



NURP water and sanitation component

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THE NURP WATER and Sanitation Component was part of the multi sectoral Northern Uganda Reconstruction Programme of the Of rice of the Prime Minister. It consisted of three main areas of intervention. These were Rural Water and Sanitation Urban Water and Sanitation and Institutional Support.

The **Rural Water and Sanitation** Sub-component consisted of drilling of 360 boreholes and the installation of the their handpumps to be carried out by the Directorate of Water Development of the Ministry of Natural Resources and the establishment of a Community Based Maintenance system with the assistance of a District Based NGO. The number of boreholes drilled in each district were as follows. Kitgum 45, Gulu 38, Lira 52, Apac 36, Soroti 43, Kumi 31 and Arua 52. In addition to the borehole drilling, there was an introduction of small water supply technologies with the involvement of the District AGO. The **Urban Water and Sanitation** Subcomponent consisted of the minor rehabilitation of water supply and sanitation systems in the towns Arua, Moyo, Soroti, Kumi, Pallisa, Dokolo and Kitgum. This minor rehabilitation was aimed at making water supply and sewerage systems operational and avoid any expansions of the existing systems. In addition, in the spirit of current legislation (Water Act 1995), the Directorate of Water Development would facilitate in the formation of Joint Management Committees which are the Water User Associations that would supervise the running of the schemes in the future.

The **Institutional Support** Sub-component consisted of

- Training of the Directorates staff both at headquarters and the Districts;
- Rehabilitation of District Water Offices in the Districts of Gulu, Lira, Apac, Kumi, Soroti and Kitgum;
- Rehabilitation of the Regional Workshops in Gulu and Soroti;
- Rehabilitation of Hydrological stations in the project area;
- Procurement of Equipment and vehicles.

The **Objectives of the project in the rural areas** were to increase the overall national coverage by point sources. This would relieve especially women and children the burden of travelling long distances to collect water. Their energies would therefore be available for more productive agricultural/industrial activities, in the case of the women and for the children they should be able to spend more time on their education. The provision of additional sources

coupled with Hygiene and health Education and safe disposal technologies for human excrete, the project intends to reduce the incidence of waterborne diseases like, diarrhoea, dysentery, typhoid and guinea worm infection in Kitgum District and some parts of Arua District where it is endemic. The overall impact would be to improve the quality of life.

The creation of a **Community Based Maintenance system** through the involvement of the community in site selection procedures, the establishment of a village water and sanitation committees, community mobilization and sensitisation, hygiene and health education, the training of handpump mechanics is a positive step toward achieving sustainability of rural water supplies in general.

In the urban areas the rehabilitation of the water supplies and sanitation systems intends to provide the community with potable water, reduce on water borne diseases and the community spend less time on collecting water and more time on productive ventures like business and industries. The establishment of a **Joint Management Committees** will enhance the potential of the management of their own affairs. This will pave way for the future sustainability of the schemes. By providing Institutional Support through the training of staff, rehabilitation of facilities and the provision of equipment and vehicles, the capacity of the Directorates' staff to perform their functions efficiently and effectively will be improved. This will enable them to execute both their project duties and their regular assignments in a more imaginative and purposeful manner.

Organization and management

At the Headquarters of the Directorate of Water Development was a **Project Coordinator** represented the Director in the day to day running of the project activities. He was assisted on the rural water and sanitation sub-component by a **Technical Advisor** (a national consultant) and they both reported to the **Commissioner Rural Water, Department**. The Commissioner Rural Water Department was the **Liaison Officer** for DWD with the **Office of the Prime Minister**.

For the Urban water and sanitation sub-component there was a **Project Engineer (Urban)** who was directly responsible. He was assisted by two national consultants - a **Civil Engineer** and an **Electro-Mechanical Engineer**. The Project Engineer (Urban) reported to the **Commissioner Urban and Institutional Water Department**. The Project Coordinator in addition was assisted by an **Accountant, a Drilling Supervisor** (an Expatriate) with

his **Counterpart Drilling Engineer, a Hydrogeologist and a Water Quality Chemist**. The Project Coordinator dealt with the **District Water Officers** who carried out the supervision of the drilling, and NGOs and the rehabilitation of district facilities. In addition he dealt with the NGO staff in Kampala and the **Commissioner Water Resources Management Department for the rehabilitation the hydrological stations. The District Water Officers were directly responsible to the Commissioner Institutional and Support Services Department**. In addition to the above organogram, there was second additional organisational structure called the **Drilling Organogram**. This was headed by Drilling Supervisor/Counterpart, Drilling Engineer and DWD Drilling Superintendent. This structure was entirely responsible for carrying out all the drilling operations. Under the Drilling Superintendent there was a **Workshop Foreman** who was in charge of the workshop and stores two **Site Supervisors** in charge of the **Units 41, 29, and 39** and a **Pump Installation Supervisor** in charge of 2 **Pump Installation Units**.

The other level of management was done at the District level. The structures that were utilized were those which had been established under a Project sponsored by UNICEF the WATSAN. There was the District Steering Committee chaired by the **Resident District Commissioner (political)** which met quarterly to approve workplans and review progress while the **District Management Committee** chaired by the **Chief Administrative Officer** (civil service) met monthly and was responsible for the day to day running of the project. The **District Water Officer** is a member of both and so is the **District NGO**. Below the District Management Committee is the **Sub-County Water and Sanitation Committee** still further below is the **Village water and sanitation committee** as shown on Fig 1.

As mentioned above, the project benefited from the presence of community management structures and trained personnel set up by WATSAN. These included the county and subcounty water and sanitation committees, trained masons, trained pump mechanics and District and sub-county depots for handpump distribution. It would serve at this point to mention the role of the main partners during the project execution. These were the District Water Officer, the District NGO and the Directorate of Water Development these roles were further elaborated in the **Letter of Understanding** that was signed in each district between the different parties. In the LOU the District Administration was represented by the Chief Administrative Officer.

These roles were as follows:

- District NGO
 - a) They provided assistance to the Local Councils in community participation techniques, health education, technical training to borehole caretakers, pump mechanics and masons.
 - b) They certified the successful boreholes based on the yield and headworks installation.
- c) The NGO coordinated between the Ministry of Local Government the Ministry of Health and Ministry Gender and Community Development.
- d) They assisted both the District Steering Committee and District Management Committee in identifying the needs and execution at subcounty level.
- Directorate of Water Development
 - a) To prepare workplans and implementation schedules.
 - b) They provided the equipment, casings and logistical support sited boreholes, drilled the borehole, carried out the pump test, tested the water quality installed the handpump and stored the equipment and materials for the project.
- District Water Officer
 - a) The District Water Officer provided supervision of all the activities at the District level.
 - b) He further assisted in the mobilization of the communities with the NGO's.
 - c) He assisted the Urban consultants with preparing the documentation for the rehabilitation works and supervised the construction under force account
 - d) He prepared the Bills of Quantities for the rehabilitation of the District Water Offices and Regional workshops.

and supervised the implementation of these activities using the force account method.

The Office of the Prime Minister, **NURP Coordinating, Monitoring and Evaluation Unit (CMEU)** was overall in charge of the project and in this arrangement DWD was drilling boreholes for the client represented by the **Permanent Secretary Office of the Prime Minister**. At the project level he was represented by the **Head of NURP, CMEU**.

At the District level he was represented by the **District NURP Omcer**. Communication channels with the donor IDA World Bank were through the line ministries seeking no objections to procurement decisions or through the CMEU for the overall policy framework.

World Bank Supervision Missions were conducted at various intervals during the project period of at least three times a year. A major supervision mission was the **Mid Term Review of October 1994**. This mission among others facilitated the movement of the rigs because of insecurity from Kitgum and Gulu Districts to Lira and Apac Districts respectively. DWD was further encouraged to follow the original workplan with an execution period of three years.

In order to facilitate early completion of the project DWD were to seek alternative means of achieving the targets i.e by hiring NGO's or private drilling companies to carry out the drilling. These proposals were implemented by DWD and the targets were met. **Annual Implementation workshops** were held in Gulu in February 1993 in Nebbi in January 1994, in Soroti, August 1994 and in Gulu in June 1995.

Supervision was carried out by the DWD Headquarters based staff quarterly.

Procurement

The **Procurement for Goods and Services** were carried out using various methods of Procurement according to the World Bank Guidelines.

These were National shopping, International Competitive Bidding, National competitive Bidding Direct Contracting, and Others. Under **National Shopping** at least 3 quotations of items specified were sought nationally or internationally and then evaluated. At the stages of specifications, opening of tenders, evaluation of tenders approval of the **NURP Procurement Committee** was sought and finally **Central Tender Board Authority** was obtained. The goods procured under this category of procurement included, Bentonite, Drilling foam, Unipots, camping tents, generators workshop tools, handtools, computers, photocopier, typewriters, office, furniture, engineering drawing equipment survey equipment, hydrological equipment water quality testing equipment and **geophysical equipment**. Under **International Competitive Bidding** the tenders are advertised internationally. The purchasing of the tender documents was done at DWD Headquarters, the opening of tenders was done at the Central Tender Board. The evaluation report was prepared by DWD, sent to the NURP Procurement Committee for approval and then to Central Tender Board for Authority to procure. After obtaining Central Tender Board Authority the evaluation report was sent to the World Bank for no objection. The goods procured under this category were two sets of casings, the service rig test pumping equipment pumps, pipes and fittings for urban water supply vehicles trucks and motor bikes. The procurement of vehicles trucks and motorbikes was done centrally by the Office of the Prime Minister.

National Competitive Bidding is similar to International Competitive Bidding but here the advertisement is done nationally. The subsequent steps were exactly the same. Contractors for the urban water supply were procured under this category. Under **Direct Contracting**, quotations were solicited from a particular supplier, who are sole agents of those items to be procured for instance. This was done in the case of spare parts for the rigs and radio sets, and later hand pumps. Procurement under the category Others, included procurement through UN Agencies. In this case Handpumps were initially procured through **UNICEF**.

Progress and problems

The following description provides a summary of the activities carried in each of the districts under the **Rural Water and Sanitation** sub-component.

The following steps were culminated in the drilling of a borehole.

- Introductory meeting at subcounty level.
- Formation of village water and sanitation committee.

- Hydrogeological survey of proposed sites.
- Community mobilisation at conformed site.
- Drilling of the Borehole.
- Certification and handing over.

On Certification of a successful borehole by an NGO, the DWD would be paid a fixed amount of US\$5050 per borehole as operational costs. A successful borehole was one which yielded 0.15 l/s or 0.5m³/hr

Kitgum district

A letter of understanding was signed with AVSI in August 1993 to carry out the mobilisation, certification and other WATSAN activities. The main problem encountered in Kitgum was the insecurity prevailing at the time, especially from January to September 1994. This culminated in a decision by the mid-term review of October 1994, to move the rig to Lira. This move was effected in November 1994. AVSI in addition, did some work on rain water harvesting tanks and on VIP's latrines. The NGO CARE is drilling the remaining boreholes in Kitgum to date.

Gulu district

The main problem encountered in Gulu was similar to that of Kitgum and that was insecurity; culminating in moving of the rig and attendant crew to Apac District in the month of October 1994. **ACORD** were active in the area of mobilization and producing translated pamphlets for distribution.

Apac district

A significant problem experienced here was the poor success rate in borehole drilling particularly in Kioga county near the Lake Kyoga. This was due to a deep bed rock. This problem was addressed by relocation of the borehole sites away from the lake shores. **Food for the Hungry International** were active in the mobilization of the communities and formation of the Water Committees.

Lira district

During the drilling in Lira District, the only problem experienced was the breakdown of the rig. Food for the Hungry International were active in the mobilization of the communities and the formation of water committees.

Soroti district

A memorandum of understanding was signed in March 1995 between DWD and **Ms Drillcon** for Drillcon to manage the drilling in the districts of Soroti and Kumi. A problem experienced here was the temporary shortage of casings. This was however alleviated by receiving casings on loan from other projects. These were replaced when the casings procured by NURP through International Competitive Bidding procedures arrived. **Youth with a mission** were active in the mobilization of communities and the formation of committees. **Kumi District Drillcon** managed the drilling in Kumi district based on the memorandum of understanding signed as mentioned above. The prob-

lem experience was similar to that above which was the temporary shortage of casings, and it was resolved in the same manner. **Arua District** A letter of understanding was signed between DWD and CARE for CARE to manage the drilling and the mobilization in Arua District. It should be noted that this particular operation proceed very smoothly with only a few breakdowns of the rig. CARE mobilized the communities drilled the boreholes and the District authorities certified the boreholes. Another problem experienced was a delay is the disbursement of funds to the field staff. This caused loss of morale and absenteeism resulting in lower production. The delay in disbursement of funds to the headquarters resulted h lack of spares and provision once again affecting production. Under the **Urban Water and Sanitation sub component**, one main problem was the procurement of pipes and fittings for the works implemented under the force account (direct labour) method. These pipes fittings and other materials arrived late and this disrupted the work schedules; this was coupled by intermittent payments. Furthermore there was insufficient management capacity at the district and this too caused delay. Another problem was the cost overruns. Initial budgetary provisions were inadequate for the contracted works which were Arua, Kumi and Soroti water supply.

Joint Management Committees were established but cash flow projections indicated that the rehabilitated water works could not be self sufficient and still required subsidies from the Central Government. The Joint Management Committees consisted of Chief Administrative Officer, District Water Officer, the Local Council Chairman, Heads of Institutions and local dignitaries up to 11 members. Under the **Institutional Support sub component** the rehabilitation of the district facilities proceeded satisfactorily except for delays in disbursement of funds to the districts. The training of staff was very successful. It generated at lot of enthusiasm from all these who participated. Improved performance was observed and all headquarters staff become computer literate. Under training there were both internal and external workshops, conferences and seminars and training courses.

Conclusions

The process gave first hand experience on the problems associated with the implementation of projects in the public sector and the strategies initiated in solving them DWD acted as a contractor and performed reasonably well. Our planned target was four boreholes per rig per month. However a private contractor can do up to ten boreholes per month. This is partly because his staff are highly motivated, he would like to minimise on overheads and maximise profit. He would have little problems obtaining spares for the rigs or casings and hand pumps that were often in short supply and had to await Government bureaucratic procedures. Furthermore in the areas of insecurity a private contractor would have declared

force majeure. The rigs were idle for several months awaiting a decision on their movement. The intermediary approach of using an AGO appeared to be very attractive as exemplified by the success in Arua District. The NGO CARE drilled boreholes quickly and satisfactorily, with a rig, casings, and handpumps provided by DWD. The problem with full scale privatisation, is that the costs per borehole will be very high (up to US\$ 15,000) and out of reach of the rural convey who still have inadequate coverage of safe water supplies. It was therefore recommended that Government retains some rigs and creates a borehole drilling unit. This unit could be independent and self accounting. The initial capital outlay could be provided by Government and revenue will be obtained from drilling operations at agreed rates. This unit would be able to compete alongside other private companies for tenders in drilling. When the capacity is overstretched, some clients may opt to contract private drilling companies at higher costs. If the unit is effective, it will increase its assets and capacity with time if not market forces will steer it along a different path.

In the future planning of a project for the Directorate of Water Development the area of intervention should be taken into account the department under which the project will be executed. Either rural or urban or institutional support services or water resources management. This project showed the strengths of this approach for instance the rehabilitation of the district offices and regional workshops were executed by the District Water Officers under the Commissioner ISSD the rehabilitation of hydrological stations came under the Commissioner water resources management and the urban water supplies under the Commissioner Urban and Institutional Water Department. In this connection, at the appraisal stage of any project, the headquarters staff must be fully involved in all activities and not leave is solely to the District staff who may lack knowledge and experience. This will reduce problems of major cost overruns that were experienced in the urban water sub-component. The Procurement procedures under the project were quite elaborate. The usual process of procurement involved at least eight steps for local shopping and thirteen steps for international competitive bidding. This significant number of steps was because of the multisectoral nature of the project where the proposals had to presented before the NURP Procurement Committee in the Office of the Prime Minister. Initially these steps were difficult to follow but with experience all the steps were covered in much shorter period.

Projects implemented under individual sectors are much easier to implement than multisectoral ones. There can be gained in procurement, disbursement and overall project execution.

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