

UNITED NATIONS
ECONOMIC COMMISSION FOR AFRICA

REPORT OF A MISSION TO SUDBAN
(18 March - 19 April 1962)

by

Roger Mare
Regional Adviser in Census Cartography
Statistics Division

April 1962
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. The mission was undertaken with the concurrence of the Department of Statistics (Khartoum), and at the request of the Statistics Division (Juba) Southern Region, and follows missions made in November 1930/January 1931, April 1931 and November 1931.
2. The schedule of the mission was:

13 March 1932 - Departed Addis Ababa - Arrived Khartoum
24 March 1932 - Departed Khartoum - Arrived Juba
15 April 1932 - Departed Juba - Arrived Khartoum
19 April 1932 - Departed Khartoum - Arrived Addis Ababa
3. The terms of reference may be defined as:

Khartoum: a) to assess progress made in census cartographic preparations

b) to advise on the delineation of Village Council, Supervisors Area and boundaries

c) to assist in making a cartographic materials order.

Juba: a) to assess progress made by Social Monitoring and Census Cartographic field teams

b) to report on the vehicle situation

c) to begin setting up the Cartographic Unit

II. CONSULTATIONS

4. During the mission discussions and meetings were principally held with the following persons:

Khartoum-Government

- | | | |
|------------------------------------|---|--|
| - Syd. Omer El Tay | - | Director-General, Department of Statistics |
| - Syd. Abdel Mahab Ali Modawi | - | Census Controller, Census Office |
| - Syd. Mohamed Abdalla Mohamed- | - | Cartographer, Census Office |
| - Syd. Abdul Aziz Farah | - | Demographer, Census Office |
| - Syd. Ahmed El Amin El Mousharraf | - | Senior Draughtsman, Census Office |

United Nations

- | | | |
|-----------------------|---|--|
| - Mr. Carth Ap Rees | - | UNDP Resident Representative |
| - Mr. Tom Mc Dermott | - | UNICEF a/i Resident Representative |
| - Mr. Tony Carter | - | UNICEF Social Statistics Adviser |
| - Mr. M.S. Khodary | - | DTCD Consultant on Enumeration of Nomads |
| - Sya. Faisal Mohamed | - | UNFP. National Programme Officer |

Juba Government

- Syd. Arop Yor
- Syd. Isaac Bior Deng
- Mr. Heinrich Tegtmeyer
- Syd. David Nyang Dak
- Syd. Samuel Chang Jwok
- Syd. Samuel Andugga
- Syd. Abdon Akout Pial
- Syd. Anthony Mayango
- Syd. Bathuel Duku
- Syd Nyeko Latukei
- Syd. Ben Oketta
- Syd. Salim Saleh
- Mr. Graham Boyd
- Syd. Andrew Malek Modut
- Commissioner of Census, Southern Region
- Director of Planning, Regional Ministry of Finance and Economic Planning
- Statistics Adviser, (GTZ), Statistics Division
- Assistant Director, Statistics Division
- Head, Census Office
- Field Supervisor/Senior Draftsman, Census Office
- Census Administrator, Census Office
- Administrative Officer, Census Office
- Administrative Asst., Census Office
- Field team member, Census Office
- Field team leader, Social Monitoring team
- Senior Statistical Asst., Statistics Division
- Town Planning Adviser (VSO), Department of Lands and Town Planning
- Lecturer in Public Administration, University of Juba

United Nations

- Mr. Whitney Foster
- Mr. Steve Allen
- Mr. P. Balasubramanian
- Mr. Fred Wessels
- Mr. Balan Kurup
- Syd. Isaac Kenyi
- Mr. Noel Bisamaza
- UNDP Deputy Resident Representative
- UNICEF Programme Officer
- UNICEF Programme Officer
- Regional Planner, Directorate of Planning
- Associate Expert (Statistics), Directorate of Planning
- UNDP Administrative Officer
- Associate Expert (Public Administration), Regional Ministry of Administration, Police and Prisons.

ECA

- Mr. K.V. Ramachandran
- Regional Adviser, Population Division

III. BACKGROUND

Census Enumeration

5. The official date for the census is still November 1982. However, the Census Controller (Tartoun) noted that the North would not be prepared by then, and the South had previously requested an early 1983 enumeration in preference to November due to rain and inaccessibility at the end of the year.

6. The Census Controller thought that the North may be able to keep to a February 1983 enumeration, but only if government gave the census higher priority and constant supplies of petrol, diesel and sufficient vehicles (field staff is apparently not a problem). But if an early 1983 enumeration were attempted, it was pointed out that:
- a) Field map updating in Northern Darfur, North Kordofan and Red Sea Province would be rudimentary, i.e. field work would be done entirely by Provincial Statistical Office staff, and the field maps would not be returned to Khartoum for final drawing (and coding) until after the enumeration
 - b) In the other provinces of the North: Village Council, Supervisors Areas and EA's would be delineated in the field by the Supervisors and Provincial Statistical Officers immediately prior to the enumeration
 - c) There would be no time for urban housing unit numbering
 - d) Work has not been started in any of the urban areas other than Khartoum.
 - e) There would be little time for publicity and training, and preparations would be rushed and prone to error
7. The Commissioner for Census (Southern Region) noted that a November 1982 enumeration in the South was out of the question, and that it was extremely unlikely that the South would be ready by early 1983. Some reasons include:
- a) The six UNFPA vehicles have not arrived
 - b) Petrol and diesel supplies are irregular/non-existent
 - c) Not one of the 6 Southern Provinces has been completely field mapped and the rainy season (April/December) has started
 - d) Urban areas have not been defined or field mapped
 - e) Census Office (Juba) and the Provincial Census Offices are not operational due to lack of funds
 - f) The Cartographic Unit is not operational due to lack of supervisory staff and non-arrival of some UNFPA equipment
8. The Commissioner of Census has had a meeting with the Minister of Administration, Police and Prisons (Chairman of the Ministerial Census Committee) and other members of the Committee, and has written a report to the Minister of Finance and Economic Planning (Khartoum) which details the critical situation in the South. He noted that he would be in Khartoum at the end of April 1982 for discussions on the subsequent course of action.

Reprogramming of UNFPA Input

9. This was carried out in January 1982 by Z. Rajakovic (Technical Adviser, UNDO, New York) and Mr. Abou - Natar (UNFPA New York) during a mission to Khartoum, with decisions being made at the national level.
10. It would have been useful if ECA had been involved in the reprogramming as ECA is backstopping the project due to the absence of UN International staff.
11. The revised UNFPA input for SUD/79/PO1 is given as:

1982	-	\$750,127
1983	-	\$ 54,237
1984	-	\$ 53,530

This gives a total of \$857,894 as against the \$1,700,650 indicated in the revised project document of 1 November 1979, (a cut of 49%).

12. Some items resulting from the reprogramming mission include:

- a) A UN Census Cartographer is to be appointed for 3 months (later increased to 12) but his date of arrival is not known. He is urgently required. It is suggested that considering the lack of progress and trained manpower in the South, it may be better if the expert were seconded to the UNDP sub-office in Juba for the greater part of his appointment. (Alternatively, a Volunteer or Associate Expert could be recruited for Juba).

Note: A USAID Consultant in Census Cartography (Marvin Gordon) is apparently arriving early May 1982 for a 2 month mission. Copies of the Regional Adviser's mission reports are being sent to USAID Khartoum for the consultant.

- b) A DPCD Consultant on the Enumeration of Nomads (M.S. Thodary) undertook a one month mission in March/April 1982 and a report was prepared. The Consultant noted that he proposed to return to Sudan in October 1982. As the supervisor's and enumerator's manuals for the settled population are now being prepared a separate manual for the enumeration of nomads would be required.
- c) Under line 13.01 (Administrative Support Personnel) a locally recruited bi-lingual secretary is to be appointed for 3 years to the Census Office (Khartoum). One of her main duties will be to type English texts.

- (d) A 3 week study tour to a country of the region having similar conditions and problems in census cartography is to be undertaken by the Cartographer. He noted that in particular he wanted to see how post census mapping is carried out (e.g. final report population distribution maps).
- (e) The remaining cartographic fellowships (2 of four months each) have been deleted from the budget although the Southern Region candidate (the Fields Supervisor) has not received his training. This is most serious considering the lack of trained manpower in the South. It is recommended that the question of fellowships be reconsidered at a later stage.

Note: The Senior Draughtsman (Khartoum) received training in census/survey cartography under a Special Purpose Programme at ISPC, Washington D.C., from 1 September/31 December 1981.

- (f) Expendable Equipment has been cut from £75,000 to £28,500 in 1982.
- (g) Line 51 operation and Maintenance of Equipment has been reduced from a total of £262,400 to £119,000. The £99,000 allocated for 1982 includes £37,000 for maintenance of 36 Land Rovers and 2 Mini-buses. £52,000 has been allocated for the purchase of fuel from Kenya for the South (£10,000 has already been released). However, £52,000 will only buy about 300 barrels, and with 6-10 vehicles doing field work may only last 7-8 months, i.e. about the time it will take to complete the field work. This would leave nothing for the enumeration period when fuel dumps need to be organised at the Provincial Census Offices. Arrangements should be made to ensure that this shortfall is covered at a later stage.

IV. PROGRESS

a) Khartoum: Census Cartographic Preparations

- 13. The remaining 7 (diesel) Land Rovers for the North have not arrived in Khartoum (Purchase Order 32-200010 dated 17 November 1981) thus the Census Office still has insufficient vehicles. Fuel shortages and acute distribution problems also affect the work rate owing to the lack of a petrol tanker, departmental truck or trailers.
- 14. However, in spite of difficulties, the situation regarding the field work in the rural settled areas is better than before:

<u>Provinces Completed</u>		<u>In Progress</u>	<u>Not Started</u>
Nile	Gezira	Southern Darfur	Northern Darfur
Northern	Blue Nile		North Kordofan
Kassala	White Nile		Red Sea
Khartoum			Re
Rural			

b) Khartoum: The Plotting of Village Council, Supervisors Area and EA Boundaries

15. In the rural settled areas the field teams are obtaining village population estimates from local functionaries. Area (District) Council boundaries and People's Rural Council boundaries (where known) are plotted on the 1:250,000 2x enlargements (1:100,000). However, the Village Council boundaries - and consequently the Supervisors Area (SA) and EA boundaries - are not plotted.

16. The Census Controller and the Cartographer noted:

- a) That the Village Council, SA and EA boundaries will be put on the maps in the field prior to the enumeration by the Supervisors themselves.
- aa) This is leaving too much to chance. Even if the boundaries are only arbitrary lines dividing settlements it is preferable to put them on the maps while the field work is being done, and transferred to the original drawings back in the Cartographic Unit. Or alternatively, arbitrary boundaries should be delineated (and the EA's coded) on the originals in the office prior to being sent out to the field, so that the Cartographic Unit have a record of the boundaries used in the enumeration.
- b) They noted that if boundaries were delineated in the office misleading information could be given to the Supervisors. For example, being arbitrary lines the boundaries are not in the right place and do not follow any features.
- bb) At 1:100,000 a kilometre is only one centimetre, thus it would be difficult to plot accurate boundaries anyway, as there is not the space to do so. The actual width of the ink line itself could be 1mm, i.e. the equivalent of 100 metres on the map. It should be remembered that the base maps are of World War I and II vintage and were originally plotted by ground survey and reconnaissance methods, thus are already inaccurate. It should also be recalled that the census maps are basically 1:250,000 sheets (enlarged 2x to 1:100,000). At 1:250,000 a kilometre is only 4mm on the map and thus the maps lack many essential details with which to plot by. What details there are may have changed over the years (e.g. tracks), and Supervisors

will not have compasses and tapes - boundaries will be plotted by eye - and consistency and coordination between different Supervisors could also be a problem.

- c) They noted that if a new village or sub-village came into existence after the field mapping was done, and it is situated where an arbitrary line crossed it, then it might be missed out by supervisors or adjoining enumerators.
- cc) It is the (well-trained) Supervisor's job to ensure this does not happen. The Supervisors will be paying courtesy calls on local officials immediately before the enumeration, and they should be on the look-out for such cases.
- d) They noted that the Supervisors would be stationed in the field one or two months before the enumeration in order to undertake the boundary plotting tasks.
- dd) Apparently the schools will not be on regular school holidays during the month of February, thus it will be difficult to keep 3000 Supervisors (who, other than Provincial Statistical Officers, will be mainly school-teachers) away from their regular employment for so long. The cost and organisational problems included in providing honoraria/accomodation/food/transport for a long period also have to be considered.
- e) They noted that in densely populated areas (e.g. Gezira) the scale of the maps was too small to enable all the extra details to be plotted, and if they were, it would confuse the Supervisors.
- ee) If after field work it is found that the scale of a map is too small then it should be enlarged. There are alternatives:
 1. A Rost Plan-Variograph (an optical pantograph for changing scales) was supplied to the Cartographic Unit under project funds and assembled in October/November 1931, but the Cartographer noted that so far it has not been used.
 2. Apparently the Sudan Survey Department/Directorate of Overseas Surveys team have completed some new compilations of the Gezira area 1:100,000. Although the sheets have not been published SSD would probably allow diazo prints to be made of the compilation or detail plates, which could then be enlarged to 1:50,000.
 3. Air photo mosaics can be made up of the area required - the basic photo scale is bound to be larger than 1:100,000 - and they can be reproduced on the photocopier.
- f) They noted that the maps updated by the supervisors and used in the enumeration would be returned to the Cartographic Unit (Khartoum) after the enumeration so that the original drawings could be updated and coded.

- ff) Past experience has shown that it is difficult to get the maps back as they get lost en route or are kept as souvenirs. It is suggested that census payments be made to each supervisor and enumerator only after their maps and questionnaires have been handed in to Census office. This condition may help to ensure safe return.
- g) They noted that it was not intended to have a locality code, coding would only be as far as Village Council level; thus coding in the field was possible.
- gg) It may be very difficult to code the sub-villages as they will not all be plotted on the maps, but the villages themselves (including their relevant sub-villages) should be coded. A Village Council code would not be sufficient for local level planners and for subsequent Household Surveys.

C) Khartoum: Cartographic Materials Order

17. An order for cartographic materials (including full specifications and suppliers addresses) was made out by the Cartographer and the Regional Adviser and submitted to UNDP Khartoum on 13 April 1982. It consisted of:

<u>For Khartoum</u>	Cost <u>SUS</u>
40 rolls - Ozalid Topatex drafting film (3 thou. D/M 30" x 20 yds).	1,440
4 sets - Rotring Isograph 2000 pens complete (Art. No. 151903)	325
20 nibs - Rotring Isograph 2000 - 1.0 mm	30
20 nibs - Rotring Isograph 2000 - 1.4 mm	30
20 nibs - Rotring Isograph 2000 - 2.0 mm	30
2 - Fluorescent tubes (for Nig Banda 146 ammonia p/machine)	24
40 rolls - Océ semi-dry printing paper (A75 N-30g-30" x 20 yds).	225
100 pkts - Océ developing powder - 46	30
 <u>For Juba</u>	
50 rolls - Océ diazo transparency film - A30s- (341 mm x 20 m)	1,750
72 rolls - 3M Magic tape (1/2" x 1296")	144
36 rolls - 3M Masking (drafting) tape - 1" width	103
	<hr/> 4,335
Plus 30% air-freight	1,302
	<hr/> 5,637

13. All items should be delivered by air-freight to Khartoum. The Regional Adviser suggested to the Resident Representative that due to its sensitivity to heat the Océ diazo film should be sent directly from Amsterdam to Juba by the agents of G.M. Naggar Co. (Juba). However, the Resident Representative assured the Regional Adviser that it would be simpler to have it sent by KLM to Khartoum whence it could be immediately cleared from the airport by UNDP - as long as the date, airwaybill and flight number are known in advance. It would help if DTCD be informed by Océ-Nederland B.V. when the film is being airfreighted so that UNDP Khartoum can make arrangements. The film would then be taken to Juba on the UNICEF aircraft by the Regional Adviser on his next mission, which is tentatively scheduled for end July/August 1982.
- 19) An order for Arabic lettering stencils, horizontal and vertical plan filing cabinets, filing strips, a light table and a Dymo machine will be placed shortly by the Cartographer and the Regional Adviser.

Urban Numbering

20. Census Office (Khartoum) will need about \$15,600 with which to buy masking tape and marking pens locally for the urban numbering exercise. This entails the numbering of each street block and giving each housing unit in that block a number (e.g. 12/951). The numbers would be written on a piece of masking tape with a black marking pen. Although using chalk is cheaper, the Census Controller does not wish to use this method as it is unpopular with householders.
21. Considering that only sketch maps are to be made of urban Quarter Councils and no household listing is to be done, there could well be enumeration problems unless numbering is carried out. Thus it is important that the exercise be fully supported and resourced. (Rural area numbering would take too long and be too costly, and will only be done in large villages where 2 enumerators are required).

Other Matters (Khartoum)

Census Questionnaire

22. The questionnaire was tested recently by the field teams in South Kordofan, White Nile, Blue Nile, Gezira and Kassala provinces. 75 forms were distributed to each province, (total 375) together with a sheet requesting information on people's reactions to the questions. The questionnaires are due to be analysed in the near future. The Enumerator's manual is now available in Arabic and English, but the English version of the Supervisors manual is not yet ready.

Purchase Orders

23. The UNFPA National Programme Officer requested the Regional Adviser to check all the available 1981 field requisitions and Purchase Orders for cartographic equipment and materials. The PO's for the Cartographic Unit (Khartoum) were verified against the Cartographer's inventory and points were discussed with the Cartographer.
24. Very few PO's for the Cartographic Unit (Juba) were available, but the computer print-outs (giving brief details) were checked against the inventory. A list of all the PO numbers/details/suppliers/arrived/not-arrived for Juba was handed to the UNFPA National Programme Officer. It is imperative that all the remaining cartographic equipment stuck in Khartoum Airport be cleared as soon as possible.

Project Photocopiers

25. There seems to be some confusion surrounding the two photocopiers ordered for the project. The Cartographer requested a U-Bix for Census Office (Khartoum) on the first cartographic order of October 1980. Then a Nashua 1215 was ordered (P.O. 1-21-10203 dated 1 April 1981) by the Cartographer and the Regional Adviser on the 3rd cartographic order of December 1980, to be delivered to Juba.
26. The first to arrive in Sudan was the Nashua 1215, but it got left out in the sun at Khartoum Airport in August 1981, and the metal parts buckled in the heat (and 39,000 sheets of paper were left out in the rain). It was therefore sent back to Rotterdam and an insurance claim made out by the freight agents. It is important that this issue be followed up as a photocopier would be extensively used in Census Office (Juba), (e.g. village lists, schools lists for the field teams).
27. Meanwhile, New York noted that they could not supply a U-Bix, and as Nashua give preferential discounts to United Nations, a Nashua 1220-S was ordered by New York (P.O. 2-21-20012 dated 14 December 1981). This is a slightly larger model than the 1215. When the 1220-S arrived in Khartoum it was delivered to the Ministry of Education by mistake and only after some weeks redelivered to Census Office. However it is not operational due to missing parts which the local agent is attending to - presumably free of charge under the delivery guarantee.

a) Juba: Census Cartographic Preparations

28. The intention was that the Social Monitoring (Village Survey) teams would do the census preparatory field work, with a cartographic team mapping the areas previously covered by the Village Survey. However, this arrangement is now breaking down.
29. At a Census Technical Committee meeting it was agreed that as the dry season in Upper Nile and Jonglei is so short, these areas should be given priority by the Social Monitoring teams and the work would then be finished before the rains. But the teams were sent to Lakes and Bahr-el-Ghazal.

30. Although the Social Monitoring teams are providing the Census with household estimates they are not plotting the villages or administrative divisions on maps. The reasons include:

- a) Social Monitoring teams claim that the field mapping was being confused by villagers with the redivision of the South issue (the splitting up of Southern Region into 3 regions). The maps were mishandled and apparently an ugly incident in Lakes province was only averted by the presence of a police constable. This indicates lack of training of the teams and language problems in communicating the reasons for the field work. The result was that the teams were advised not to use maps by the Associate Expert (Statistics). This was commendable from a security point of view but the Census Commissioner should have been informed.
- b) There were never enough maps to go round as each copy had to be sent down from Census Office (Khartoum). However, the printing machine, paper and developer have now arrived in Juba and during the mission the printing machine was assembled. But we were unable to test the machine as there is no electricity in the day time at the Census Office, Cartographic Unit, and due to lack of transport an evening session could not be arranged. The 440 1:100,000 film positives of the Southern Region were sent down from Khartoum and arrived the day before my departure.
- c) The Director of Statistics (Khartoum) although short of vehicles himself, sent two Land Rover petrol pick-ups to Malakal to enable cartographic work to be started in Upper Nile. Although the vehicles were not in good condition on arrival and had to be repaired, it enabled 75% of the province to be completed by the start of the rainy season.
- d) A Social Monitoring team leader noted that they did not like using the maps - "as they were wrong and confusing and slowed the work down". This statement again shows lack of training as to why they have been given maps.

31. This lack of co-operation and co-ordination means that areas previously covered by Social Monitoring teams have to be revisited by Census Cartographic teams, with subsequent extra costs and time involved.

32. The situation at present is:

Social Monitoring - 3 teams/vehicles

(Duties: completion of a socio-economic questionnaire in each village/recording number of households)

<u>Provinces completed</u>	<u>In Progress</u>	<u>Not started</u>
Eastern Equatoria	Bahr-el-Ghazal (75% complete)	—
Western Equatoria	Upper Nile (10%)	
Lakes	Jonglei (10%)	

Census Office - 4 teams/vehicles

(Duties: plotting administrative boundaries, villages, tracks etc., on maps/recording number of households)

<u>Provinces Completed</u>	<u>In Progress</u>	<u>Not Started</u>
-	Upper Nile (75%)	Western Equatoria
	Eastern Equatoria (50%)	Lakes
	Jonglei (10%)	Bahr-el-Ghazal

b) Juba: Vehicles

33. The 6 UNEFA diesel Land Rover hard top pick-ups have still not arrived although delivery was scheduled for August then November 1981. A Purchase Order was prepared (see PO 1-21-12496 of 23 November 1981) but when the Deputy Resident Representative (Juba) went to New York in February 1982 he found that the vehicles had not been actually ordered. It now appears that the vehicles have left UK for Mombasa but the confusion surrounding this issue has not helped UNEFA/government relations at all.
34. Once again UNICEF have come to this project's rescue. They have agreed to loan the Census Office 3 brand new diesel Land Rover soft-top pick-ups, which would be replaced by 3 of the UNEFA vehicles on eventual arrival.
35. UNICEF found that to have 12 vehicles on the Social Monitoring Project (2 for each future Provincial Statistical Office) would be too expensive to maintain, thus the original idea was to sell the 3 vehicles to UNEFA (for \$40,000 approx.) and put the cash back into the project.
36. Cables were sent to New York and EEC Khartoum (who had agreed to provide \$180,000 for pre-census activities). UNEFA declined to buy the vehicles as theirs were apparently on the way, and EEC found that hoped-for savings from other projects were not available. UNICEF then decided to loan the vehicles, which were due to be handed over shortly after my departure.
37. The Census Commissioner has managed to borrow a Land Rover Station Wagon from the Regional Ministry of Agriculture (to be used in Jonglei for a short period) and a hard-top pick-up may also be made available. The GTC Toyota Land Cruiser was doing cartographic work in Upper Nile until the steering rod broke, and spare parts are now being ordered from Nairobi. GTC provide 1½ barrels (66 gallons) a month for the Toyota but this amount is insufficient for field work.

c) Juba: Cartographic Unit

38. Half of the cartographic equipment, ordered in December 1980 has still not arrived, and this, plus the fact that there is no staff (trained or untrained) to man the drawing office means that the Cartographic Unit is still not operational.
39. There will therefore be no time to actually draw census maps on draughting film. So diazo transparency film has been ordered and copies will be made of the process film positives as required and stuck together with Magic Tape.

40. Additional items (e.g. boundaries, new villages) will be drawn and hand-printed on the top side of the diazo film and deletions scratched off the reverse with razor blades. The only stencils lettering envisaged is for title boxes and drawing numbers.
41. The 400/500 maps will be based on the Village Councils (Chiefs Areas) and all boundaries - Provincial, Area Council, Rural Council, Village Council, Supervisors and EA's, plus urban areas, town planning areas, forest and game reserves will be plotted on the maps (and coded) before being issued to Supervisors and Enumerators. The Regional Adviser hopes to start this work, and to train the Field Supervisor/Senior Draughtsman, during his next mission.

Volunteer to Supervise Cartographic Unit

42. The Cartographic Unit needs a full time competent person to run it. The Field Supervisor (though very hard-working) is untrained in drawing office techniques, and it was therefore suggested to JILP Juba and Census Office (Juba) that a UN Volunteer (or VSO, CUSO) be recruited. The Field Supervisor could then concentrate on the completion of the field work, and work in the drawing office only on a part-time basis until after the enumeration.
43. It was pointed out that the Volunteer need not be a qualified cartographer, but he/she should preferably have a Geography degree and have had experience in using technical drawing pens. To obtain a UN Volunteer extra project funds would be required, whereas a government commitment would be needed (salary, housing) for a VSO or CUSO Volunteer. Another problem is the time (3-9 months) that it takes to recruit someone. Census Office (Juba) noted that they would consider the proposal.

Other Matters (Juba) Census Funds

44. The Census Office (Juba) has only been allotted a total of £s.22,000 (£19,580). Of this, Department of Statistics (Khartoum) has contributed £s.16000 (£14,240), and the Southern Region administration £s.6,000 (£5,340). Only about £s.3,000 (£2,120) remains, the rest having been spent on:
 - a) Petrol - often at local market prices £s.15-20 (£17-22) a gallon.
 - b) Field Allowances - including some to Social Monitoring teams.
45. The Cartographic Unit is housed in a building purchased by the Ministry of Finance and Economic Planning but at present the Census Commissioner and his staff occupy furnished offices at the Regional Assembly. After the forthcoming elections (the Deputy Director, Statistics Division is on release from Census Office for election purposes) the Census Office administration will be moved to offices presently occupied by the Provincial Ministry of Agriculture. They in turn will be moved to Torit, the new administrative centre for Eastern Equatoria province.

45. The new offices will be quite suitable and are centrally situated, but the Census Office does not have sufficient funds to buy furniture. The Regional Adviser estimated that Is.9,250 (S.S,235) would be required for basic furnishings, (to be purchased from Norwegian Church Aid workshop Torit) stationery and miscellaneous items.
47. Funds are also required to set up the 5 Provincial Census Offices. Rooms have been made available by Directorate of Planning in Nau, Aumbek, Yambio and Malakal but nothing has been found in Bor, whilst Torit remains lowest priority, being nearest to Juba.
48. Census Office staff are disgruntled because secondment allowances have not been paid, and the Census Commissioner (who has the rank of Assistant Minister) has not been provided with an official car.

Definition of Urban Areas (Southern Region)

49. It was strongly emphasised during the mission that the urban areas in the South should be defined as soon as possible, then the urban cartographic work can be carried out at the same time as the rural areas. The urban areas have to have boundaries (e.g. traditional villages joining onto a trading centre have to be given "cut-off points")
50. The 1973 census definition of urban was: "centres of 5,000 and over, plus centres of administrative and commercial importance". This has been changed to: "those urban centres used in 1973 census, plus centres of administrative and commercial importance". It would be better if a more accurate definition could be made.

Village Lists, Schools Lists, Primary Health Care Unit Lists (South)

51. Village and sub-village lists should be prepared without delay, so that the maps can be checked against the Social Monitoring work. Schools lists and Health Care Unit lists - together with the relevant number of teachers and health care workers - should be prepared by Province, Rural Council and Village Council.
52. This will take some time to accomplish and the Ministries of Education and Health should be contacted. If ready in time, the lists should be checked out during the field mapping.

In Brief (Juba)

53. Other topics which arose during the mission included:
- a) The GTZ computer is due to arrive late April 1982. The Statistics Adviser informed me that it will consist of:

- Commodore CBI 3032 (Screen 30 chrs. per line) - 2 units.
- CBI 3050 Floppy disc dual drive, L&B
- CBI 3024 Matrix printer
- Katz generator, 5 KVA
- Total cost (including airfreight) - DM 25,000 (\$10,900)

Note: The Statistics Adviser is leaving Sudan in September 1982 when his contract expires. No successor has yet been appointed.

- b) Provision of motor cycles/motor boats/canoes for field work/enumeration.
- c) The 30 bicycles have not yet arrived (P.O. 1-21-12497, 24 November 1981).
- d) 139 copies of long questionnaire, 15 copies of short questionnaire (English version) were sent to Juba. Nothing had been done about it as "reaction sheets" and manuals were not sent.
- e) Enumeration of refugees - UNHCR (Juba) should be contacted by the Census Office about this special category of the population.
- f) The possibility of the secondment of University of Juba staff to the Census Office should be investigated due to the lack of trained manpower on the project.
- g) Timetables for: Cartographic/Social Monitoring teams/Cartographic Unit map production should be prepared.
- h) The possibility of the cartographic equipment at Khartoum Airport being sent by Army plane should be followed up. (Unfortunately the UNDP plane is out of action due to a crash landing, which was not fatal).
- i) The question of coding to locality level should be discussed by the Census Controller (Khartoum) and the Statistics Adviser (Juba).
- j) The Ministry of Wildlife Conservation and Tourism and Department of Forestry should be contacted - for boundaries of National Parks (2), Game reserves and Forest Reserves.
- k) Film positives of Hofrat-en-Nahas area (ex-Southern Darfur) will be required in near future - this should be followed up.
- l) A generator for the Cartographic Unit is urgently required.
- m) A steel cabinet - Ls.375 (\$334) was obtained locally for the Cartographic Unit.
- n) Juba town boundary has been approved in principal. This and other urban mapping problems should be investigated in the near future.

- o) Roads projects - air photos may be available (e.g. Norconsult, Gite, de Groot, Wilbur Smith and Associates, George Wimpey)
- p) The Defense Mapping Agency/USAD are mapping 10 sheets at 1:250,000, but none of the maps will be ready by the time of the census.
- q) A study of the "toich lands" is required. These are seasonally flooded areas, with shifting cultivation and nomadic or transhumant animal husbandry.
- r) A study of the nomadic Toposa peoples of the east part of Eastern Equatori-/Northern Kenya is required.
- s) A study is required of the temporary settlements made by South Kordofan cultivators along the Nile during the dry season.
- t) The possibility of utilising the ILO/JNFPA expert on the new Human Resources project should be investigated.
- u) The Cartographic teams should be given proper field mapping forms instead of scribbling household estimates on scraps of paper.
- v) The paper on rural mapping by Census Office (Khartoum) is written in Arabic and should be translated into English.
- w) The Statistics Adviser is to start the training of Chief Supervisors for enumeration.
- x) The possibility of the Field Supervisor/Senior Draughtsman visiting Census Office (Khartoum) for a couple of days was discussed.
- y) 44 1:250,000 sheets (1 of each) 7 1:1,000,000 sheets and a 1:4,000,000 map were sent from Khartoum to the South by the Regional Adviser, as they were not previously available to the Census Office Cartographic Unit (Juba).
- z) Other issues are to be discussed when the Regional Adviser in Demographic Statistics undertakes a mission to Sudan, (e.g. purchase of enumerators satchels).

V CONCLUSION

54. As can be seen, some progress has been made, particularly in the North where Census Office (Khartoum) is at last operational: staff have been allocated particular tasks, telephones have been installed, and morale is higher than before.

55. It is difficult to calculate work-rates for the field mapping as the programme in both North and South stop/starts according to the availability of petrol and diesel. The late delivery of 13 UNFPA Land Rovers has also adversely affected the work-rate.
56. The Calendar of Project Activities was revised during the reprogramming mission - not a single activity has been completed in the South, which at one time seemed to have the upper hand with the Social Monitoring Teams backing the census.
57. The lack of co-ordination/co-operation between the Social Monitoring teams and Cartographic teams in the South is no one particular persons fault. The plain fact is that they lack strong committed direction. The Census Office (Juba) needs the assistance of full-time UN International staff (e.g. an Associate Expert Census Adviser, Cartographer and/or a Volunteer) particularly now that the Statistics Adviser is leaving.
58. The Census Commissioner (Juba) noted that unless the present situation in the South is resolved immediately, the possibility of postponement to 1984 cannot be ruled out.