

CHAPTER 6 PROJECT IMPLEMENTATION

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PROJECT IMPLEMENTATION

6.1 General

The official channel of the project implementation is the COR, however since the project includes three major components; the underground water development, the village water supply and the urban water supply of the local town, a close coordination will be necessary with th NWC. For this purpose an agreement is already made between the COR and the NWC. As for rehabilitation of the Kassala Town water supply the COR requires coordination with the Urban Water Administration of Kassala.

6.2 Extent of the Project

6.2.1 General Description

The following water supply facilities are to be constructed in the project;

1. New Village Water Supply Facilities: 10 sites of 34 sites
2. Rehabilitation of Existing Boreholes: 36 holes of 73 holes
3. Rehabilitation of the Kassala Town Water Supply Facilities
 - 1) Boreholes; $\phi 10$ inch, 50m, 10 holes
 - 2) Storage Tank; reinforced concrete, $2,000 \text{ m}^3$ and $1,500 \text{ m}^2$, one each
 - 3) Booster Pump Station; 2 units
 - 4) Pipe Laying of Distribution Main; 27 km

The remaining sites of the new village water supply facilities and rehabilitation of existing boreholes are to be completed by Sudanese counterparts after completion of technology transfer utilizing material and equipment to be provided by the project.

Since construction works for the Kassala Town Water supply facilities require sophisticated technique, the construction is proposed to be made by the appointed general contractor.

Of these construction works, fences and houses at the new village water supply facilities are to be undertaken by the Sudanese authority. It is also responsibility of the Sudanese authority to provide necessary lands for facilities and to take care of custom duties for equipment, machinery and material to be provided for the project.

6.2.2 Procurement

Except for materials obtainable at Kassala; sands and gravels, and at Port Sudan; cement and fuel, necessary material and machinery in addition to equipment are to be procured from Japan.

The landing port is Port Sudan and the required time duration for procurement will be 6 months including purchase and transport.

6.3 Construction Method

6.3.1 The Contractor

Considering the existing conditions in Sudan and urgency of the project, it is proposed to appoint Japanese contractors for construction of works for Kassala Town and village water supply facilities.

6.3.2 Detail Design and Construction Supervision

1. Detail Design

The detail design of the project will be made by the Consultants based on the basic design with a close coordination with the Government officials concerned.

2. Tendering and Contract

The consultants are to assist the Government in preparation of the tender documents including specifications and drawings. The consultants are also to assist the Government in evaluation of tenders.

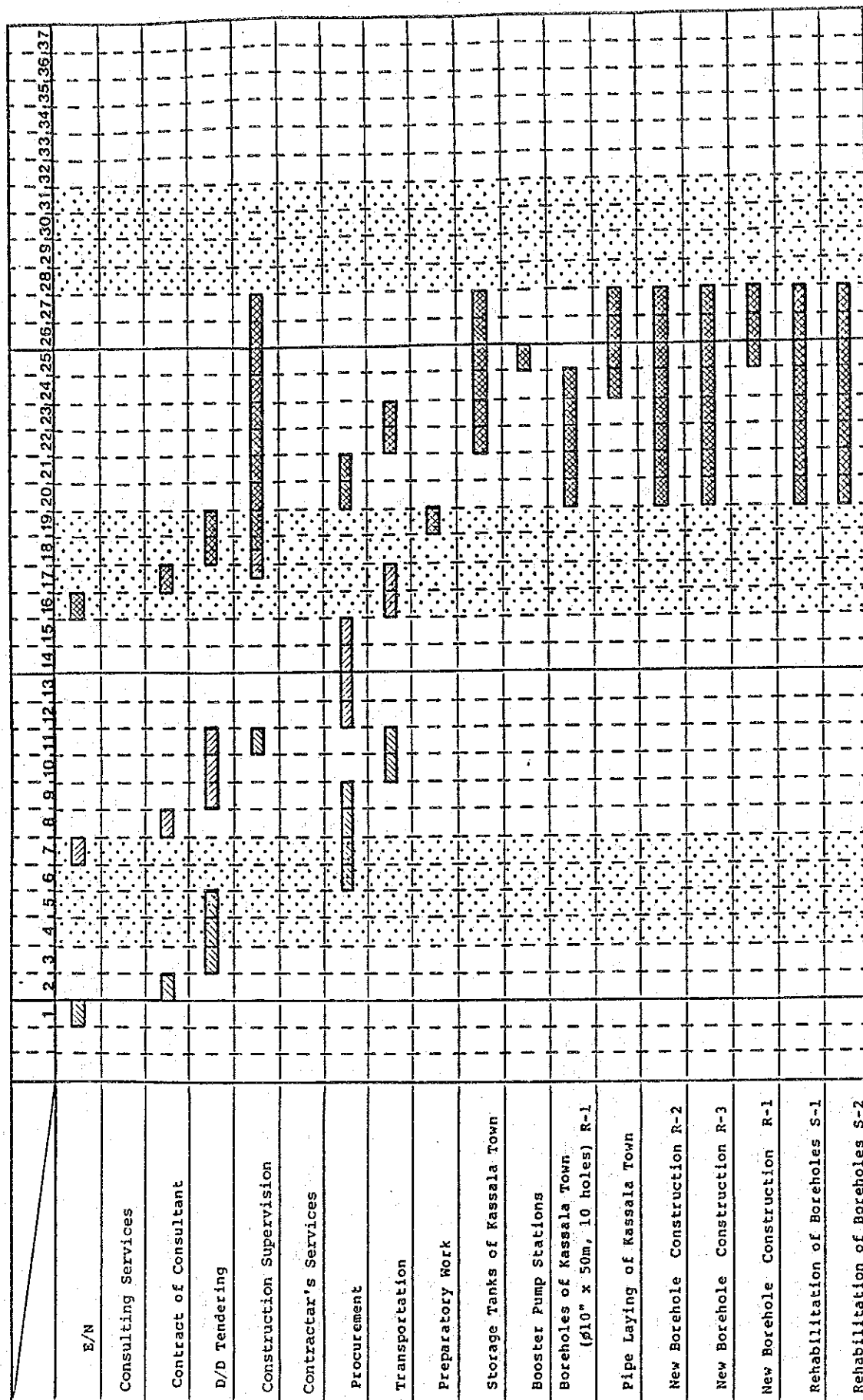
3. Construction Supervision

- 1) The consultants are to assist the Government in expediting the verification procedure of the documents and in inspection of procurement in Japan.
- 2) The consultants are to participate to the pre-construction meeting and to supervise the construction work in the project. Schedule control, quality control and cost control are also responsibility of the consultants in order to complete the project as stipulated in E/N.

6.4 Work Schedule

Required period for the project is estimated to be 22 months including the necessary time for procurement and transport which corresponds to 26 months from the date of E/N including the time required for the detail design and tendering (Fig. 28).

Fig. 28 Work Schedule



 : Phase 1
 : Phase 2
 : Phase 3
 : Rainy Season

The project is proposed to be implemented in three phases; the procurement of equipment, machinery and material will be made in the first and the second phases. The third phase include construction of works and the remaining procurement. The construction period is proposed to be 8 months in the dry season from October to May.

6.5 Operation and Maintenance System and Costs

6.5.1 Operation and Maintenance System

The UWA Kassala which is responsible for operation and maintenance of the Kassala Water Supply holds 178 staff including engineers and technicians. Existing operation and maintenance system will be applicable for the new facilities to be provided by the project.

For village water supply, three villagers are to be appointed by the NWC. Since new type of pump and engine will be installed, attentions should be drawn to make necessary instructions and inspections to these operators by the NWC staff.

6.5.2 Operation and Maintenance Cost

The annual operation and maintenance costs is estimated as below;

| | | |
|---------------------|-------------|-------------|
| Salary and Wages | ¥8,372,000 | (SE110,200) |
| Fuel | ¥24,448,000 | (SE321,700) |
| Electricity | ¥1,800,000 | (SE23,700) |
| Chemicals | ¥600,000 | (SE7,900) |
| Consumable Material | ¥2,360,000 | (SE31,100) |
| TOTAL | ¥37,580,000 | (SE494,600) |

The operation and maintenance costs for the facilities to be provided for Kassala Town Water Supply by the project are the costs for electricity, chemicals and consumable material amounting at ¥4,760,000.

This amount is equivalent to ¥0.08/day/cap which is considered to be reasonable compared with the existing water charge ¥1.84/day/cap.

The operation and maintenance costs for the village water supply include salary and wages and fuel costs amounting at ¥32,820,000 which is equivalent to ¥0.132/l. This amount is also considered to be reasonable compared with the existing water price of ¥1.265/l. in the project area.

6.6 The Project Costs

The items of the project cost to be met by the Sudanese Government is summarized as below;

| | |
|----------------------|----------------------------|
| 1. Fences and Houses | ¥77,520,000 |
| 2. Cattle Troughs | ¥3,400,000 |
| Total | ¥80,920,000 (SE 1,065,000) |

CHAPTER 7 PROJECT EVALUATION

CHAPTER 7

PROJECT EVALUATION

In the Eastern Region of Sudan, the surface water is rarely obtainable due to the dry climate. Major sources of domestic water rely on the underground water and at present almost 1.1 million rural population obtains water from boreholes for domestic purposes. However many boreholes have been used for many years and are so deteriorated that their yields have been decreased. In addition an increase in rural population caused by arrival of refugees worsened conditions of the shortage of domestic water in rural areas.

It is estimated that about 36% of the rural population (about 400,000 people) including a large number of refugees are suffering from shortage of domestic water in the Eastern Region.

As for Kassala Town, almost 75% of the urban area is facing to water supply problems due to increase in water demand caused by arrival of refugees from Ethiopia estimated to be 50,000 people corresponding to about 30% of the total population of the Town.

In order to ease these conditions the project is formulated.

In the rural areas about 400,000 people require provision of domestic water urgently. The project will supply clean water for 210,000 people including large number of refugees at 107 sites;

| | <u>Refugee camps</u> | <u>Sudanese village</u> |
|------------------------------|--------------------------|-----------------------------|
| New Facilities | 8 sites | 26 sites |
| Rehabilitation of Facilities | 15 sites | 58 sites |

In Kassala Town, the target daily demand of 75 l/day/cap will be maintained and the present problematic area of 75% of the urban area will no more exist, which will definitely be advantageous to improve financial aspects of the Urban Water Administration at Kassala since present revenue of water charges is only limited due to extended problematic area as summarized below.

| | Without Project | With Project |
|--------------------|--------------------|-----------------|
| East Bank | | |
| Private Connection | 56 l/day/cap | 75 l/day/cap |
| Public Tap | intermittent | 25 l/day/cap |
| Problematic Area | 10 km ² | none |
| West Bank | | |
| Private Connection | 36 l/day/cap | 75 l/day/cap |
| Public Tap | intermittent | 25 l/day/cap |
| Problematic Area | 6 km ² | none |

Considering various aspects of the project background, it is proposed to undertake sufficient technology transfer to Sudanese counterparts. Therefore, complete three sets of drilling machine and two sets of rehabilitation machine with transferred technology will definitely make significant contribution to the future underground water development in the Region. In addition, the provision of the safe water to villagers will contribute to maintain stable rural lives and further more to participation of villagers to productive activities.

The construction costs to incur for the Sudanese authority is estimated to be S£1,065,000 which is equivalent to 16% of the average annual budget of the COR (S£6.5 mil).

It is understood that this amount of construction costs is a quite practical magnitude for the COR. The operation and maintenance costs are also considered to be reasonable compared with the existing water price in the Project area.

The underground water development division of the NWC has sufficient numbers of staff with experience. Through the project an additional technology transfer will be made especially proper completion of borehole construction and rehabilitation which will definitely contribute to the future underground water development in Sudan.

CHAPTER 8 CONCLUSION AND RECOMMENDATION

CHAPTER 8

CONCLUSION AND RECOMMENDATION

8.1 Conclusion

The number of the rural population suffering from the shortage of water estimated to be 400,000 people will be much reduced to 190,000 people by the project.

In addition, the project the equipment for drilling and rehabilitation of boreholes will remain at Sudan with sufficient technology transferred which will be effectively utilized for the future underground development in the area.

In Kassala Town, existing problematic areas of 75% of the urban area will no more exist and the target water supply, 75 l/day/cap will be maintained by the project. This is advantageous for financial aspects of the Urban Water Administrations,

It is, therefore, concluded that this project is effective to ease water supply problems prevailing over the Eastern Region and suitable for Japanese Grant Aid Cooperation.

8.2 Recommendation

1. The complete three sets of drilling equipment and two sets of rehabilitation machine will be provided by the project. Utilizing these equipment a complete technology transfer has to be undertaken to utilize these equipment for underground development even after the project completion.

2. There expected no significant technical difficulties in the project, however the rotation of proposed engines is higher than the rotation of existing engines in the rural sites. Therefore, periodical inspections and instructions will be made by the mechanics of the NWC in the Region.
3. In Kassala Town there will be no problematic areas and the private connection consumption rate is increased to 75 l/day/cap. It is therefore important to maintain the proper water charge collection for improvement of the financial conditions of Kassala Urban Water Administration.
4. The official channel of the project is the COR, however a close coordination will be necessary with related government institutions like the NWC and the UWA for the project implementation.

APPENDIX

APPENDIX 1


MINUTES OF MEETING

MINUTES OF DISCUSSIONS
ON
WATER SUPPLY PROJECT RELATED TO ICARA II
IN
DEMOCRATIC REPUBLIC OF SUDAN

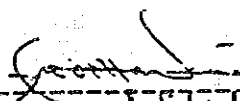
In response to the request made by the Government of Democratic Republic of Sudan on Water Supply Project Related to ICARA II (hereinafter referred to as "the Project"), the Government of Japan has sent, through Japan International Cooperation Agency (hereinafter referred to as "JICA"), a team headed by Mr. Shoji TAKAHASHI, Manager of Rokkoh-san Management Office, Water Supply Bureau, Kobe City Government, to conduct a basic design study from 25th November to 19th December 1985. The team has carried out field survey, held a series of discussions and exchanged views with the Sudan authorities concerned. As conclusion of the study and discussions, both parties have agreed to recommend to their respective Governments to examine the results of the study attached herewith (ATTACHMENT) towards the realization of the Project.

8th December, 1985

Khartoum.



(Mr. Shoji TAKAHASHI)
Leader, Basic Design
Study Team, JICA



وزارة الداخلية
(Mr. Hassan Attia Musa)
Commissioner For Refugees
Ministry of Interior - د.ح
OF INTERIOR
For Refugees

A T T A C H M E N T

1. Both parties agreed to reconfirm the Minutes of Discussions which was mutually signed on August 13, 1985.
2. The area of the Project is Kassala Province of East Sudan, including Kassala town.
3. The purpose of the Project is as follows:
 - (1) construction of new bore holes
 - (2) rehabilitation of existing bore holes
 - (3) rehabilitation of water supply facilities in Kassala town.
4. Responsible organization in the Government of Sudan for completion of the Project is Ministry of Interior, Commissioner of Refugees Office.
5. The Sudan authorities concerned has accepted Japan's grant aid system for implementation of the Project explained by the basic design study team, which includes principles of use of Japanese consultant firm(s) and Japanese general contractor(s).
6. The Sudan authorities concerned will take necessary measures listed in Annex on the condition that the grant aid by the Government of Japan is extended to the Project.

(5)

6.

A N N E X

Following arrangements are to be taken by the Government of Sudan

1. To provide necessary data and information for basic design, detail design and construction
2. To secure land for the wells and other water supply facilities as needed before the start of the construction
3. To undertake incidental civil works such as planting and fencing, if needed
4. To provide the space necessary for temporary offices, working areas, stock yards and others
5. To use properly the facilities constructed and equipment purchased under the grant aid
6. To ensure prompt unloading, tax exemption and custom clearance at ports of disembarkation in Sudan and prompt internal transportation therein of the products and related equipment purchased under the grant aid
7. To exempt Japanese nationals engaged in the Project from custom duties, internal taxes and other fiscal levies which may be imposed in Sudan and with respect to the supply of the related goods and services under the verified contracts
8. To accord without delay to Japanese nationals whose services may be required in connection with the supply of the related goods and services under the verified contracts such facilities as may be necessary for the entry into Sudan and their stay therein for the performance of their work

9. To bear all the expenses, other than those to be borne by the grant aid

(1)

e.

APPENDIX 2

LIST OF THE BASIC DESIGN STUDY TEAM MEMBER

List of Members of the Basic Design Study Team

| | |
|----------------------|---|
| Leader; | Mr. Shoji Takahashi, Director Rokkosan Water Control Office Bureau of Water Supply Kobe City Government |
| Project Coordinator; | Mr. Michimasa Numata Grant Aid Planning and Survey Department Japan International Cooperation Agency |
| Planning Engineer; | Mr. Akihiko Togo Pacific Consultants International |
| Facility Engineer; | Mr. Kiyoshi Nakahara Pacific Consultants International |
| Equipment Engineer; | Mr. Ichiro Makuta Pacific Consultants International |

APPENDIX 3

ITINERARY

Itinerary of the Basic Design Study

| <u>No. of Days</u> | <u>Date</u> | <u>Location</u> | <u>Item</u> |
|--------------------|-------------|-----------------|-------------------------------|
| 1 | Nov. 25 | Tokyo | Traveling |
| 3 | Nov. 27 | Khartoum | " |
| 4 | Nov. 28 | " | Meeting at Embassy of Japan |
| 5 | Nov. 29 | " | Internal Meeting |
| 6 | Nov. 30 | " | Meeting at COR |
| 7 | Dec. 1 | Kassala | Traveling |
| 8 | Dec. 2 | " | Meeting at COR, PWG |
| 9 | Dec. 3 | " | Site Survey |
| 10 | Dec. 4 | Gedaref | Meeting at COR and Field Trip |
| 11 | Dec. 5 | " | Field Investigation |
| 12 | Dec. 6 | " | " |
| 13 | Dec. 7 | Kassala | Meeting at PWC and RWC |
| 14 | Dec. 8 | " | Meeting at NWC |
| 15 | Dec. 9 | " | " |
| 16 | Dec. 10 | Khartoum | Traveling |
| 17 | Dec. 11 | " | Meeting at COR and NWC |
| 18 | Dec. 12 | " | Meeting at UNDP, IBRD |
| 19 | Dec. 13 | Khartoum | Internal Meeting |
| 20 | Dec. 14 | " | Meeting at COR and NWC |
| 21 | Dec. 15 | " | " |
| 22 | Dec. 16 | " | " |
| 23 | Dec. 17 | " | Traveling |
| 24 | Dec. 12 | Paris | Traveling |
| 25 | Dec. 19 | Tokyo | " |

APPENDIX 4

LIST OF PERSONNEL VISITED

List of Personnel Visited

1. Commissioner for Refugees Office (COR)

- (1) Mr. El Fadil Deap
Deputy Commissioner
- (2) Mr. Karar Mohmed Ahmed
Water Engineer (Counterpart)
- (3) Mr. Hassan Mohd Osman
General Project Manager, COR Showak Office
- (4) Mr. El Ferafi
Deputy Project Manager, COR Showak Office
- (5) Mr. Silman Osman
Water Engineer, COR Showak Office (Counterpart)
- (6) Mr. Mohamed Osman Ali
Project Manager, COR Kassala, Wad-Sherfay Settlement
Office
- (7) Mr. Tag Eisir
Deputy Manager, COR Kassala Office
- (8) Mr. Ismail Abraham
Assistant Manager, COR Gedref Office

2. National Water Corporation (NWC)

- (1) Mr. Lotfi Wahdan
General Director
- (2) Mr. El Hag El Taib
Assistant General Manager
- (3) Mr. Omer Musa
Head of Supply & Store Section

3. United Nations Development Programme (UNDP)

- (1) Mr. Agdul Ghavour
Assistant Resident Representative

4. Regional Government of Eastern Sudan

- (1) General Mahadi Osman
Governor
- (2) Mr. Mohamed Hussein
Director General,
Rural Water Administration
- (3) Mr. Osman Sidding Muslafa
Drilling Engineer,
Rural Water Administration
- (4) Mr. Hassan Abd El Raffman
Regional Manager,
Urban Water Administration

APPENDIX 5
ECONOMIC INDEX OF SUDAN

SUDAN - COUNTRY DATA

ECONOMIC INDICATORS

| GROSS DOMESTIC PRODUCT IN 1983/84 | ANNUAL AVERAGE RATE OF GROWTH (%, Constant prices) | | | |
|-----------------------------------|---|-------|-----------------|-----------------|
| | US\$ Min | % | 1974/75-1978/79 | 1978/79-1983/84 |
| GDP at Market Prices | 6,288.0 | 100.0 | 3.6 | 1.7 |
| Gross Domestic Investment | 870.0 | 13.8 | 0.6 | -0.4 |
| Gross National Saving | 224.3 | 3.6 | 13.1 | -10.0 |
| Current Account Balance | -646.0 | 10.3 | 0.7 | 4.1 |
| Exports of Goods, NFS | 877.0 | 13.9 | 0.7 | 4.1 |
| Imports of Goods, NFS | 1,668.0 | 26.5 | 0.2 | 4.0 |

OUTPUT 1/, LABOR FORCE 2/ AND PRODUCTIVITY IN 1983/84

| | Value Added | | Labor Force | | V.A. Per Worker | |
|-------------|-------------|-------|-------------|-------|-----------------|----------------|
| | US\$ Min. | % | Min. | % | US\$ | % (of average) |
| Agriculture | 1,684.4 | 29.7 | 4.92 | 78.0 | 342 | 23.1 |
| Industry | 931.7 | 16.5 | 0.63 | 10.0 | 1,479 | 164.7 |
| Services | 3,051.4 | 53.8 | 0.76 | 12.0 | 4,015 | 447.1 |
| Total | 5,667.5 | 100.0 | 6.31 | 100.0 | 898 | 100.0 |

GOVERNMENT FINANCE

| | Central Government - 1983/84 | |
|-----------------------------|------------------------------|----------|
| | (Lsd. Min.) | % of GDP |
| Current Receipts | 1,469 | 14.7 |
| Current Expenditure | 1,300 | 13.0 |
| Current Surplus | 169 | 1.7 |
| Capital Expenditures | 483 | 4.8 |
| Unallocated Expenditures 3/ | 366 | 3.7 |

| MONEY, CREDIT AND PRICES | 79/80 | 80/81 | 81/82 | 82/83 | 83/84 |
|---|--------------------------------------|---------|---------|---------|---------|
| | (million Lsd outstanding and period) | | | | |
| Money Supply | 1,047.5 | 1,445.2 | 1,899.9 | 3,151.8 | 3,151.8 |
| Bank Credit to Central Government (net) | 719.0 | 914.5 | 848.7 | 677.2 | 775.4 |
| Bank Credit to Private Sector and Parastatals | 814.3 | 1,118.6 | 1,560.9 | 2,229.6 | 2,585.7 |
| | (percentages) | | | | |
| Annual percentage changes in: | | | | | |
| Consumer Price Index 4/ | 25.9 | 24.3 | 26.8 | 30.6 | 28.1 |
| Bank Credit to Central Government | 9.0 | 27.2 | -7.2 | 20.2 | 14.5 |
| Bank Credit to Private Sector and Parastatals | 24.7 | 37.4 | 39.5 | 42.8 | 16.0 |

1/ Factor Costs.

2/ Labor force estimates are based on EPD's Social Indicators Data Sheet.

3/ Includes some capital expenditures by other public entities.

4/ Calendar Year.

APPENDIX 6

LIST OF UNHCR OFFICERS

UNHCR INTERNATIONAL STAFF IN THE SUDAN

BRANCH OFFICE KHARTOUM, P.O. Box 2560
Block 2, Sudanese/Kuwaiti Bldg.
Nile Avenue (immediately E. of R.C. Cathedral)

Tlx: 22431 HCR
Tel: (exchange)
74757, 81243, 81250

| <u>NAME</u> | <u>NATIONALITY</u> | <u>FUNCTIONAL TITLE</u> |
|------------------------------|--------------------|---|
| MORRIS, Mr. Nicholas | Australia | Representative |
| GERETY, Mr. Pierce | USA | Deputy Representative |
| ABU ZAYD, Ms. Karen | USA | Senior Programme Liaison Officer (COR) |
| AL ATTAR, Mr. Saad | Iraq | Protection Officer |
| AMAR, Ms. Meryem | Morocco | Public Information Officer |
| BOAFO, Mr. Kwame | Ghana | Programme Officer (South) |
| BOUTROUE, Mr. Joel | France | Assistant Programme Officer (JPO)(East) |
| CHORDI, Mr. Vincent | France | Programme Officer (Water) (JPO) |
| DUNKLEY, Mr. Glen | Canada | Senior Programme Officer |
| HALL, Ms. Janet | UK | International Secretary |
| HANLAN, Ms. Hope | Jamaica | Senior Administrative Officer |
| KING, Mr. Peter | UK | Associate Administrative Officer |
| LIECHTENSTEIN, Ms. Maria-Pia | Liechtenstein | External Affairs Officer |
| LINNER, Ms. Christina | Sweden | Associate Programme Officer (East) |
| MARCELINO, Ms. Luth | Philippines | Assistant Finance Officer |
| MELLANDER, Mr. Nils | Sweden | Logistics Consultant |
| MURRAY, Mr. Julian | UK | Programme Officer (West) |
| NAGASAKA, Mr. Kosutashi | Japan | Assistant Protection Officer (JPO) |
| OLATOKUNBO, Mr. Moshood | Nigeria | Social Services Officer |
| RIZWANULLAH, Mr. Mohammed | Bangladesh | Senior Finance Liaison Officer (COR) |
| RODRIGUEZ, Mr. Ernesto | USA | Programme Officer (East) |
| TERRELL, Ms. Vanessa | UK | Senior Administrative Clerk |
| TSUCHIDA, Mr. Yorchiro | Japan | Education Officer (JPO) |
| WARSAMA, Mr. Ali | Djibouti | Assistant Logistics Officer |

SUB-OFFICE SHOWAK, Radio with UNHCR Khartoum

FIELD OFFICE GEDAREF, UNHCR/COR Compound. Telephone: Gedaref 3491.

| | | |
|-----------------------------|-------------|--|
| MENNING, Mr. Michael | USA | Head, Sub-Office |
| BARCLAY, Ms. Ellen | USA | UNHCR/COR Nutrition Co-ordinator |
| DEBAYLE Mr. Jacques | France | Field Officer |
| DECOSTE, Mr. Harold | Canada | Field Officer (Wad el Hilewu) |
| DE LA MOTA, Mr. Jorge | Spain | Field Officer |
| FAZLI, Mr. Fazul | Pakistan | Field Officer (Hilat Hakuma) |
| FEIXAS-VIHE, Ms. Monserrat | Spain | Education Officer |
| FIFE, Ms. Margaret | UK | UNHCR/COR Community Health Advisor |
| FROHARDT, Mr. Mark | USA | Field Officer (Shagarab/Khashm el Girba) |
| GOUDSTIKKER, M. Jean-Michel | France | Field Officer (Wad Kowli) |
| GRISEWOOD, Ms. Elizabeth | UK | Administrative Secretary |
| HIGGINS, Ms. Margaret | UK | Field Officer (Wad Sherife) |
| KAENTRAKOOL, Mr. Sudang | Thailand | Programme Officer |
| LARSSON, Mr. Lars | Sweden | Operations Planning Advisor |
| LEMAITRE, Mr. Philippe | France | Field Officer (Kilo 26, Khashm el Girba, Karkora, Um Gargur) |
| MICHAELIS, Mr. Pierre | Switzerland | Emergency Programme Officer |
| MIHAJLOVIC, Mr. Nikola | Yugoslavia | Field Officer (Fau) |
| NESBIT, Dr. Richard | Australia | UNHCR/COR Health Advisor |

| | | |
|---------------------------|-----------|-----------------------------|
| NYIRENUA, Mr. Victor | Zambia | Programme Officer |
| ODASHIMA, Mr. Toshiro | Japan | Associate Programme Officer |
| PENA-GUZMAN, Mr. Fernando | Argentina | Field Officer (Um Rakuba) |
| QUARTIER, Mr. Jean | France | Logistics Officer |
| VIGNE, Mr. Piers | UK | Agriculturalist |

SUB-OFFICE PORT SUDAN, P.O. Box 220. Telephone 5057. Radio with UNHCR Khartoum

| | | |
|------------------------|-------|--------------------------|
| Vacant | | Head, Sub-Office |
| BHATTARAI, Mr. Pushkar | Nepal | Assoc. Programme Officer |
| WILKINSON, Ms. Zoe | UK | Asst. Logistics Officer |

SUB-OFFICE JUBA, UNHCR/FMRA Compound. Telephone 2534. Radio with UNHCR Khartoum and Yei.

| | | |
|-----------------------|------------|---------------------------------|
| O'KEEFE, Ms. Margaret | Ireland | Head, Sub-Office |
| EGEH, Mr. Abdi | Somalia | Assoc. Programme Officer |
| ISLAM, Mr. Aminol | Bangladesh | UN Volunteer (Logistics) |
| KARANI, Mr. Philip | Kenya | Repatriation/Protection Officer |
| TVEDT, Mr. Terje | Norway | Programme Officer (JPO) |

FIELD OFFICE YEI Radio with Juba.

| | | |
|--------------------------|-----------|---------------------------------------|
| JINADASA, Mr. Ariyavansa | Sri Lanka | Head, Field Office |
| PITTERMAN, Mr. Shelly | USA | Programme Officer (JPO) |
| SHRESTA, Mr. Madhukar | Nepal | UN Volunteer (Health Education) |
| ZAREEF, Mr. Abid Khan | Pakistan | Assist. Programme Officer (Logistics) |

FIELD OFFICE EL GENEINA Radio with UNHCR Khartoum

| | | |
|-------------------------|----------|--------------------------|
| MENEMENCIOLU, Mr. Ekber | Turkey | Head, Field Office |
| KAMIL, Mr. Abib O. | Somalia | Field Officer |
| KAVANAGH, Ms. Frances | Ireland | Administrative Assistant |
| SINGH, Mr. Juan | Malaysia | Associate Field Officer |

FIELD OFFICE NYALA Radio with UNHCR Khartoum

| | | |
|-------------------------|-------------|-------------------------|
| AMANING, Mr. Kingsley | Ghana | Field Officer |
| LANGENKAMP, Ms. Johanna | Netherlands | Programme Officer (JPO) |

APPENDIX 7

ASSISTANCE TO REFUGEES

Contributions to the UNHCR Sudan Emergency Programme
Cash and Kind as of 17.10.85

Eastern Sudan

I Contributions in response to the East Sudan element of the UNHCR Appeal for
Emergency Needs in Africa

US\$

A. Governments

| | |
|-----------------------------|------------|
| Australia | 556,100 |
| Austria | 183,486 |
| Belgium | 1,091,935 |
| Canada | 1,114,123 |
| Denmark | 2,238,961 |
| Egypt | 2,438 |
| Finland | 316,280 |
| France | 326,822 |
| Federal Republic of Germany | 5,289,500 |
| Ireland | 249,967 |
| Italy | 1,770,114 |
| Japan | 759,060 |
| Luxembourg | 70,175 |
| Netherlands | 688,422 |
| New Zealand | 331,207 |
| Norway | 1,145,865 |
| Oman | 557,700 |
| Sweden | 285,714 |
| Switzerland | 630,998 |
| UK | 4,330,249 |
| USA | 22,844,446 |

B. Intergovernmental Organizations

| | |
|-----|------------|
| EEC | 15,533,337 |
|-----|------------|

C. NGO and other donors

| | |
|--------------------------------------|---------|
| Africa Society of Japan (JAP) | 50,000 |
| Asahi Shimbun (JAP) | 866,003 |
| Association Blankets to Africa (JAP) | 447,927 |
| Austcare | 110,965 |
| Bandaaid (UK) | 81,250 |
| Caritas (FRG) | 200,667 |
| Churistu Rosen (JAP) | 176,482 |
| Danish Refugee Council (DAN) | 8,636 |
| Deutsche Stiftung (FRG) | 69,378 |
| Diakonischeswerk/BfdW (FRG) | 356,389 |
| Germanaid Baden (FRG) | 72,817 |
| Japan Times (JAP) | 27,115 |
| Mainichi Shimbun (JAP) | 40,000 |
| Norwegian Refugee Council (NOR) | 100,000 |
| Otsuka Pharmacent(JAP) | 121,384 |
| Soka Gakkai (JAP) | 133,094 |
| UN Association GBR (UK) | 2,682 |
| UN Association (JAP) | 3,704 |

* Does not include WFP food contributions

| | US\$ |
|-------------------------------|-------------------|
| U. of S-California USA | 473 |
| WUSC (CAN) | 62,500 |
| Yomiuri Hikauai Osaka | 809 |
| Yomiuri Shimbun | 289,160 |
| 24 Hour TV (JAP) | 102,855 |
| Private | 37,134 |
| UN African Emergency TF (UNO) | 3,400 |
| Total A, B, and C: | 63,681,723 |

II Contributions outside appeal budget requirements

US\$

| | |
|---------------------------------------|--------------------------|
| France | 85,789 |
| Federal Republic of Germany | 722,022 |
| Japan | 145,099 |
| Sweden | 888,889 |
| Switzerland | 3,552,174 |
| United States of America | 24,306 |
| EEC (IGO) | 2,225,000 |
| Africa Society of Japan (JAP) | 218,221 |
| Association Blankets Africa (JAP) | 4,466,130 |
| Caritas (FRG) | 13,627 |
| Churitsu Roren (JAP) | 9,289 |
| Diakon.work/Bfdw (FRG) | 13,627 |
| Germanaid Baden (FRG) | 9,836 |
| Japan Times (JAP) | 14,039 |
| Operation Hope (NZL) | 115,054 |
| Truck & Country Club (FRG) | 57,377 |
| Yomiuri Shimbun (JAP) | 221,617 |
| Sub total | <u>12,782,096</u> |
| Grand Total for Eastern Sudan: | <u>76,463,819</u> |

Western Sudan

III. Contributions in response to the West Sudan component of the UNHCR Appeal for Emergency needs in Africa

A Governments

| | |
|-----------------------------|-----------|
| Austria | 45,872 |
| Canada | 559,764 |
| Denmark | 218,182 |
| France | 684,375 |
| Federal Republic of Germany | 1,318,793 |
| Netherlands | 70,423 |
| Oman | 102,300 |
| Switzerland | 775,976 |
| U.K. | 351,617 |
| USA | 822,427 |

B. Intergovernmental Organization:

| | US\$ |
|-----|-----------|
| EEC | 2,491,797 |

C. NGO's and other donors

| | |
|-------------------------------|-----------|
| Asahi Shimbun | 255,319 |
| Caritas (FRG) | 16,469 |
| JRCC (JAP) | 18,130 |
| Japan Times | 9,615 |
| Norwegian Refugee Council | 100,000 |
| US Artists of Africa | 392,500 |
| Überlebenshilfe (FRG) | 3,250 |
| Private | 4,000 |
| Vereinüberlebenshilfe | 18,051 |
| UN African Emergency TF (UNS) | 94,000 |
| Sub Total | 8,352,860 |

IV Contributions outside appeal budget requirement:

| | |
|-------------------------------|------------------|
| France | 200,000 |
| Germanaid Baden | 6,557 |
| Sub Total | <u>206,557</u> |
| Grand Total for Western Sudan | <u>8,559,417</u> |

Note: The above list of contributions does not include funds contributed directly by or to agencies in support of the programme sectors implemented by them, unless such contributions have been reported to UNHCR Headquarters contributions to the High Commissioner's programme. Most of the implementing agencies listed in Annex VI have made substantial contributions of their own resources.

APPENDIX 8

ASSISTANT ACTIVITY TO REFUGEES

ORGANISATIONS ASSISTING REFUGEES

NAME

SECTOR OF ACTIVITY (key overleaf)

Eastern Sudan

| | | | |
|--|-----|----|--------------------------|
| American Refugee Committee | HE | CD | SA |
| CARE | AGR | FD | |
| Christian Outreach | HE | | |
| Comité Européen d'Aide aux Réfugiés (CEAR) | CD | | |
| Community Aid Abroad | ..E | | |
| Concern | HE | | |
| Euro-Action Accord | AGR | | |
| Fellowship for African Relief (FAR) | HE | | |
| German Disaster Unit (THW) | WA | | |
| GOAL | HE | | |
| Help the Aged | HE | | |
| International Rescue Committee (IRC) | HE | CD | |
| Lalmba Association | HE | CD | SA |
| League of Red Cross and Red Crescent Societies | HE | | |
| Médecins sans frontières (MSF) | HE | | |
| Mercy Corps International | WA | | |
| Oxfam | WA | | |
| Radda Barnen | CD | | |
| Rissho Kosekai | HE | | |
| Save the Children Fund (UK) | HE | | |
| Save the Children Federation (USA) | HE | | |
| Sudanaid | CD | SA | |
| Sudan Council of Churches (SCC) | HE | CD | SA |
| Swedish Special Unit for Disaster Relief (SSU) | HE | SE | WA |
| Swiss Disaster Relief Corps (SDR) | | | Vehicle Workshop (Shwak) |
| | HE | SE | WA |
| Swiss Red Cross | HE | | |
| Voluntary Service Overseas | CD | | |
| YMCA | HE | | |

Khartoum

| | |
|--------------------------------|----|
| International Rescue Committee | CD |
| YMCA | ED |

Port Sudan

| | | |
|-----------------------|----|---------------|
| CARE | WA | FD |
| Euro-Action Accord | CD | |
| LRCS | HE | (South Tokar) |
| Ockenden Venture (UK) | CD | SA |
| Sudanaid | HE | |

Central Region

| | | |
|--------------------------------------|----|----|
| Islamic African Relief Agency (IARA) | FD | HE |
| World Vision | FD | |

Southern Sudan

| | | | | | |
|-----------------------------------|------------------|----|-----|-----|-------------|
| ACROSS | SE | ED | GR | CD | WA Domestic |
| Foreign Missionary Society of the | | | | | |
| Protestant Episcopal Church | SE | ED | AGR | CD | |
| GTZ | SE | HE | ED | AGR | CD |
| Lutheran World Service | SE | HE | ED | AGR | CD |
| Médecins sans Frontières (MSF) | HE | | | | |
| Norwegian Church Aid (NCA) | SE | HE | ED | AGR | CD |
| WA | | | | | |
| OXFAM (UK) | WA | | | | |
| Sudanaid | CD (self-funded) | | | | |
| Sudan Council of Churches | SA | | | | |

Western Sudan

| | | |
|--------------------------------------|----|-----------------|
| ACROSS | SE | HE (Angitoki) |
| German Emergency Doctors | HE | (Asernei) |
| Goal | HE | (Foro Burunga) |
| Islamic African Relief Agency (IARA) | HE | (Asernei) |
| League of Red Cross and Red Crescent | | |
| Societies | HE | (Beida area) |
| MSF (Belgium) | HE | |
| OXFAM (UK) | HE | WA |
| Save the CChildren Fund (UK) | SE | HE FD (Umballa) |
| Sudanese Red Crescent Society | HE | (Beida area) |

| | |
|-----|---|
| AGR | Agriculture |
| CD | Community development and income-generation |
| ED | Education |
| HE | Health Care (including supplementary feeding) |
| SA | Social services |
| SE | Settlement establishment |
| WA | Water supply |
| FD | Food distribution |

APPENDIX 9

REQUIRED TIME DURATION FOR DRILLING AND REHABILITATION OF BOREHOLES

1. Required Time Duration for Drilling of Boreholes

| <u>Work Item</u> | <u>No. of Days</u> |
|--------------------------|--------------------|
| Temporary Work | 6 |
| Drilling | 17 |
| Logging | 2 |
| Casing | 4 |
| Completion | 3 |
| Pump Test | 4 |
| Disassembling and Travel | 3 |
| TOTAL | 39 |

2. Required Time Duration for Rehabilitation of Boreholes

| <u>Work Item</u> | <u>No. of Days</u> |
|---------------------------|--------------------|
| Temporary Work | 1 |
| Removal of Facilities | 1 |
| Sand Drain | 2 |
| Cleaning | 3 |
| Sand Drain | 1 |
| Pump Test | 3 |
| Installation of Machinery | 1 |
| Disassembling and Travel | 1 |
| TOTAL | 13 |

APPENDIX 10

STAFF LIST OF KASSALA TOWN WATER SUPPLY

STAFF LIST OF KASSALA TOWN WATER SUPPLY

Technical Sections

| Job Description | Job No. |
|---|---------|
| Senior Water Engineer | 1 |
| Distribution Engineer | 1 |
| First Forman distr. mains | 1 |
| First Forman Resources | 1 |
| Water Meters Forman | 1 |
| New connection forman | 1 |
| Pump Stations Chargehand | 1 |
| Distribution mains Chargehand | 1 |
| Water Meters Insp. & maing Chargehand | 1 |
| " " " Leading artizan | 2 |
| Distribution mains leading " | 4 |
| Pump Operation Shift leading artizian | 5 |
| Distribution shifts & emergency leading art. izian. | 3 |
| Meters Mechanic & Inspector | 4 |
| Pump operation shift | 5 |
| Pipe filters cl. one | 4 |
| Pipe filters cl. two | 13 |
| Distribution Assistants | 30 |
| Pump Operation Assistants | 5 |

STORES SUPPLIES SECTION:-

| | |
|-------------------------|---|
| Senior Supplies Officer | 1 |
| Store Keeper | 1 |
| Asst. Store Keeper | 1 |
| Store men | 6 |

ACCOUNTS SECTION

| Job Description | Job No. |
|-------------------------------------|---------|
| SENIOR Inspector of Accounts | 1 |
| Revenu Accounts Inspector | 1 |
| Senior Ledger Keeper | 3 |
| Ledger Keepers | 13 |
| Consumers Record Registration Clerk | 1 |
| Senior Casheir | 1 |
| Casheir | 1 |
| Heter Reading Inspector | 1 |
| Heter Reading & bill distributors | 17 |
| Hea Accounts, general Accounts | 1 |
| Accounts, general Accounts | 6 |

PERSONNEL SECTION

| | |
|-----------------------------|---|
| Establishment Officer | 1 |
| Asst. Establishment Officer | 2 |
| Social Insurance Clerk | 1 |
| Clerks | 5 |
| Typist | 3 |

GENERAL SECTION

| | |
|-------------------------|---|
| Head Guardsman | 1 |
| Guardsmen | 6 |
| Garneners | 2 |
| Hessenger | 5 |
| Emergency Call receiver | 3 |

RESOURCES & DISTRIBUTION MAINTENANCE WORKSHOP

| | |
|---------------------|---|
| Workshop chargehand | 1 |
| Mechanical Filters | 3 |
| Assistants | 3 |

TRANSPORT SECTION

| Job Description | Job No. |
|-------------------|---------|
| Head Car Driver | 1 |
| C ar Drivers | 5 |
| Garrage Mechanic | 2 |
| Assistants | 2 |
| Garrage Labourers | 3 |

JICA