for enumeration was December 1984. This draft was revised and the enumeration date put back to April 1985. Following comments by ECA Statistics Division a third draft was prepared by the Regional Adviser in Demographic Statistics whence the enumeration date was rescheduled for December 1985.



46. It will thus be apparent that although the project has taken two years to be approved the enumeration date has only been put back one year. It is also noticable that with reference to the Census Work Plan in the third draft of May 1983 the project is already some 6 months behind schedule.

47. The methodology advocated, therefore, for the production of the maps - ammonia printing updated transparencies of film positives for the rural areas, and mostly photocopying updated master prints of the urban areas - is seen as a corner-cutting exercise with a minimum amount of drawing work.

48. But it is less than ideal; for example, the map borders will still be based on geographical co-ordinates rather than on the limits of chiefdoms or ward boundaries. In other words, pieces of paper will have to be stuck together where EA's cross sheet limits.

49. But it is a quick method and considering the reduced budget, is cost effective. The other advantage is that the CSO Cartographer and the retired Cartographer are familiar with it, as it is basically the method used in 1974. But it is sincerely hoped that a long-term drawing programme producing chiefdom maps and ward maps, i.e. maps based on the administrative structure, can be started after the census. But for this, further equipment and materials would be required.

50. The Mining Areas. Enumeration problems occurred in the mining areas of Eastern Province in 1974. To ensure this does not happen again, special **attention** will have to be paid to their mapping and field work. It may be necessary, for example, to enlarge the 1:50000 sheets to 1:25000 for Gbense, Tankoro and Kamara Chiefdoms in Kono District, which were recorded as having an average density of 655 persons per square mile (253 per sq.km.) in 1974. But on the other hand the high density may relate to clustering around a few mines themselves rather than to mining villages spread over a wide area. But it may be noted incidentally that the 1974 census analysis recorded that 79% of the population of Sierra Leone live in localities of less than 5000 persons and the 1974 Census Adviser's report indicates that over 17000 localities were recorded during the field work.

51. Census Office. The lack of a Census Office is serious at this late stage, and the availability of a suitable building with parking space for the vehicles may ultimately depend on the shifting of government ministries to the new 9-storey "Friendship" complex built with Chinese assistance. A shortage of furniture, however, has delayed its occupation. But census momentum may not pick up until the census commissioner and committee have been appointed and the UN Census Adviser (for 18 months from October 1984) is in post. It is, therefore, essential that recruitment processes be started as soon as possible.

52. Vehicles. The project vehicles will not only be needed for the census enumeration itself but will be used for preliminary field mapping work covering each locality in the country. After the census they will be used by CSO on the African Household Survey Capability Programme (AHSCP) and other inter-censal surveys. So the vehicles will be expected to last from 7-10 years.



53. There is, therefore, strong justification for purchasing durable 4-wheel drive cross-country vehicles rather than saloon cars. The vehicles should have petrol engines that can be easily maintained by the CSO mechanic and on which running repairs can be made by drivers while in the remote areas. The most suitable body type is the station-wagon with its large carrying capacity for personnel, documents and fuel. It is considered, therefore, that 12-seater Land Rovers complete with United Nations IAPSU preferred options (e.g. extra-fuel tank) would be the most useful vehicles for the purposes.

54. In the draft document of May 1983 the vehicles were requested in two batches: 6 to be received by October 1983 to enable the field work to be started in the dry season, and 4 to be received by June 1984. If the present 6 vehicles are ordered in January 1984 it will be mid-year before they arrive. Thus field work will be starting at the height of the June-September rainy season, so areas in the Northern Province where less rainfall is received may have to be tackled first.

55. For the 1974 census, estimates of population were obtained by dwelling unit counts. It is proposed to use this method again rather than use complete quick-counts or household-listing which would take longer. But even so, it is estimated that if field work is carried out at the same rate as in 1974, then it will take 10 teams about 16 months to complete field mapping. On the same basis the following table may be noted:

Field Mapping and Dwelling Unit Counts

<u>No. of vehicles/ teams required</u>	<u>No. of field assistants employed</u>	<u>Time needed to Complete mapping</u>	<u>Starting date</u>	<u>Finishing date</u>
12	48	13 months	July 1984	July 1985
10	40	16 months	" "	Oct. 1985
8	32	19 months	" "	Jan. 1986
6	24	26 months	" "	Aug. 1986

56. Thus for mapping and dwelling unit counts only, a minimum of 10 teams/vehicles would be required for the work to be completed in time for a December 1985 enumeration. Two supervisors/vehicle would be required in addition for supervision purposes.

57. The full implications of this will be clearer after field work has begun, and a reassessment is made of the situation. The most important thing at the moment is for census preparations to start as soon as possible.



List of Persons with whom Discussions  
Were Held

Government

Hon. Dr. Sheka H. Kanu	-	Minister of Development and Economic Planning
Mr. E.C. Benjamin	-	Director, CSO
Mr. H.K. Max-MacCarthy	-	Deputy Director, CSO
Mr. G.F. Williams	-	Cartographer, CSO
Mr. A.A. George	-	Administration Officer, CSO
Mr. E.A. Redwood-Sawyer	-	Director, Surveys and Lands Division, Ministry of Lands, Mines, Housing and Country Planning (MLMHCP)
Mr. J.B. Cole-Davis	-	Cartographic Superintendent, Surveys and Lands Division, MLMHCP
Mr. Sylvanus Edwin	-	Head Storeman, Surveys and Lands Division, MLMHCP
Mr. M.M. Bangura	-	Senior Cartographer, Land and Water Development Division, Ministry of Agriculture and Forestry (MAF)
Mrs. D. Awuta - Coker	-	Land Resources Officer, Land and Water Development Division, MAF
Mr. C. Gilpin - Macfoy	-	Printing Technician, Land and Water Development Division, MAF
Mr. C. Clarkson-Williams	-	Deputy Government Printer, Government Printing Department (GPD)
Mr. James M. Davies	-	Ag. Superintendent of Press Graphics, GPD

Fourah Bay College, University of Sierra Leone

Prof. Enid Forde	-	Head, Department of Geography
Mr. S.J.A. Nelson	-	Cartographer, Department of Geography
Mr. Armand C. Thomas	-	Ag. Director, Demographic Research and Training Unit

Commercial

Mr. P.J. Warren	-	Director, Newco (Freetown) Ltd.
Mr. Ahmed Labi	-	Divisional Manager, National Motors Ltd.
Mr. V.G. Thomas	-	Technical Manager, National Motors Ltd.
Mr. Hassan Abess	-	Sales Representative, Toyota Motor Co. (Freetown)

Other

Mr. Moses E. Pratt	-	Cartographer (retired)
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UNDP

Mrs. M. Chinery-Hesse	- Resident Representative
Mr. S.B. Rajbhandary	- Deputy Resident Representative
Ms. Jette B. Jensen	- Programme Officer
Mr. R.I. Pobee	- National Programme Officer
Mr. S.K. Gupta	- Economic Statistician (CSO)
Mr. Rameshwar Srivastava	- UNV Statistician (CSO)

UNFPA

Mr. Lamine N'Diaye	- Chief, Africa Branch
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ECA

Mr. K.T. de Graft-Johnson	- Deputy Chief, Statistics Division
Mr. E.A. Colecraft	- Regional Adviser in Demographic Statistics



Sierra Leone - Base Map Order for Population Census Project

(SIL/83/PC1)

To: The Director,  
Directorate of Overseas Surveys, (DOS)  
Kingston Road,  
Tolworth,  
Surrey,  
England, U.K.

Please supply the following film positives:

One - Combined film positive (Transparency), at scale, latest edition, of each sheet, series DOS.419 Sierra Leone 1:50,000 being sheets 1 - 118 inclusive on standard matt - surface film

Estimated cost: Each US \$ 45  
111 Separate sheets = \$4,995  
Plus 25% air freight = \$1,249  
\$6,244

Please Air Freight (As urgently required) To:

UNDP,  
(Project SIL/83/PC1 Population Census)  
Box 1011,  
Freetown,  
Sierra Leone



Sierra Leone-Cartographic Equipment Order for Population CensusProject (SIL/83/POL)

Item No	Item	Quantity	Unit	Specification	Unit Cost US\$	Total Cost US\$	Supplier
1.	Diazo Printing Paper	25	Rolls	Warm Black-Line 2918-1 50 Yards Rolls Size 30" Item 17-1003	17	425	Charrette, 31, Olympia Avenue, Box 4010 Woburn, Massachusetts, USA.
2.	Diazo Printing Paper	5	Rolls	Warm Black-Line 2918-1 50 yards Rolls Size 42" Item 17-1007	24	120	DITTO
3.	Ammonia	4	Cases	26° Baume Ammonia Item 17-4028	24	96	DITTO
4.	Tracing Paper	5	Rolls	916H Charprint 20 Yards Rolls size 30" Item 10-0204	19	95	DITTO
5.	Tracing Paper	1	Roll	916H Charprint 20 Yards Roll size 42" Item 10-0208	23	23	DITTO
	Graph Paper	1	Pkt.	Metric Gridded Media Opaque 15 x 25cm MFG.No.341-M Item No.10-4167	8	8	DITTO
7.	Drawing Tables	2	-	Cambridge Folding Drawing Table Board Size 30" x 42" Colour White Item 18-0198	165	330	DITTO



Item No.	Item	Quantity	Unit	Specification	Unit Cost US\$	Total Cost US\$	Supplier
8	Drawing stools	2	-	Cambridge Adjustable Stool Colour White Item 18-3206	48	96	DITTO
9	Flat Files	2	-	Charrette Premium Flat Files K. 5341 5 Drawer White 53" x 41" x 16" Item 18-1137 With Export Wooden Crated Packaging	547	1094	DITTO
10	Closed Base	1	-	S.5341 Black Item 18-1139	79	79	DITTO
11.	Stainless Straight Edges	1	-	Size 18" x 1 1/2" Item 21-6318	19	19	DITTO
12.	" "	1	-	Size 36" x 2" Item 21-6336	31	31	DITTO
13.	" "	1	-	Size 48" x 2" Item 21-6348	41	41	DITTO
14.	Meter Rule	1	-	Fairgate Meter Rule Aluminium Item 29-1010	8	8	DITTO
15.	Lasico Compensating Planimeter	1	-	Model N-30 Item 31-4242	180	180	DITTO
16.	Industrial Blades (100 per Box)	1	Box	Templar Blades	12	12	DITTO
17.	Scissors	1	-	Charrette Stainless Length 5 1/2" Item 21-2591	8	8	DITTO



Item No.	Item	Quantity	Unit	Specification	Unit Cost US \$	Total Cost US\$	Supplier
18.	Masking Tape	10	Rolls	Charrette 1" Width Item 21-3284	3	30	DITTO
19.	Masking Tape	2	Rolls	3M 202 2" Width Item 21.3217	8	16	DITTO
20.	Magic Mending Tape	5	Rolls	3M 810 72 yards x 1" Width Item 21.3819	6	30	DITTO
21.	Transparent Cellophane Tape	10	Rolls	3M 600 72 Yards x 1" Width Item 21.3606	4	40	DITTO
22.	Stapler	1	-	Faber Castell No. 17 Item 21-2653	14	14	DITTO
23.	Standard Staples	1	Box	Item 21-2607	3	3	DITTO
24.	Clipboards	20	-	Length 15 1/2" Legal size Item 21-2656	2	40	DITTO
25.	Marking pens	20	-	Eberhard Faber Red, Bullet Point Mfg. NO. 336-LF Item 23-2544	2	40	DITTO
26.	Drafting Film	2	Rolls	Charrette <del>Premium</del> Double Matte 0.003" (75 Microns) 30" x 20 Yards Items 11-1251	62	124	DITTO
27.	Drafting Film	1	Roll	Charrette Premium Double Matte 0.003" (75 Microns) 42" x 20 Yards Item 11-1255	86	86	DITTO



Item No.	Item	Quantity	Unit	Specification	Unit Cost US\$	Total Cost US\$	Supplier
28.	Sketch Pads (30 sheets per pad)	6	-	Charrette Sketch Book Size 12" x 18" MFG No. 758 Item 13-0183	5	30	DITTO
29	Mars Lumograph "100" Technical Drawing Pencils (12 per box)	1 4 1 1	Box Boxes Box Box	Grade B Item 23-2085 Grade HB Item 23-2086 Grade H Item 23-2088 Grade 2 H Item 23-2089	7 7 7 7	7 28 7 7	DITTO
30	Coloured Pencils (12 per box)	1	Box	Eagle Prismacolor No 352 Item 26-3352	6	6	DITTO
31.	Triangular Scale	1	-	Premium/ Dense Plastic MFG No. 609 Item 28-2609	7	7	DITTO
32.	Proportional Divider	1	-	Aluminium Item 31-1495	51	51	DITTO
33.	Rubber Bands	2	Boxes	Assorted Item 21-2524	7	14	DITTO
34.	Mapping Pens Nibs	3	Dozen	Hunt Artists Pens 102 Crow Quill Item 24-5745	6	18	DITTO
35.	Mapping Pen Holders	1	Dozen	102 Crow Quill item 24-5785	6	6	DITTO
36.	Pantograph	1	-	Model 1296 Precision Pantograph Item 31-5280	805	805	DITTO



Item No.	Item	Quantity	Unit	Specification	Unit Cost US\$	Total Cost US\$	Supplier
37.	Plan Trimmer	1	-	Model 913 (with Stand)	264	264	Oco-Nederland B.V. Box 101 Venlo, Netherlands
38.	Vertical Plan Filing Cabinet	1	-	AO LETO File With Export Wooden Crated Packaging Code 3002	600	600	Harper & Tunstall, Denington, Wellingborough, Northants, England, U.K.
39.	Plan Filing Strips (100 per pkt.)	10	pkts.	AO Presspahn Code 3103	15	150	DITTO
40.	Diazo Film	6	Rolls	Diazo Ammonia Intermediate Transparency Film 0.003 Code DLS3DM (75 Microns) 30" x 20 Yards Polyester Base	35	210	DITTO
41.	Pocket Pencil Sharpeners (40 per box)	1	Box	Staedtler Noris Art. 511-05-DS	18	18	J.S. Staedtler INC Chatsworth, USA.
42.	Angle Poise Lamps	4	-	Model 90 White, with Table Clamps 220 Volt Supply complete With 60 Watt Bulbs	30	120	Angle-Poise Lighting Ltd., Redditch Worcestershire, England, U.K.
43.	Field Compasses	6	-	No. KB-14/360 With case	20	120	Suunto Co. Ltd., Helsinki, Finland
44.	Paper Weights	6	-	Lead Filled Cat No. 58-0810	5	30	Keuffel and Esser 20, Whippany Road, Morristown, New Jersey, USA.
45.	Rotring Variant Pens Complete	4	sets	Art.No. 110-903 (8 pen sets 0.1-1.2mm)	40	160	Rotring, Reipe-Werke, Box 54-10-60, D-2000, Hamburg 54, Federal Republic of Germany



Item No.	Item	Quantity	Unit	Specification	Unit Cost US\$	Total Cost US\$	Supplier
46	Rotring Variant Nibs Only (5 per box)	2	Boxes	0.2mm Art. 710-020	10	20	DITTO
47	" "	1	Box	0.3mm Art. 710-030	10	10	
48	" "	1	Box	0.4mm Art. 710-040	10	10	
49	" "	1	Box	0.5mm Art. 710-050	10	10	
50	" "	1	Box	0.6mm Art. 710-060	10	10	
51.	" "	1	Box	0.8mm Art. 710-080	10	10	
52.	" "	1	Box	1.2mm Art. 710-120	10	10	
53.	Rotring Varioscript Pens Complete	4	Sets	Art.120-906 (8 pen sets 2-10mm)	40	160	DITTO
54.	Rotring Varioscript Pen Complete (Extra size)	4	-	1.4/1.6mm Art.120-016	4	16	DITTO
55.	Rotring Varioscript Nibs only (5 per box)	2	Boxes	1.4/1.6mm Art.720-016	15	30	DITTO
56.	" "	2	Boxes	2.0/2.5mm Art.720-020	15	30	
57.	" "	1	Box	3.0/3.5mm Art.720-030	15	15	
58.	" "	1	Box	4mm Art.720-040	15	15	
59.	" "	1	Box	5mm Art.720-050	10	10	
60.	" "	1	Box	6mm Art.720-060	10	10	
61.	Rotring Micronorm	4	-	0.18mm Art.150-018	4	16	DITTO
62.	Pens Complete	4	-	1.4mm Art. 150-140	4	16	



Item No.	Item	Quantity	Unit	Specification	Unit Cost US\$	Total Cost US\$	Supplier
63.	Micronorm Pens complete	4	-	2.0mm Art.150-200	4	16	
64.	Rotring Micronorm Nibs only (5 per box)	1	-	0.18mm Art.750-018	15	15	DITTO
65.	" "	1	Box	1.4mm Art.750-140	10	10	
66.	" "	1	Box	2.0mm Art.750-200	10	10	
67.	Rotring Micronorm Stencils Upright	2	-	1.8mm Art.320-018	11	22	DITTO
68.	Rotring Micronorm Stencil Oblique	1	-	1.8mm Art.321-018	11	11	
69.	Rotring Varioscript Stencils Upright	2	-	1.4mm Art.300-014	14	28	DITTO
70.	" "	2	-	1.6mm Art.300-016	14	28	
71.	" "	4	-	2.0mm Art.300-025	14	56	
72.	" "	2	-	2.5mm Art.300-025	10	20	
73.	" "	2	-	3.0mm Art.300-030	10	20	
74.	" "	2	-	3.5mm Art.300-035	10	20	
75.	" "	2	-	4.0mm Art.300-040	10	20	
76.	" "	1	-	5.0mm Art.300-050	11	11	
77.	" "	1	-	6.0mm Art.300-060	11	11	
78.	" "	1	-	7.0mm Art.300-070	12	12	
79.	" "	1	-	8.0mm Art.300-080	16	16	



Item No.	Item	Quantity	Unit	Specification	Unit Cost US\$	Total Cost US\$	Supplier
80.	Varioscript Stencil Upright	1	-	10.0mm Art.300-100	21	21	
81.	Rotring Varioscript Stencils Oblique	1	-	1.4mm	14	14	DITTO
82.	" "	1	-	1.6mm Art.301-016	14	14	
83.	" "	1	-	2.0mm Art.301-020	10	10	
84.	" "	1	-	2.5mm Art.301-025	10	10	
85.	" "	1	-	3mm Art.301-030	10	10	
86.	" "	1	-	4mm Art.301-040	10	10	
87.	" "	1	-	5mm Art.301-050	11	11	
88.	" "	1	-	6mm Art.301-060	11	11	DITTO
89.	" "	1	-	7mm Art.301-070	12	12	
90.	Rotring Single-Ended Pen Holders (10 per box)	4	Boxes	Art.515-201	10	40	DITTO
91.	Rotring Drawing Ink	6	Bottles	Black, Type TT 30ml. Art.595-2179	3	18	DITTO
92.	" "	6	Bottles	Black, Type TT 250ml. Art.595-3179	10	60	DITTO
93.	Rotring Pencil erasers	2	Boxes	B.30 Art.551-130	5	10	DITTO
94.	Rotring Combined Ink/Pencil Erasers	2	Boxes	TE-20 Art.551-320	10	20	DITTO



Item No.	Item	Quantity	Unit	Specification	Unit Cost US\$	Total Cost US\$	Supplier
95.	Rotring Bl-Rasor	4	-	Art.551-100	1	4	DITTO
96.	Rotring Bl-Rasor Refills (Box of 10)	1	Box	Ink Erasers Art.551-105	1	1	DITTO
97.	Rotring Bl-Rasor Refills (Box of 10)	1	Box	Pencil Erasers Art.551-110	1	1	DITTO
98.	Rotring Cleaning Unit	1	-	Art.585-281	10	10	DITTO
99.	Rotring Concentrate (For the above -10 Sachets per box)	4	Boxes	Art.585-270	5	20	DITTO
100.	Rotring Circle Template	1	-	Art.840-629	5	5	DITTO
101.	Rotring Architects Combination Template	1	-	Art.853-779	7	7	DITTO
102.	Rotring Burmester (French) Curves	1	Set	Clear Art.830-530	5	5	DITTO
103.	Rotring Clear Plastic Rulers	10	-	20cm. Art.800-020	1	10	DITTO
104.	" "	1	-	30cm. Art.800-030	1	1	
105.	" "	1	-	40cm. Art.800-040	1	1	
106.	" "	1	-	50cm. Art.800-050	1	1	
107.	Rotring Stencil Guides	2	-	35cm. Art.545-635	10	20	DITTO
108.	" "	1	-	50cm. Art.545-650	15	15	



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Item No.	Item	Quantity	Unit	Specification	Unit Cost US\$	Total Cost US \$	Supplier
109.	Rotring Graphos Set	1	-	Large Art.240-568	30	30	DITTO
110.	Nashua Plain Paper Copier	1	-	Model 1218 220v/50HZ Fitted with Blue Response Drum With Export Wooden Crated Packaging	3500	3500	Nashua Inc., Cory House, The Ring, Bracknell, Berkshire England, UK.
111.	Cabinet	1	-	For Model 1218 With Castors With Export Wooden Crated Packaging	120	120	DITTO
112.	Spare Parts Kit	1	-	For 1218	600	600	DITTO
113.	Start-Up Kit (Sufficient for 35,000 copies)	1	-	For 1218 Consists of 2 Copypacks and 70 Reams (35,000 Sheets) A4 Paper	550	550	DITTO
114.	Cassette	1	-	For 1218 B4 Paper	50	50	DITTO
115.	Plain Bond Paper	1	Carton	B4 Paper 10" x 14"	60	60	DITTO
116.	Spare Blue Response Drum	1	-	For 1218	280	280	DITTO
TOTAL						\$12,032	
Plus 25% Air Freight						<u>3,008</u>	
						\$15,040	



Sierra Leone Suggested Vehicles Order For Population Census Project  
(SIL/83/PO1)

Schedule

Land Rover

Series IIIA

To export specifications for Sierra Leone

Unit Price (per IAPSU bulletin August 1983)

Sterling £5,340 (x1.5) = US \$8,010

Specification

Model 109" Station Wagon

12 Seater

Left Hand Drive

2286cc (21 1/4 litre) Petrol Engine (4 cylinders)

E.1740 7:1 Low Compression Engine

Speedometer in Kilometres complete with trip recorder showing tenths of Kilometre

With spare wheel and basic tool kit

With towing jaw and attachment bracket

Colour: Limestone

Supply with 10% of unit cost, factory recommended spare parts

Options to be supplied with each vehicle

US \$

E.1012	Deletion of spare wheel carrier from rear door	(Allowance) -	\$ 5
E.1072	Rubber pads for clutch and brake pedals		6
E.1085	Front lifting and towing rings		15
E.1116	Bonnet locking device (for deluxe bonnet)		9
E.1161	Fuel filler locking device		6
E.1636	Windscreen with laminated glass		30
E.6579	Cooling system for hot climate		10
E.6671	Deluxe dished bonnet, spare wheel carrier and locking device		30
E.6773	Interior and door mounted mirrors with 'midibrak' hinge		21
E.6893	Steering damper (LHD)		37
E.6914	Safety harness, static, for driver and outside passenger		49



## ANNEX IV

E.1029	Heavy duty lifting jack	\$ 11
E.1145	Export packing lid	44
E.1188	Heavy duty rear springs and front and rear shock absorbers	12
E.6538	Additional 10 Gallon fuel tank with Changeover cock system	354
E.6811A	Fitted with five Michelin XS tyres 7.50 x 16	110
-	Roofrack	100
-	Instruction manual, in English	N/C
Total		\$839

Cost per Vehicle

	US \$
Unit price	8,010
Plus options	839
Plus 10% of unit cost, factory recommended spare parts	801
Delivery to docks and FOB port charges	150
Estimated freight (IAPSU bulletin May 1983)	1,291
Total	\$11,091
Cost for six vehicles	Grand Total \$66,546

From

Land Rover Limited,  
Lode Lane,  
Solihull,  
West Midlands,  
England, U.K.

Attn: Mr. D.P. Crawley  
Direct Sales Manager