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Centre
Kampala
Uganda

Four Districts Water, Hygiene and Sanitation Programme, Uganda

Main Project Report — Volume 1



October 1999



Water, Engineering and Development Centre
in association with
Kagga and Partners Ltd, Kampala
Mott MacDonald International, Cambridge

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Department for International Development East Africa DFIDEA

**4 Districts Water, Hygiene and Sanitation
Programme: Uganda
CNTR Ref: 99 7763**

Main Project Report - Volume 1

October 1999

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List of Acronyms

| | |
|--------|--|
| ACAO | Assistant Chief Administrative Officer |
| AIC | Average Incremental Cost |
| CAO | Chief Administrative Officer |
| CBO | Community Based Organisation |
| CDA | Community Development Assistant |
| CHW | Community Health Worker |
| CFO | Chief Finance Officer |
| DEO | District Environment Officer |
| DFID | Department for International Development |
| DFIDEA | Department for International Development for East Africa |
| DHE | District Health Educator |
| DHI | District Health Inspector |
| DMO | District Medical Officer |
| DMT | District Management Team |
| DPO | District Planning Officer |
| DWD | Directorate of Water Development |
| DWO | District Water Officer |
| EHD | Environmental Health Division |
| EIRR | Economic Internal Rate of Return |
| GDAP | Groundwater Development Action Plan |
| GoU | Government of Uganda |
| HA | Health Assistant |
| HI | Health Inspector |
| IMSC | Inter Ministerial Steering Committee |
| IRC | International Water and Sanitation Centre |
| KDDP | Katakwi District Development Programme or Kumi District Development Programme |
| LCI | Local Council village level |
| LCII | Local Council parish level |
| LCIII | Local Council sub-county level |
| LCIV | Local Council county level |
| LCV | Local Council district level |
| LDDP | Lira District Development Project |
| MIS | Management Information System |
| MoF | Ministry of Finance, Planning and Economic Development |
| MoH | Ministry of Health |
| MoLWE | Ministry of Lands, Water and Environment |
| MoLG | Ministry of Local Government |
| MOU | Memorandum of Understanding |
| NEMA | National Environmental Management Agency |
| NGO | Non Governmental Organisation |
| O&M | Operation and Maintenance |
| PAC | Public Accounts Commission |
| PEAP | Poverty Eradication Action Plan |
| PHAST | Participatory Hygiene and Sanitation for Transformation |
| PHC | Primary Health Care |
| PIA | Programme Implementation Advisor |
| PRA | Participatory Rural Appraisal |

| | |
|--------|---|
| PSP | Private Sector Participation |
| PSU | Programme Support Unit |
| RUWASA | Rural Water and Sanitation (DANIDA Programme) |
| TPC | Technical Planning Committee |
| UNPAC | Uganda National Plan of Action for Children |
| USh | Uganda Shillings |
| W&S | Water and Sanitation |
| WEDC | Water, Engineering and Development Centre |
| WELL | Water and Environmental Health at London and Loughborough |
| WES | Water and Environmental Sanitation (UNICEF Programme) |
| WSC | Water Source Committee |

1. Introduction

This Project Report provides the detailed findings and data which support the Project Submission for the DFID 4 Districts Water, Hygiene and Sanitation Programme. The work to prepare the detailed design for this programme was carried out in Uganda by a team of consultants from the Water, Engineering and Development Centre (WEDC), Kagga and Partners and Mott MacDonald between 5 July and 10 September 1999. The Project Report is presented in two volumes: Volume 1 contains the synthesis of the collected data and the recommendations which form the basis of the Project Submission and Volume 2 contains 15 Appendices which contain supporting data and detailed information on the four districts.

Section 2 of this report provides background information on the conceptualisation and development of the 4 Districts Programme and puts it into the context of DFID's bilateral programme for Uganda.

Section 3 describes the rationale behind the programme and describes in some detail the methodology which was adopted by the team in order to design the programme.

Section 4 examines the compatibility of DFID and GoU policies and discusses the key GoU policies which provide the framework for this programme.

Section 5 provides an overview of the other major water and sanitation projects which are on-going nationally and in the programme area. There are important lessons to be learned from the experience of other bilateral and multilateral donors and also from NGOs.

Section 6 provides a profile of the natural environment in the four districts and includes information on meteorology, hydrology, groundwater and potential environmental impacts.

Sections 7, 8, 9 and 10 provide detailed profiles of Katakwi, Apac, Lira and Kumi districts respectively. These sections contain socio-economic data derived from a range of secondary sources and also provide detailed relevant information gained from the extensive consultations and primary data collection exercises carried out by the team. Each section ends with an analysis of the key design issues arising which have been used to guide the programme design.

Section 11 discusses the overarching key design issues for the four districts which need to be taken into account in designing and implementing the proposed programme.

Section 12 is a draft version of the Project Submission which was prepared at the end of this consultancy for consideration by DFIDEA Advisors. It is important to note that this is only a first draft of the Project Submission and it will be further refined and amended before submission for approval at the end of 1999. However it provides the indicative scope of the programme which is being proposed.

The list of Appendices in Volume 2 is as follows:

- Appendix 1: Schedule of People Met and Field Work Undertaken
- Appendix 2: List of Documents and References
- Appendix 3: Sample Checklists

- Appendix 4: District and Sub-county Institutional Profiles
- Appendix 5: *Not used*
- Appendix 6: Community Profiles and Maps from PRA
- Appendix 7: Sample Household Survey Questionnaire
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- Appendix 9: Population Projections and Demand Forecasts
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- Appendix 13: *Not used*
- Appendix 14: District Revenues and Expenditures
- Appendix 15: Detailed Financial and Economic Analysis

Volume 2 is bound separately and should be consulted for more detailed information on activities undertaken during design of the programme and data on the four districts.

2. Background to Programme

In 1998 DFIDEA identified the potential to increase bilateral funding to the Ugandan water and sanitation sector. A two-phase scoping study was carried out by a team of WELL consultants between April and June 1998 and the four districts of Katakwi, Apac, Kumi and Lira as shown in Figure 2.1 were prioritised for a possible DFID-funded water, hygiene and sanitation programme. A Project Concept Note (PCN) outlining the conceptual design of a 4 Districts Programme was prepared in collaboration with DWD; the PCN was approved by DFID Senior Management in January 1999.

This Project Report details the findings of the two month consultancy to carry out the detailed design for the programme approach. The design phase has involved extensive stakeholder discussions and consultations both at national level and in the four districts. The objectives of the design phase were:

1. To collect quantitative and qualitative information in the four districts to enable DFID to make informed decisions on contributing to poverty eradication through support to the water and sanitation sector; and
2. To recommend a sound programme approach in line with national policy and other on-going programmes in the sector.

The recommended programme design has been proposed in a Draft Project Submission which was prepared in accordance with DFID requirements. A preliminary draft of the Project Submission is included in Section 12. However this will be amended as a result of comments and feedback from the DFIDEA Advisors. The final Project Submission will be put through the DFID approval process which is required for all bilateral commitments over £250,000. If this process progresses as planned then it is anticipated that the 4 Districts Programme can commence in April 2000.

UGANDA DISTRICTS JULY, 1997

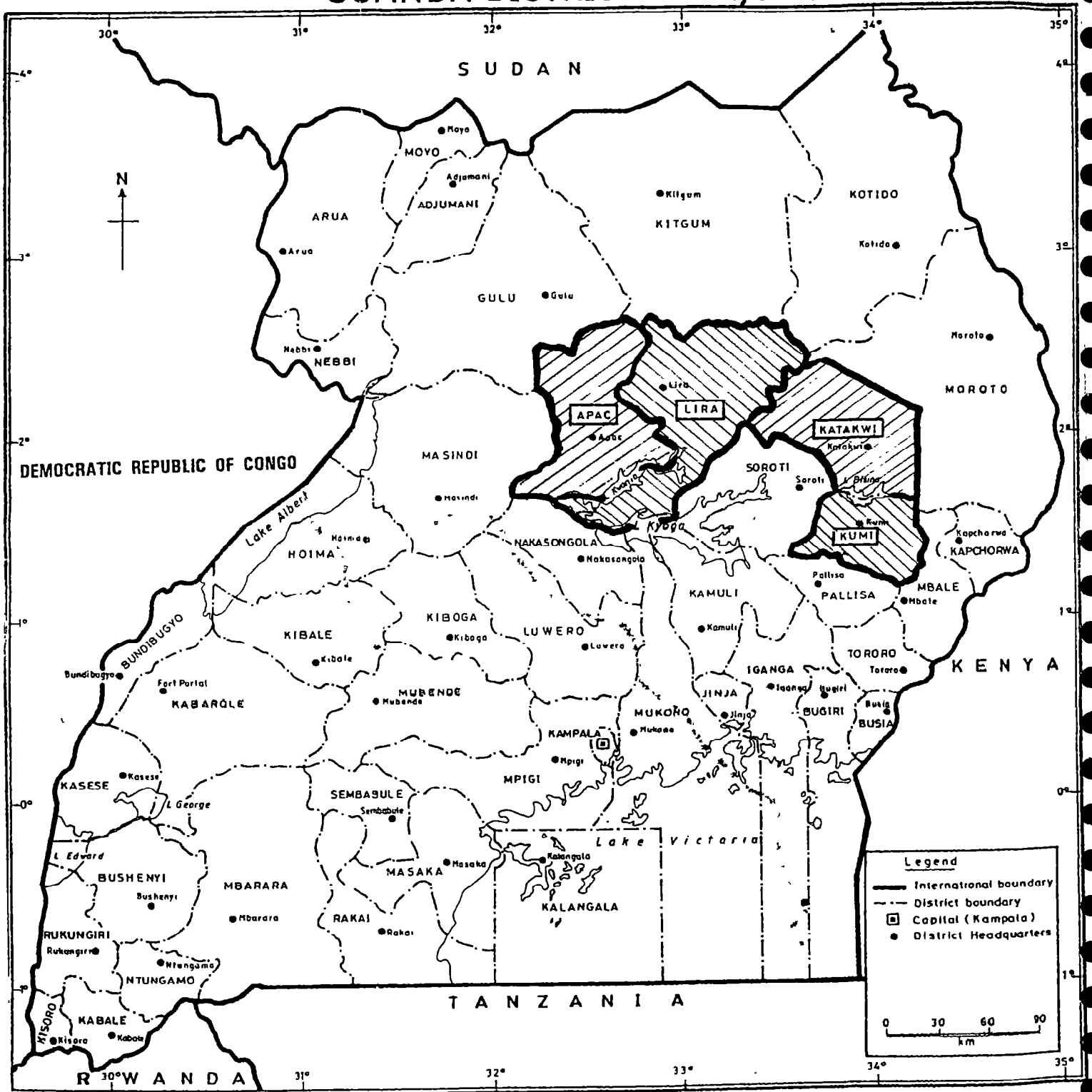


Figure 2.1 Location Map of Four Districts Programme Area

3. Rationale and Approach to Study

3.1 Introduction

The proposed 4 Districts Water, Hygiene and Sanitation Programme needs to be designed within the context of the British Government's 1997 White Paper on International Development: this sets out a clear commitment to focus development assistance on the poorest and most marginal communities in order to contribute to "the elimination of poverty in poorer countries". More specifically the White Paper defines three objectives:

1. Policies and actions which promote sustainable livelihoods
2. Better education, health and opportunities for poor people
3. Protection and better management of the natural and physical environment

The goal of the 4 Districts Water, Hygiene and Sanitation Programme, which had already been defined in the preceding phase of this study as "Empowering communities, and in particular the rural poor, to make sustainable improvements to their well-being", is directly linked to DFID development objectives. This programme also needed to be designed in accordance with DFID Uganda Country Strategy Paper and the Ugandan government's policies and national framework as set out in Section 4.

3.2 Team Composition and Training

The team of British and Ugandan consultants was selected in order to obtain the right skills mix, local knowledge, previous knowledge of phase I and II studies and an understanding of DFID and GoU policy and objectives. The team and their inputs on the programme design are summarised in table 3.1 below.

Table 3.1 Team Composition and Inputs

| Name | Organisation | Role | No. of days UK | No. of days Uganda |
|--------------------------|------------------|------------------------------------|-------------------|-----------------------|
| Sarah Parry-Jones | WEDC | Team Leader and water/sanitation | 5 | 55 |
| Joseph K Kabanga | Kagga & Partners | Deputy Team Leader and W&S | 0 | 30 |
| Richard Cullen | Mott MacDonald | Water resources & QA | 10 | 25 |
| Emmanuel Ssewankambo | Kagga & Partners | Institutions/community development | 0 | 49 |
| Fred Kyayi | Kagga & Partners | Socio-economic survey specialist | 0 | 49 |
| Liz Juppenlatz | Mott MacDonald | Social development | 2 | 50 |
| Sean Murphy | Mott MacDonald | Finance and economics | 2 | 18 |
| Leoni Postma/Evelyn Bolt | IRC | Hygiene and sanitation promotion | 1 | 27 |
| Ian Smout | WEDC | Project management and support | 3 | 0 |

The core team participated in a three day training exercise in Kampala on DFID project cycle management at the start of the two month consultancy. This training was extremely useful in helping all team members to focus on the programme objectives and wider context. It also ensured that everyone was familiar with tools such as the Logical Framework,

Stakeholder Analysis and Risk Analysis. The training period also assisted in team building and developing a sense of common purpose.

3.3 Programme of Activities

The outline programme of activities undertaken by the team is shown in Figure 3.1. Since the proposed programme approach is to be developed in close partnership with national and local government it was important to hold meetings and consultations with all the relevant ministries at national level as well as the local government authorities at district and lower levels. The team therefore spent the first two weeks in Kampala to ensure that all key national stakeholders were consulted. This included relevant staff in ministries, other bilateral and multilateral donor agencies such as Danida and Unicef and NGOs working in the programme area.

The team's aim was to maximise the amount of time spent in the four districts at field level in order to obtain data to inform the design. The original Terms of Reference suggested that the focus of this field work should be in Katakwi district. However WaterAid recently decided to focus on working with their existing NGO partners in Katakwi and they carried out a detailed scoping study of the district in June 1999. It was therefore agreed with DFID that the team should concentrate their efforts on the other three districts although Katakwi would still be included in the programme. The revised programme allowed the team to spend one week in Katakwi and approximately 10 - 11 days in the other three districts. The same approach to consultation and data collection was adopted in each district. A detailed schedule of the field work and meetings undertaken is included in Appendix I (Volume 2) to this report.

3.4 Field Work Methodology

The field work methodology was developed with the whole team and needed to take into account the requirements of the ToR, the limited time available, optimal use of the two project vehicles, language constraints and training needs of field enumerators and facilitators. The same approach, as outlined below, was adopted in each of the four districts but it was important to remain flexible and adaptable to fit in with local conditions and availability of key people.

3.4.1 Consultations at District Level

The initial contact was made with the Chief Administrative Officer (CAO) to explain the purpose of the visit and to ask for assistance in information gathering and consultations. The CAO and the Assistant CAO for WES would then help to set up the relevant meetings at district level. The key people to meet included the DWO, DHI, DMO, DEO, DPO, CFO etc. However, the actual meetings depended on the availability of staff (many were away attending workshops) and whether or not the positions were currently filled.

- Meetings with technical staff aimed to gather information on the current role the district administration is playing in delivery of water and sanitation services and also how far the administration had progressed with the process of decentralisation. Checklists were used to ensure that the same type of information was gathered in each of the four districts. These are shown in Appendix 3 (Volume 2).

- Representatives from the political wing - normally the LCV Chairperson and RDC - were met wherever possible. It was considered important to ensure that the politicians were fully informed of the programme and the team's activities in the district. However, due to the short time spent in each district and the limited potential for arranging meetings in advance it was not always possible to meet these key people.
- Meetings with NGOs, CBOs and other organisations or groups active in the water and sanitation sector were arranged wherever possible. In order to gain an insight into the work these organisations are doing project sites were normally visited with appropriate technical staff.
- Donor programme co-ordinators for the Netherlands and the Irish Aid multi-sector programmes were met in Kumi, Soroti and Lira. This provided a useful insight into the success and challenges of ongoing programmes.

3.4.2 Selection of Sub-counties for Field Work

In Apac, Kumi and Lira districts the team had four days to carry out data collection and consultations at sub-county, parish and village level. It was therefore important that the field work locations were selected to provide a representative snap-shot of the existing water, hygiene and sanitation situation and problems. The approach adopted was to select four different sub-counties within a district to provide a broad picture: the criteria used for selecting these sub-counties included geographical spread, population density, range of water resources, capacity of sub-county administration, revenue base, presence of other players in the sector and other location-specific issues such as dry-land communities, fisherfolk and incursions from the Karamajong. These sub-counties were generally selected in discussion with the district technical staff but it was found important to avoid formal meetings being set up at sub-county level because these led to raised expectations and hindered consultation at the lowest level.

3.4.3 Consultations at Sub-county Level

One day was spent in each of the four selected sub-counties in each district. Initial contact was made with the sub-county administration; depending on availability the key people normally met were the sub-county chief, chairperson and sub-accountant. Wherever possible the Health Assistant (HA) and Community Development Assistant (CDA) were also met. Checklists were used for these meetings as shown in Appendix 3.

The meetings with sub-county staff gave a useful insight into the degree to which decentralisation had taken effect, the impact of ongoing capacity building and training activities, the availability of resources at sub-county, the level of communication and co-ordination between LCI, LCII, LCIII and LCV representatives and current attitudes and practices in water, hygiene and sanitation. The chief and chairperson were generally extremely co-operative and were keen to discuss the problems and constraints which they faced in trying to deliver services.

3.4.4 Selection of Parishes and Villages for Field Work

The selection of parishes and villages in which to undertake field work was done through discussions with the sub-county staff and similar criteria were used as for the selection of sub-counties. In order to obtain a representative overview of the sub-county as well as gaining an in-depth perspective of problems and attitudes at village level, the team split into

two groups for the purposes of data collection. One group aimed to visit at least five villages in different parishes to obtain breadth of data whilst the other group selected one village in which to carry out participatory data collection for an in-depth analysis. All these locations were selected with the assistance of the sub-county staff.

3.4.5 Data Collection at Village and Household Level

As mentioned above, the team of consultants divided into two groups for the purposes of data collection at field level. This approach was very successful and allowed maximum use of the resources available to obtain a good balance of qualitative and quantitative data.

The two teams were comprised as follows:

A “technical” team lead by the water and sanitation engineer.

This team visited at least five villages each day. The villages were selected to demonstrate a range of water sources and sanitation problems. The team visited the sources, carried out water quality analysis and a condition assessment of the installation and conducted semi-structured interviews and observations with users at the source. The data from the water quality testing is shown in Appendix 10.

The “technical” team also had two enumerators (undergraduate students) who were trained to conduct the household survey using the questionnaire as shown in Appendix 7. These enumerators were assisted with the vehicle to select households at random within the villages visited. The results of the household survey are shown in Appendix 8. Sanitation facilities at private homes and also in institutions were inspected and key informant interviews were conducted wherever possible.

A “social” team lead by the community development specialist

This team spent the entire day in one selected village in order to gain qualitative and quantitative data from male and female villagers. The meeting was convened at the traditional village meeting place and people generally became aware of the meeting during the transect walk and were keen to participate. The meetings were always well-attended by between 30 and 100 people. This team used a total of four facilitators who were able to speak the local language and were trained in the use of participatory techniques. The tools used were adapted from PHAST by WaterAid Uganda. The set of activities used was:

- Transect walk
- Community map
- Sanitation ladder
- Story with a gap
- Seasonal calendar
- Timelines
- Wealth ranking
- Village institutions
- Water source preferences

The range of activities used aimed to obtain a balance of quantitative and qualitative data which could be used for comparison between villages. It was important to be realistic about the number of tools or activities which could be used in one day and the team also had to take extreme care not to raise expectations amongst the villagers. Most activities were done with mixed groups since the women were not usually too shy to participate. The facilitators

were careful to ensure a gender balance and used their discretion to separate groups where they felt that women were not being allowed to participate fully.

The comparison of villages based on in-depth data are presented in the relevant district Sections 7.4, 8.4, 9.4 and 10.4. The detailed data together with reproductions of community maps are presented in Appendix 6.

3.4.6 Stakeholder Meetings

At the end of the field work in Kumi, Lira and Apac a half day stakeholder meeting was organised. This meeting was co-ordinated by the ACAO for WES in each district and it was attended by the key district technical and political representatives, sub-county technical and political representatives and NGO staff active in the district. Village level stakeholders were also invited to attend wherever possible but they were generally poorly represented probably because they were not officially invited by the district administration. The stakeholder meetings were well-attended by 40 to 70 people.

The purpose of these meetings was to share ideas and findings from the field work in order to cross-check the snap-shot view developed by the team. In addition it allowed people to air their ideas and opinions and to raise key concerns or constraints faced by the different stakeholders. A simplified stakeholder analysis was carried out in groups in order to check understanding and perceptions of roles and responsibilities of the various stakeholders involved in water and sanitation. The meeting also provided a useful forum for the team to inform people of the next steps in the programme development and to thank them for their co-operation and assistance.

3.5 Data Synthesis and Report Completion

The team returned to Kampala to complete synthesis of the data and to compile the Project Report and the Project Submission. This allowed for further consultation with key stakeholders at national level where necessary and to discuss proposals with DFID staff, other donors and GoU personnel.

4. National Policy and Framework

4.1 Compatibility of GOU and DFID Policy

The DFID 1997 White Paper on Eliminating World Poverty highlights the role that water and sanitation has to play in tackling global poverty. It also emphasises the importance of working in partnership with governments who are committed to achieving international targets. The GoU has demonstrated a strong commitment to increasing national coverage of water and sanitation services and also to poverty eradication. This commitment is embodied in a number of ministerial policy documents as outlined in Sections 4.2 to 4.4 below. The GoU and DFID objectives and policies in the sector can therefore be considered to be mutually acceptable.

4.2 Poverty Eradication Action Plan

This Action Plan establishes the policy framework for the eradication of poverty for the next 20 years. It was prepared through a National Task Force and covers all sectors.

The target is to reduce the percentage of the population currently living in absolute poverty from 66.3% to below 10%, and to reduce the percentage in relative poverty from 86.2% to 30% by 2017.

Among measures proposed to improve the quality of life of the poor is included increasing water coverage, to which a high priority is given. Also included are measures to improve delivery of health services, increase resources for primary education.

The objectives for the Water Sector are:

- to provide safe drinking water supply to 100% of the population by 2015, and adequate water for livestock
- to ensure that water supply is sustained both technically and financially through community contributions and by building community capacity for maintenance. The private sector will also be encouraged to provide technical installation and repair skills.
- to conserve water resources through environmentally friendly practices and encouraging permanent land settlement of nomads, optimal grazing and reforestation
- building capacity of communities to maintain a safe water supply, participating in site selection, appropriate technology type and in contributing towards construction
- to co-ordinate government programmes with those of NGOs and other stakeholders at national, district and lower levels

Water Sector strategy

The strategy to provide rural areas with a sustainable supply of safe water is based on the following principles:

- Community based and demand driven to ensure full utilisation and functionality. Communities will be involved from the early stages of planning and design of water supplies. This will ensure that the sources are put in the right place and provide water at affordable cost.

- Using appropriate and low cost technology such as protection of springs and wells and harvesting of roof water in order to increase functionality and reduce costs to the community of operation and maintenance
- Use of high technology such as piped water and deep wells only where water from shallow wells are declared unfit for consumption and other sources of sustainable supply are non-existent, especially in drier areas
- Promote partnership with participating NGOs, private sector and donors to harmonise the programs and reduce duplication of effort and wastage of resources.

Private sector participation will be promoted in undertaking services such as borehole drilling and sale of spare parts. Communities are expected to raise funds for spare part purchase and to pay caretakers. Districts will be required to provide technical back up support and to undertake major repairs.

4.3 Draft National Water Policy

The Draft National Water Policy (NWP), based on the Water Action Plan (1995), was drawn up in 1997 and is expected to be approved during the course of 1999. The NWP has been designed to promote a new integrated approach to water resource management, whereby Uganda's water resources are managed in a sustainable manner, that is of most benefit to the people. Whilst recognition of the social value of water continues in the NWP, the economic value of water is also emphasised.

The NWP has been developed under two distinct categories, namely:

- Water resources management, and;
- Water development and use, including domestic water, water for agricultural production and other uses such as hydropower, recreation and ecosystem needs.

The NWP is dynamic and evolving, has been created to serve the people and will be regularly re-assessed in the light of experience gained and changing circumstances in Uganda's society. The rationale for the NWP takes account of Uganda's main water resource issues (local and international), the potential role of water resources in development and the need for proper water resources management procedures and structures.

Policy makers have formulated the NWP within the context of the global water agenda, regional water obligations and water resources in the national policy setting. Within the national policy setting, based on the new constitution, the decentralisation and privatisation policies and the Environmental Management Policy and Statute, there are a number of key policy documents relating to the NWP. These are:

- The Constitution (Objective XIV – General social and economic objectives, Objective XXI – Clean and safe water, Objective XXVII – The environment).

- Decentralisation and Privatisation (The Local Government Act, National Environment Management Policy (1994) and Statute (1995), The Water Statute (1995), The National Water and Sewerage Corporation Statute (1995) and The Ugandan Plan of Action for Children (1992)).

Water Resource Management

The Government of Uganda's overall policy objective for water resources management is:

To manage and develop the water resources of Uganda in an integrated and sustainable manner, so as to secure and provide water of adequate quantity and quality for all social and economic needs of the present and future generations with the full participation of all stakeholders.

From this overall policy objective, water resources management strategies have evolved in three principal areas, namely:

- Those supporting an enabling environment.
- Those guiding institutional development.
- Those supporting an upgrading of planning and prioritisation capacities.

Of most relevance to the 4 Districts Programme is that, within these strategies, domestic water demands are to be the first priority (other needs are to be met according to the economic, social and environmental value of water) and water resources management capacities are to be developed at all levels. Thus the sustainable management and operation of water sources and resources at the community/village level is positively encouraged by Government. Furthermore, existing Local Councils (LCI– LCIII) are expected to play a role in setting local priorities, monitoring and mediating in water management issues and enforcing local bye-laws.

Within the proposed *Organisational Structure for Water Resource Management*, District Level authorities report to authorities at a National Level and communication links are clearly shown between the District Level and stakeholders at a local (sub-county and community) level. This structure is designed to provide the means for higher authorities to develop policies which provide an effective enabling environment, whilst at the same time giving local stakeholders the ability to determine and implement local water development priorities.

Water Development and Use

Policies regarding water development and use are divided into three key areas, these are:

- Domestic Water Supply.
- Water for Agricultural Production.
- Water for Other Uses.

Domestic water supply is clearly the most relevant policy area for the 4 Districts Programme. However, should the current climate of relative stability in the districts concerned continue, other development needs e.g. livestock requirements are likely to increase in importance as

closely associated (with domestic water) developments in rural areas. Such issues should be addressed as the NWP evolves to meet the changing development requirements of Uganda's rural areas.

Domestic Water Supply

The NWP has been developed in a context where only 35% of the rural population has access to safe water and only 45% of the national population has reasonable sanitation facilities. Within this context, the water supply sub-sector incorporates water supply, sanitation (and sewerage services) and health and hygiene promotion.

The Constitution states that every person is entitled to clean and safe water. With this overriding principle as a foundation (taking full cognisance of other national development requirements), the Government's stated policy objective in the water supply and sanitation sector is:

Sustainable provision of safe water within easy reach and hygienic sanitation facilities, based on management responsibility and ownership by the users, to 75% of the population in rural areas and 100% of the urban population by the year 2000 with an 80% - 90% effective use and functionality of facilities.

Uganda's national sector policy for the provision and management of domestic water supply services incorporates the six guiding principles from the "New Delhi Statement" (Global Consultation on Safe Water and Sanitation for the 1990's, New Delhi 1990) under the main theme of "some for all, rather than more for some". The six guiding principles incorporate key issues, including:

- Integrated management of water resources and waste to protect the environment and safeguard health.
- An integrated approach with full participation of women.
- Community management of services.
- Financial viability of public utilities.
- Provision of services through demand driven approaches, where users are fully involved and contribute to costs so as to promote ownership.
- Allocation of funds to give priority to those who are inadequately served and who are willing to participate.

Sector strategies are grouped under five main headings, namely; technology and service provision; financing, subsidies and tariffs; management and sustainability aspects; private sector participation; and co-ordination and collaboration.

The Government of Uganda has set some ambitious water development targets. Via the policies and strategies incorporated in the NWP, it is hoped that Uganda will move away from having one of the lowest accesses to safe water and sanitation facilities in the world, to a situation where most of the population are adequately covered with water and sanitation facilities soon after the turn of the century.

4.4 Draft National Sanitation Policy

A Draft National Sanitation Policy for Uganda was prepared by the National Sanitation Task Force in August 1997 but has not yet been approved by government. The document sets out GOU policy and approach to sanitation and is intended to cover both rural and urban sanitation.

The definition of "sanitation" in the Policy is intentionally broad to clarify the fact that sanitation should not be synonymous with latrines. Sanitation is therefore defined as:

- Safely disposing of human excreta by any appropriate means;
- Developing and maintaining safe water chain;
- Attaining and maintaining personal, domestic and food hygiene;
- Safely disposing of solid and liquid wastes; and
- Controlling disease vectors and vermin in and around the home and working environment.

The Policy describes the current poor status of sanitation in Uganda and details the effects which poor sanitation has on public welfare, the environment and the country's economy. The sanitation situation in the 1960s was much better than the current situation and attributed to the following reasons:

- the economy was healthier;
- the Public Health Act was applicable;
- law enforcement was strong;
- tribal leaders and chiefs were respected;
- there was a higher ration of preventive health staff to the population;
- home and environment campaigns were undertaken annually.

Policy Goal and Objectives

The Policy goal is to promote and preserve the health of the community through improved sanitation. The objectives are:

1. To promote safe disposal of human excreta by any appropriate means.
2. To promote proper management of solid and liquid wastes.
3. To enhance the development and maintenance of safe water chain.
4. To promote IEC for behaviour change concerning sanitation.
5. To promote the mobilisation of resources for sanitation.
6. To promote a framework for development of appropriate laws/regulations and an institutional framework for sanitation promotion.

Strategies are outlined in the document to implement sanitation policy at national, district and community level. Some of issues which will be particularly important in designing the 4 Districts Programme are summarised below:

Strengthening the Institutional Framework

- Sufficient numbers of personnel need to be required to implement sanitation promotion.
- Communities need to be supported to initiate and manage sanitation *programmes based on existing resources* - i.e. they should not be expecting subsidises.

Capacity Building

- Sanitation promoters need to be trained in communication skills.
- Financial and technical resources should be mobilised from NGOs and private sector.
- Awareness raising in order to create demand/negotiated- driven interventions.
- Use of participatory strategies which promote action for change.

Policy guiding principles

In summary, the Policy guiding principles which will be integrated into this programme design are:

- A basic right and responsibility for all;
- Equity (in allocation of public funds);
- Integration and Co-ordination of all stakeholder activities;
- Involvement of women and youth;
- Private sector involvement;
- Cost recovery - "user pays" principle;
- Behaviour change - through promotion of privacy, status and convenience as well as health benefits;
- Adequate resource allocation for sanitation (deployment of personnel);
- Development of appropriate institutional framework.

4.5 Local Governments Act 1997

It is recognised that the local government system adopted in Uganda borrowed a lot from the structures established by the colonial powers from around 1900. This involved a hierarchy of chiefs stretching from village, through parish and sub-county to county level. The structures were reinforced by the implementation of a country wide Resistance Council System by the NRM in 1986 of a hierarchical structure of popularly elected councils and committees from village level to District level that marked the democratisation of the local administration. The local administration system was consolidated by the 1993 Local Government Statute, which decentralised functions to Local Governments and the Decentralisation provisions in Chapter Eleven of the Constitution (1995).

The Local Government Act 1997 defined the devolution of powers, responsibilities, functions, funds and services from the central Government to the District Administrations and lower local governments. Here below is a summary of the key provisions in the Act that guided programme design.

1. The Act made a distinction between Local Governments and Local Administrative Units (Section 4 and 46) where in rural areas the Local Governments are the District councils and Sub-county councils and Local Administrative Units are County, Parish and Village levels. The Local Government Councils are bodies corporate;
2. Whereas the local government responsibilities for service provision are stipulated, the law allows them flexibility in choosing methods of service delivery. For instance by using NGOs or the private sector and thus allows District Councils to abolish offices but not functions in the public service (section 53);

3. Measures put in place to promote transparency, such as the publication of quarterly summaries of all tenders awarded (section 92-8), and various details regarding audits and their follow up (section 87 to 91).
4. Under Part 2 (3) of the Second Schedule of the Act the District councils are responsible for the provision and maintenance of water supplies in liaison with the Ministry responsible for Natural Resources, where applicable.
5. Under part 4 (7a and 21) of the Second Schedule of the Act, the District Council should devolve the provision of hygiene services and protection and maintenance of local water sources to Lower Local Government Councils;
6. The District Administrations are entitled to funding from the Central Government in the form of conditional, unconditional and equalisation grants (Section 84);
7. The Local Government budget shall reflect all revenues to be collected or received by the Local Government, and to be appropriate for each year (Section 78, Sub-section 4);
8. The District council shall prepare a comprehensive and integrated development plan incorporating plans of lower level Local Governments for submission to the National Planning Authority, and lower level Local Governments shall prepare plans incorporating plans of lower councils in their respective areas of jurisdiction (Section 36, sub-section 3).
9. The District Technical Planning Committee shall co-ordinate and integrate all the sectoral plans of lower level Local Governments for presentation to the District Council (Section 37, sub-section 2). Approval of the development plans, annual budgets and supplementary estimates are some of the functions and powers which a Local Government Council cannot delegate (Fourth Schedule);
10. The Parish or Village Executive Committee shall oversee the implementation of policies and decisions made by its council and shall initiate, encourage, support and participate in self-help projects (including for water and sanitation) and mobilise people, materials and technical assistance in relation thereto and generally monitor projects and other activities undertaken by Government, Local Governments and Non-Government Organisations in their area (Section 50 paragraph b and f);
11. The Act specifies the under listed responsibilities for Central Government ministries with regards to the decentralised functions: policy making, monitoring, inspection, co ordination, technical guidance, support supervision, and specialised training (Section 98).

5. Overview of Relevant On-going Programmes

5.1 UNICEF WES Programme

The Water and Environmental Sanitation (WES) Programme has been focusing on rural water supply and sanitation activities in Uganda since 1995. It is administered jointly through the Department of Water Development (DWD) and UNICEF, with direct links to the Environmental Health Division in the Ministry of Health (MoH).

In addition to its overall responsibility for planning and supervision of rural water and sanitation programmes in liaison with the relevant GOU and donor agencies, DWD also has the mandate for water resources monitoring, assessment and management.

MoH is responsible for guidelines, training and monitoring related to rural hygiene and sanitation.

WES currently operates in 34 of the 46 districts in Uganda, including all four in the 4 Districts Area. It is responsible for planning and allocation of available GOU and UNICEF/ donor resources, and the detailed Programme Plan of Action (PPA) for 2000 is to be published shortly.

The PPA sets out the budget¹ for each district as now shown in Table III.1 for the Four Districts in 1999.

Table 5.1 UNICEF WES Programme in the 4 Districts in 1999

| Activity | Approved WES budget January to December 1999 ('000 US\$) | | | |
|--------------------------|---|---------|---------|---------|
| | Apac | Katakwi | Lira | Kumi |
| Management | 67 230 | 48 874 | 68 016 | 53 790 |
| Advocacy | 5 392 | 7 237 | 7 338 | 4 669 |
| Training | 10 453 | 9 007 | 11 899 | 9 007 |
| Sanitation promotion | 144 345 | 23 200 | 191 955 | 109 905 |
| Water supply development | 533 546 | 74 134 | 562 038 | 87 528 |
| Support to emergencies | 0 | 0 | 0 | 0 |
| Total | 760 966 | 234 472 | 841 246 | 264 899 |
| Percentage from Donors | 56.0% | 43.2% | 54.8% | 44.6% |

The PPA for the Year 2000 will follow this model, and will mark the end of the current WES five year planning cycle (which was heavily concerned with equitable and effective sharing of very limited resources across the country).

WES is currently embarking on its next five year planning cycle (2001 to 2005). Although far

¹ Contributions from community, LCIII, LCV, GOU and donors net of costs to be met directly by beneficiaries (including institutions)

from complete, it is expected to focus on:

- An integrated household water and sanitation programme;
- Water and sanitation in schools;
- Strategic capacity building (notably national information management/MIS, assistance to private sector organisations, policy dissemination, training and gender disparity).

UNICEF's mandated focus is on the individual, and specifically children, which conflicts to a certain extent with the decentralisation process, which centres on the districts. As part of building a Rights-based programme (and to restore focus on the communities), UNICEF is considering more intensive operations in five pilot districts. These districts would be chosen on the basis of existing coverage, per capita income, support from other donors, and remaining incidence of guinea worm. Moreover, GOU funds may be concentrated on 'hardware' leaving UNICEF to address 'software'.

WES does not anticipate a shift from its current co-ordination role in the 34 districts, and there is no reason to expect that DFID support in the 4 Districts would precipitate lack of WES support. However, the existence of DFID funds would enable WES to focus any more intensive, community-based operations to other districts.

Thus active participation in the promotion of WES activities in the 4 Districts can be expected to continue through the Kampala-based WES Officers in post (currently a Community Development Specialist responsible for Apac and Lira, and a Public Health Specialist in Katakwi and Kumi).

This is important as it:

- leaves the existing WES committees at each of the four districts secure, and a firm base on which to build further;
- Provides a ready focus for technical and institutional advocacy.

The 2001 to 2005 programme design will also involve a review of the national target levels for water supply and sanitation coverage – currently 75% by 2000 and 100% by 2005. Wardrop (1999) have proposed that the targets be moved to 75% coverage by 2005, leading to 100% by 2015, but we are not aware of any consensus on this yet.

5.2 RUWASA

The Rural Water and Sanitation (RUWASA) programme for Eastern Uganda has been in existence since 1991 with funding from DANIDA. It has so far been implemented in three phases; Phase 1, Phase IIA and the latest one, which is Phase IIB. Beneficiary districts include Kamuli, Jinja, Iganga, Bugiri, Busia, Tororo, Pallisa, Mukono, Kapchorwa and Mbale. The programme is based on a demand driven participatory approach to improvement of water and sanitation to the communities. It has implemented deep borehole and shallow well drilling and spring protection as well as promoting hygiene and sanitation at the community level.

RUWASA phase 1 (1991 – 1995) was preceded by a pilot phase, which lasted from mid 1989 to end of 1990. The project was implemented through the Government structures combining the Ministries of Natural Resources (lead Ministry), Gender and Community Development, Health, Finance and Economic Planning.

Phase 1 was mainly implemented in four Districts of Mukono, Jinja, Kamuli and Iganga. By December 1995, a total of 2,611 new water sources were completed and 281 boreholes rehabilitated with community participation serving a total population of 761,400 people. Under the phase 1, Sub-county Water and Sanitation Committees, Water User Committees and School Health Clubs were formed. Community Health Workers and Hand Pump Mechanics were also trained. This was to ensure the management of water sources and undertaking of hygiene and sanitation activities.

RUWASA Phase II is one of the four components of Danida's Sector Programme Support for the water sector in Uganda. Phase IIA covered the period June 1996 through June 1999. Phase IIB is covering the period July 1999 through December 2001.

The following presents a summary of the RUWASA Phase IIB Implementation Strategy:

a) Institutional Arrangements and Development:

The Programme entry and formal contact is at the District level, with District Administrations being responsible for accountability and results according to the RUWASA framework and principles. Under this arrangement each District will organise itself in the best way possible to achieve intended results. There is a possibility of direct Programme support to Sub-counties should a District Administration fail to carry out its responsibilities.

The approach to improving institutional capacity focuses not only on improving individual skills, but also on resolving institutional deficiencies/practices that constrain good performance. Therefore interventions will be based on assessments of the actual requirements. An assessment instrument entitled "Indicators of Institutional Capacity at the District Level" has been prepared in the Project in order to determine the capability of a District Administration to meet its responsibilities.

b) Community Mobilisation

The revised community mobilisation approach aims at improving efficiency and pace of implementation. It will increase focus at the sub-county level and make the water supply component more participatory, demand driven and sustainable.

Communities will be expected to apply for assistance, and the sub-county will process their applications based on agreed criteria. Communities whose applications are approved will sign a CloA with the sub-county. Village Council executives will be co-opted into WUC training in order to spread benefits from the skills gained. In addition each trained WUC will be provided with a set of PRA tools to use in training and follow-up support of community members.

Water source siting will be carried out before full realisation of community contributions, based on the list of approved applications and signed CLoAs. However construction will only start after agreed levels of payment. The communities will be expected to contribute for the different technologies as follows:

- Spring protection UShs. 45,000=

- Borehole rehabilitation UShs. 45,000=
- New borehole equipped with a handpump UShs. 180,000=
- Shallow well equipped with a handpump UShs. 90,000=
- Gravity flow scheme tapstand UShs. 45,000=

In order to support large and/or weak Sub-counties to cope with the time limits, Core Mobilisers will be identified from among the existing CDAs and HAs and deployed for short periods to carry out special assignments.

c) Sanitation Strategy

The sanitation strategy is aimed at simplifying and streamlining approaches for both household and institutional sanitation. The household sanitation approach will focus on promotion of traditional latrines and any improvements that result in health benefits. Less emphasis will be laid on sanplat promotion.

The school sanitation approach will streamline and ease the process of latrine construction. Each of the selected schools will be provided with ten latrine stances and a urinal (six stances for girls and four for boys). The Project subsidy will be increased from 39% to 93%, with schools being required to dig the pits only. This is intended to increase impact and implementation speed. For both schools and health centres, agreements will be signed between them and the District on the construction of latrines. Competent individual consultants will be hired to supervise the construction works.

d) Water Supply

The basic technical criteria used for water source development in Phase IIA will continue. However based on the experience, and in order to increase the pace of implementation larger contracts will be awarded through competitive tendering. For simple technologies, where delays occur at District level, tendering will be carried out at the Programme level in order to expedite service delivery.

The package offered to each District will emphasise more the financial implication of the most appropriate technology mix. However in case a District opts for a different mix within the broad guidelines, the amount of funding available to it will not be changed; rather the number of water-points may change. Water source siting and drilling supervision will increasingly be contracted out to consultancy firms.

RUWASA will continue assisting Districts in design of gravity flow schemes (GFS), while private firms will be engaged through CTB to carry out construction. Existing GFS will be rehabilitated and/or extended where appropriate to improve management and functionality, as well as increase coverage.

Rainwater harvesting schemes will be provided for selected schools beyond 1.5km from protected water sources that have adequate galvanised iron roofs. This is intended to promote the hygienic practices for which training is provided.

e) Operation and Maintenance

The O&M strategy aims at improving on the systems already developed for preventive maintenance and minor repair of springs and hand pumps, as well as to cater for major repairs and maintenance of other water supply technologies and latrines beyond the capacity of the communities. District capacity to plan for and address major problems with

water points will be strengthened. Emphasis is laid on developing District capacities to provide for major repairs when the need arises. A shared funding system for major repairs between the central and local governments is proposed. The central government contribution will mainly be in the form of conditional grants towards the maintenance of water and sanitation facilities.

f) Monitoring, Evaluation and Reporting:

The Phase II B monitoring and evaluation strategy seeks to provide the required information for planning, management and impact assessment catering for information needs of the Project Office, Districts and communities to ensure that monitoring is an effective tool for management.

5.3 Irish Aid in Kumi

Irish Aid has been funding an integrated district development programme in Kumi District since 1997. The programme is being implemented directly through the district administration and there has been a significant amount of capacity building to strengthen planning, budgeting and financial management aspects within the administration. The programme has been hindered by a severe lack of human resources at district and sub-county level and so Irish Aid provides a grant to the district to cover the salaries of some additional staff. The Irish Aid Programme co-ordinator sits in the district and provides support to various departments and ensures accountability of funds.

The Programme is focusing primarily on education (construction of classrooms, provision of text books), primary health care, food security and water. These priorities are identified through participatory planning at community level. In order to strengthen this process capacity building over the past year has been targeted at sub-county level. A Focus Point Person (FPP) who is already employed by the district (e.g. an extension worker) has been identified in each sub-county and trained in PRA techniques. Village data collectors have been trained at village level to assist in prioritisation and capacity building of communities.

The water component of the Programme is being co-ordinated by the Assistant Water Officer (in the continuing absence of a District Water Officer) and implemented through partner NGOs such as Youth With A Mission (YWAM) and Vision Terudo. Two pump mechanics and masons have been trained in each sub-county and these are now expected to operate by direct contracts with community Water Source Committees. To date the Programme has not had a strong focus on sanitation or hygiene education. Slabs are being sold by at USH17,000 but the demand is very low.

One of the lessons to be learnt from the Irish Aid Programme is the difficulty of controlling flow of funds. The Co-ordinator, who is Ugandan, estimates that about 95% of allocated funding can be accounted for but this demands a great deal of his time on a day-to-day basis.

Irish Aid plans to have a continuing involvement in Kumi over the next 10 years or so. The shape of the Programme will be dependent on the demands and needs of the district and lower level administrations. A review of Irish Aid's water policy was recently carried out by IRC but this is not yet available for reference.

5.4 Netherlands in Katakwi and Lira

Katakwi District Development Programme (KDDP)

The Netherlands Government has been funding a three year integrated programme in Soroti since 1996. As Katakwi was formerly a county of Soroti District, it was therefore subsumed under the Soroti District Development Programme (SDDP) until Katakwi gained District status in 1996. A Co-ordinator for KDDP was then appointed in 1998 and stationed at the District headquarters. The programme is due to finish towards the end of 1999, and will be tendered out for a further three years.

The programme supports projects which address needs prioritised at community level. In theory funding is made available to those priorities identified in the District Development Plan, and the District use the PRA baseline surveys conducted by KDDP to design their Development Plan. The majority of the 14 sub-counties in Katakwi have now been completed.

While the strategies and objectives are similar for both KDDP and LDDP, the specifics of the District shape the form these take.

The objectives of the programmes are:

- Rehabilitation of lost production capacity, infrastructure and services, enhancing household food security, and improving the functioning of government services
- Initiating a participatory process of integrated and sustainable District development, aiming at full household food security and income generation, and implemented through the District Administration in collaboration with its partners - CBOs, NGOs, projects and the private sector

Among the main achievements of SDDP:

- rehabilitation and construction of infrastructure, including boreholes, shallow wells, protected sources with active participation from users
- re-stocking draught animals through a credit scheme
- re-equipment of District and Sub-County departments
- rehabilitation of primary schools
- perceptible increase in village level awareness of their own responsibility for development

Achievements particularly relevant for the 4 Districts programme

In Katakwi 6 boreholes have been installed. The participatory planning process introduced by the Programme involves identification of village water needs through the WES committees established at Village, Parish and Sub-County levels through which plans and budgets are submitted to sub-county and district. Before installation of boreholes, communities contribute local materials and unskilled labour, and 100/- (cash) per household. Water and sanitation activities supported by KDDP are supervised and monitored by the District administration. However, there has been no capacity building built in for the water source committees which exist at Sub-County, parish and village level.

Situation analyses of the 14 Sub-counties in Katakwi have been completed, using PRA, both to collect data and prepare the population in preparation for Programme implementation. Viable Parish Credit Committees have been established, showing a capacity to operate a village-level credit scheme with a revolving fund provided by the Programme, with good repayment rates.

Improvement of the extension service through the creation of Parish Agricultural Development Committees (PADEC) and introduction of merit-based incentive system and record keeping by the FEWs.

A number of small income generating projects is being carried out, the majority with a credit component. However, the repayment rates of the loans has been unsatisfactory.

Reviews conducted on both programmes in August 1998 indicated that realistic time frames need to be adopted for the achievement of capacity building objectives such as accountable local government.

Lira District Development Programme (LDDP)

The Lira District Development Programme (LDDP), a bilateral programme between the governments of Uganda and The Netherlands, came to the end of its first three year phase in December 1998. The programme is currently in a "bridging" phase whilst independent consultants are selected to implement the next phase.

The overall goal of the programme is to "improve the quality of life of the population of Lira District through sustainable, broad-based economic growth and the availability and accessibility of basic social services". Management and implementation of the programme is the responsibility of the Chief Administrative Officer (CAO) and the Programme Co-ordinator (Pcoor), together with the District Planning Officer. Project funds are administered jointly by the CAO and Pcoor, together with the Chief Financial Officer.

Activity implementation was planned to take place in co-operation with district institutions, private institutions and NGOs. Total funding for the project amounted to around Ushs 7 billion over the three year period. A similar programme is at the same stage of implementation in Katakwi District.

A number of practical problems have been faced by the project during the course of implementation. These include; insecurity and rebel activity in the northern part of the district; local financial malpractice requiring adequate control measures; presidential and District Council elections taking up much counterpart time and leading to reluctance to change or implement new policies and; inadequate local funding for the District Administration due to insufficient local revenues and limited grant finance from Central Government. Such problems have inevitably led to reduced programme effectiveness.

The Project Review, undertaken at the end of 1998, declared that the objectives set for the first three years were too ambitious or, in some cases, unrealistic. This finding is set against a situation in Lira District where the administration had gone through a 12 year period of inactivity due to insurgency and lack of funds. The decentralisation process led to a reduction in District staff numbers and the change in role from implementers to planners and facilitators has been a difficult one for remaining staff to come to grips with. The situation was exacerbated by problems with recruiting other staff to fill certain key District positions. Weak county and sub-county capacity has not helped the implementation process and delayed payment of salaries at all levels has had a detrimental effect on staff motivation.

Private sector involvement in implementing the programme has been limited, principally due to a shortage of suitable partners e.g. NGOs or an unwillingness to become involved in rural development e.g. financial institutions. CBOs ceased to exist during the period of insurgency and are only now beginning to become reasonably active again.

Although the programme has been successful at creating an awareness of its existence and in involvement of the target group (rural people), problems have also been faced at the target group level of activity. The principal problems faced have been difficulty with funding accountability (including credit repayment) and capacity building. The implementation of rural infrastructure such as schools and community roads has, however, gone well.

Programme activities have involved participation in the following areas:

- Provision of training and support to the District Administration.
- Data collection, planning investigation and cultural support (Lango).
- Sustainable land use and environmental awareness.
- Gender awareness.
- Support to production and marketing activities e.g. assistance to dairy farmers close to Lira township.
- Trade assistance e.g. bakery construction and blacksmith training.
- Reactivation of Primary Societies to assist with marketing at a parish level.
- Provision of Credit in a number of areas, including oxen, co-operatives, crops and livestock.
- Assistance to schools (over 200 schools have received various forms of assistance, including the construction of new school buildings). Teacher training and financial assistance to orphans has also been included in the programme.
- Health and community service assistance has been provided, including training, health unit rehabilitation, purchase of an ambulance and a special credit provision for female heads of households.
- Over 180 kilometres of community roads have been constructed.
- Administration offices at the District and Sub-county level were either rehabilitated or constructed.
- 81 shallow wells and 56 springs have been protected.

Programme experience is that communities are willing to provide significant amounts of support to development initiatives. This can take the form of provision of labour, materials and finance. The overall level of contribution varies between types of initiative, but

somewhere in the region of 20 – 30% (equivalent) of the total cost appears to be the general yardstick.

It has proved difficult to achieve a good balance between delegated responsibility and hands-on control for financial management and flow of project funds. Budgeting has also proved to be an area where significant capacity building was required due to lack of local experience and skills.

For the first three years the LDDP has had a separate bank account, separate accounting system and a different financial year. This was partly due to the very basic systems (and poor staff capacity) available to administer and account for funds via the District General Account, but also due to the perceived need to maintain close control over programme funds so as to ensure that as much funding as possible reached the intended beneficiaries.

The anticipated financial contributions from Lira District towards the LDDP have not been forthcoming. Indeed district financial resources were so much less than originally anticipated that LDDP even had to pay staff allowances (albeit at a lower rate than normal). This eventuality arose for the most part due to the very significant difference between locally budgeted revenue amounts and actual revenues collected.

Finally, an additional constraint to the Programme which has led to under spending of funds has been the rather cumbersome system of application for, approval and release of funding. All cheques had to be signed by the CAO, CFO and Pcoor, a drawn out procedure which was often prolonged by the absence of one or more of the signatories. There were apparently often delays in release of funds by the Netherlands Embassy.

It is hoped that the many, varied lessons learned from the first phase can be utilised to good effect in the second phase. LDDP intend to maintain control of programme funds for the foreseeable future.

6. Natural Environment Profile

6.1 Environmental Setting

6.1.1 Introduction

This chapter contains an overview of the environmental context as it affects the design and implementation of the Programme, and the extent to which further environmental assessment is required. It covers:

- The environmental policy framework
- The salient features of the Programme Area
- Climate and water resources
- An assessment of the potential positive and negative environmental impacts of the physical interventions considered during programme design.

6.1.2 Policy Framework

The National Environmental Statute (1995) for Uganda aims to provide, 'A statute to provide for sustainable management of the environment; to establish an authority as a co-ordinating, monitoring and supervisory body for that purpose; and for other matters incidental to or connected with the foregoing'.

The Authority charged with responsibility in implementing the statute is the National Environmental Management Authority (NEMA). Under NEMA there are local environmental committees.

NEMA is the national regulator for the management of the environment and is responsible for co-ordinating, monitoring and supervising all related activities. These activities include, but are not limited to, review and approval for Environmental Impact assessments and Statements, producing and updating every two years the State of the Environment Reports and the National Environment Action Plans – reviewed every five years.

Requirements for EIA are contained in the Third Schedule.

6.2 The 4 Districts Area

6.2.1 Review of the State of the Environment Reports: 4 Districts Area

The following summarises the findings published in the State of the Environment Reports for the districts of Kumi, Apac, Lira and Soroti (the northern part of which is currently designated as Katakwi district). All the documents reviewed were published in 1997 and under the National Environmental Statute (1995) should be updated every two years.

All four districts appear to be suffering varying degrees of environmental degradation as a result of a complex interaction between the effects of instability in the region, unreliable rainfall patterns, the existing land tenure systems and population growth. The productivity of rangelands and cultivated areas appears to be decreasing and forest areas especially are being mined for fuelwood and building materials. Wetlands and fisheries have also been highlighted as sectors under pressure from unsustainable resource use.

The lack of adequate and clean water resources is highlighted in each district as a major issue for concern, despite an apparent good endowment of natural resources. These issues have been subject to development programmes within the 4 Districts Area, such as WES; and near by in the ten districts being supported through RUWASA.

The information now given in Section 6.2 is taken from the State of the Environment Reports. In some cases, for example population, more specific estimates or assessments which supersede the data now quoted have been prepared during programme design; these are reported separately.

6.2.1.1 Apac District

Apac District covers an area of approximately 6 540 km², consisting of the Counties of Kole, Kwania, Maruzi and Oyam.

Soils: fair to moderate productivity, and fall into two categories:

- eutrophic, accounting for a small proportion of the district (east of Akalo); and
- ferralitic, covering the rest of the district.

Climate/rainfall: drought prone areas to south and south-west. Average rainfall in the driest areas – Akokoro to Cawente experience 875 to 1 000 mm per annum. Aber to Nambieso ranges from 1 000 to 1 500 mm and for the rest of the district to the north, between 1 250 to 1 500 mm per annum.

Habitats: the assessment of the habitat types is based on the Langdale Brown study in 1964. Considerable changes may have occurred over time. The status is generally degraded. The broad range of habitats includes:

- Savanna, including moist *Acacia* savanna, and moist *Combretum* savanna which covers the majority of the district and has been subjected to annual grass fires, periodic clearing for cultivation and felling for fuelwood and building materials, palm savanna and dry *Combretum* savanna; a fire climax assemblage
- thicket (dry)
- impeded drainage sites associated with seasonal swamps /wetlands
- *Cyperus* swamp associated with permanent wetland.

Population: the population growth rate estimated for 1980 to 1991 was 3.38% relative to a national average of 2.7%. The counties with the highest population densities include Kole, Oyam and Kwania. The most sparsely populated is Maruzi. Insecurity adjacent to Kitgum and Gulu districts has forced relocation of people. There are high levels of illiteracy and poverty, with 75% on the population dependent on subsistence agriculture.

Agronomic practices: characterised by cattle farming systems with intercropping as the dominant practice. Resources available are very low. Productivity is low due to:

- annual crops and sandy soils – erosion

- unsustainable farming methods – no soil enrichment practices and shorter fallow periods
- land tenure - grazing lands are communal
- wood fuel for energy source
- range degradation – cattle rustling – proliferation of poor grasses.

Water resources: available water resources include:

- springs, rivers, lakes, boreholes and dams (58 in 1996 but generally in poor repair)
- water quality in some areas is not good due to poor hygiene or maintenance. Other areas are affected by high levels of dissolved chemicals such as nitrate and iron (Arocha catchment)
- borehole distribution is uneven and is not in areas of need
- catchment management poor
- past and present water development programmes include NURP, CPAR and WES.

Fisheries: the main fishing grounds comprise the Victoria Nile and Lake Kwania/ swamp.

- increasing intensity of fishing activities
- presence of water hyacinth.

Deforestation: trees cut to:

- supply the demands for fuelwood and construction, smoking fish and tobacco and for the brick and charcoal industries
- clear land for cultivation – especially Kole and Oyam.

Wetlands: a small proportion has been reclaimed but could potentially develop into a more serious problem due to:

- increasing population pressure
- utilisation for food, wood and fuelwood needs
- increasing demand for bricks.

Wildlife resource: there are no game reserves in the district. However, the Maruzi peninsula supports some wildlife populations, and is known to harbour the tsetse fly. Hunting is widespread.

6.2.1.2 Lira District

Lira District covers an area of 7 251 km² and includes the counties of Dokolo, Erute, Kioga, Moroto, Otuke and Lira Municipality.

Soils: the soils in the district are mainly sandy loams with ferrallitic sandy sediments and alluvial deposits in the north with mineral hydromorphic soils along the shores of Lake Kyoga.

Climate/rainfall: a bimodal pattern is dominant - April to May and August to November with an annual overall rainfall of 1 300 mm.

Habitats: the current status of the forest reserves is classified as degraded through requirements for fuel, which has reduced the vegetation to bush cover. The savannas have been subject to grazing and cultivation. Features include:

- woodland – south of Lake Kwanja consisting of *Albizia* – *Combretum* continuum
- wooded savanna including *Combretum* savanna (covering half of the district), *Butyrospermum* savanna – mainly in the north and dry *Acacia* savanna in the extreme south-west
- thicket – semi deciduous present in the south of the district
- riparian vegetation along the lake shores comprising aquatic grassland and herb swamp
- forest plantations including eucalyptus and pine (very small areas).

Degradation of natural resources occurs through:

- soil erosion, unreliable/unpredictable rainfall
- low water retention capacity of soils
- seasonal fires
- destructive farming methods
- insecurity
- land tenure arrangements
- dependence on fuelwood

Population: overall distribution is sparse and uneven with the highest population densities in Erute, Dolcolo and Moroto. The average annual growth rate has been estimated at 2.7% (1991 census). Internal displacement of the population has occurred through instability and through inadequate water and food supplies. Slum areas have developed in Lira town, which has an inadequate infrastructure leading to poor sanitation conditions. Programmes are being implemented in the district including WES, Global 2000 and (previously) NURP.

95% of the population is rural, and engaged in subsistence agriculture.

Economy: the majority of households are engaged in subsistence agriculture. Cattle are the symbol of wealth and provide draught power. Productivity is steadily declining through a lack of effort in improving the existing farming systems. Cash crops include cotton, sunflowers, simsin and rice.

Land tenure: land is controlled through the household/clan elders or leasehold or freehold. There is no land use policy.

Agriculture: the district is self-sufficient for food at present but not stable. There is poor infiltration of modern agricultural methods and shifting cultivation may alter the current balance.

Livestock: There is a general shortage of grazing land – communal lands are now cultivated after cattle rustling reduced the number of cattle present. Lower numbers has led to generally insufficient supplies of meat and diary products. Water resources are generally sufficient for livestock but access is difficult due to unplanned cropping patterns.

Rangeland management is mainly through seasonal burning.

Insecurity: There is occasionally a problem in the northern part of district.

Forest resources: deforestation through pressures of fuelwood shortages in Lira and Docile.

Aquatic ecosystems: major water bodies include Lakes Kyoga and Kwanja and River Maroto plus perennial streams such as River Okole and permanent swamps. There is an apparent shortage of water sources in the dry season.

Water quality: water quality is generally unmonitored with contamination occurring as a result of:

- contamination from settlements
- degradation of catchment area
- agriculture
- fish harvesting
- pollution of natural water sources.

Programmes in place include UNICEF's WES project – rural water and AfDB for urban water.

Fishing: this is an important economic activity. There are limited, small-scale fish farms.

Wetlands: these have been subject to some reclamation (4% estimate) for:

- rice production
- clay pottery

- water supply
- fisheries.

The resource is currently over exploited resulting in a decrease in productivity and water hyacinth - especially in Lake Kyoga - is an increasing problem.

Tourism: poor facilities.

Mining: not significant.

Energy: fuelwood is used for 99% of all cooking and 15% of lighting. The district has a connection to National Power from Jinja Owen falls dams but is under-utilised and unreliable.

6.2.1.3 Katakwi District

This section is based mainly on the 1997 State of the Environment Report for Soroti District (from which Katakwi was sub-divided in 1998).

Katakwi District has an area of about 5 110 km², consisting of the counties of Amuria and Usuk.

Soils: mainly sandy sediments and sandy loams, generally friable and well drained; low-lying areas have some aluminium deposits.

Climate/rainfall: rainfall reported as unpredictable recently (ie since 1988); average annual rainfall up to 1350 mm.

Habitats: there are no natural forests, only broad leaf and conifer plantations. The status is one of intensive cultivation in the east with increasing demands for both fuelwood and timber resources. The vegetation types present include:

- wooded savanna
- moist *Acacia* savanna
- *Combretum* savanna
- grass savanna
- riparian vegetation
- scattered tree grasslands
- *Cyperus* swamps – Lake Kyoga and Agu swamp.

The ecosystem is relatively stable due to low population density but overgrazing and bush burning may lead to fragility. Transhumance practices by the Karamojong in the dry season are thought to contribute to overgrazing problems.

Population: Katakwi is one of the less populated districts with 98% rural population. The 1980-1991 census reported a negative growth rate with a majority of women and youth in the demographic structure. The majority of the population practises subsistence agriculture. Extreme poverty and poor communications characterise the district.

Economy: cashew nuts and cotton are grown as cash crops and there is a reported trend of non-farming activities.

Land tenure:

- customary – clan leaders' inheritance
- leasehold – urban areas
- freehold – churches.

The existing land tenure arrangements are believed to contribute to the degradation of land due to over use and lack of conservation methods.

Food security is reported to be reducing through:

- insecurity and loss of oxen
- dismantled 'Teso farming system' (an annual crop plus livestock with rotation of cotton and millet)
- unreliable rainfall
- lack of finances, resources and poor storage facilities
- vermin.

Livestock: generally under-stocked at present. Available water resources include 77 dams and natural wetlands are used in the dry season but in general the water resources are a long distance from grazing lands. Animals tended include:

- cattle
- goats/sheep tethered
- pigs, poultry and rabbits.

Deforestation: increasing due to:

- annual fires

- agriculture and demand for resources for charcoal, fuelwood, bricks, making 'malwa' local brew, and timber
- instability
- fish smoking.

Catholic diocese development organisation has introduced agro-forestry and tree nurseries into the district.

Wildlife: generally low in numbers, however the district offers dry season grazing for wildlife moved by fires in adjacent districts. Poaching for bush meat and other resources such as ostrich feathers, crocodile skin and leopard skin that are of commercial value is widespread. The district does however, have some protected grazing grounds.

Aquatic ecosystems: water resources include wetlands, Lakes Kyoga, Bisina, Nyaguo, Amorte and Nyasala, plus the River Amoja. Generally supply is inadequate in rural areas and competition between animals and humans at point sources results in poor water quality. The WES programme has been implemented in the district.

Fisheries: a major income source although some harvesting methods utilised are illegal. Water hyacinth is a major problem. There is a traditional belief that fish supply is inexhaustible which has led to some over-exploitation, whereas wetlands tend to be under-exploited.

Wetlands: reclamation for alternative uses is recorded as low with some rice cultivation and livestock grazing in the dry season.

Tourism: some potential as the district provides a through route to Kidepo Valley National Park and has some protected (dry season) wildlife grazing areas.

Mining: not important at present.

6.2.1.4 Kumi District

Kumi District covers an area of approximately 2 820 km², consisting of the Counties of Bukedea, Ngora and Kumi (the latter two accommodate the largest towns/urban areas).

Soils: soils are predominantly loams and sandy-loams in Kumi and Ngora. Bukedea County tends towards sandy/clay-loams. Overall the soils are productive in the south and marginal in the north. The soils have a moderate soil erosion hazard.

Climate/rainfall: average rainfall in Bukedea is between 860 and 1 420 mm. The rest of the district receives between 900 and 1 500 mm increasing to 1 250 to 1 400 mm in the south.

Habitats: the current status of the vegetation is classified as degraded due to intensive cultivation, cutting and burning.

- savanna – appears to be extending due to cut and burn management practices. The savanna types include *Butyrosperinum* savanna, mixed savanna, dry *Acacia* savanna and grass savanna
- forests consisting of plantation *Eucalyptus spp*
- riparian/wetlands – water hyacinth infestation.

Population: the population density of 96.3 persons per square kilometre is higher than the national average of 85 (1991 census data) recorded in the Kumi district. The other counties are less densely populated. Ninety per cent of the population is dependent on subsistence farming (cash crops such as cotton have been abandoned). Population growth rate was negative in the 1991 census.

Productivity: productivity is deemed to be low and attributed to the following factors:

- unsustainable farming methods. Bye-laws for soil conservation not enforced
- instability and loss of oxen
- insecurity of land tenure
- unreliable rainfall and drought
- disease (plant, animal and human).

Population pressures:

- deforestation through increased demand for agricultural land and forest products, especially fuelwood
- loss of wetland – for bricks and rice production. Areas are important for dry season grazing
- poor soil conservation techniques – short-term view of the population is to satisfy today's needs.

Water resources: Kumi has inadequate water resources with few springs and streams and in the past with higher stock densities, water was a major issue during the dry season.

- poor catchment management leading to soil erosion
- pollution of sources through cattle and humans
- water hyacinth – especially in Lake Kyoga - which affects fisheries, navigation and evaporation rates.

Fisheries: this is an important sector in the Kumi district for subsistence and also to satisfy the high demand for fish in neighbouring Mbale. There are poor processing and hygiene facilities in the communities.

6.2.1.5 Summary Points

The State of the Environment reports focus on a variety of environmental issues and raise a variety of questions, notably:

- A lack of modern farming techniques and insecurity of food; there is little mention of irrigation.
- A tendency to site boreholes near the more accessible roads.
- How is national/ local land-use planning progressing; and how does it address the balance between dwellings, crops and grazing and associated water use; what is being done to deal with farming of progressively marginal land?
- How do communities manage land? Remembering that most of it is communal land by definition, and as such is vulnerable to over-use and progressive degradation.
- If there is a land management plan which is based on sedentary people and their needs (and associated willingness to pay for improved water supply services), how can this be reconciled with pastoralists who poach? There are historical rights on both sides.
- There has been a serious reduction in the number of cattle, both due to the rebel activity in the area, and to raiding pastoralists.
- The lack of oxen has forced the adoption of old cultivation techniques (hand tilling etc), with the result that there is less cropped land.
- The growth of relatively urban areas has led to loss of woodlands and forest (for fuel, charcoal, building materials etc).
- The wetlands are of extreme importance (as a climate moderator, fish habitat, dry season grazing, wild life, and as a rich source of biodiversity).
- Currently the wetlands are not being mined.
- A combination of digging clay for bricks and harvesting papyrus is reducing the land available for grazing.
- There is a variety of catchment management issues; lost forest will lead to soil erosion, sedimentation downstream, and associated deterioration in water quality and quantity; how much of a problem is this, and how can it be addressed?
- Good sanitation practices have helped to protect water sources and have a positive impact on water quality; but sanitation facilities tend not to be used if these are too far away; much could be done to develop composting and improve solid waste disposal.

By and large these questions pose far wider questions than those issues related to the design of the Programme. These are discussed in Section 6.5.

6.3 Water Resources

6.3.1 Meteorology

Monthly rainfall for selected rain gauges in and around the 4 Districts is shown in Table 6.1.

Table 6.1 Monthly Rainfall Data

| Station ID | Name | District | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual total | Mean |
|---------------------------|-------------------|----------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|--------------|--------------|
| 8632000 | Kitgum | Kitgum | 15 | 25 | 70 | 145 | 162 | 120 | 171 | 192 | 134 | 115 | 65 | 27 | 1 241 | 1 249 |
| 8732000 | Gulu Met. Stn. | Gulu | 17 | 32 | 93 | 173 | 178 | 159 | 186 | 240 | 199 | 193 | 105 | 39 | 1 614 | 1 606 |
| 8732002 | Lira Agromet | Lira | 28 | 45 | 92 | 166 | 198 | 26 | 42 | 108 | 141 | 154 | 147 | 123 | 1 270 | 1 458 |
| 8831003 | Masindi Met. Stn | Masindi (Apac) | 39 | 54 | 111 | 179 | 139 | 86 | 108 | 141 | 154 | 147 | 123 | 53 | 1 334 | 1 341 |
| 8832001 | Aduku VTC | Apac | 31 | 53 | 99 | 154 | 164 | 101 | 108 | 150 | 157 | 159 | 103 | 45 | 1 324 | 1 322 |
| 8833004 | Serere Agric. Ctr | Soroti | 33 | 62 | 113 | 202 | 175 | 96 | 116 | 161 | 139 | 145 | 73 | 41 | 1 356 | 1 431 |
| 8833006 | Soroti Met. Stn. | Soroti | 24 | 41 | 90 | 176 | 187 | 124 | 135 | 174 | 140 | 145 | 73 | 41 | 1 350 | 1 367 |
| <i>Mean</i> | | | <i>27</i> | <i>45</i> | <i>95</i> | <i>171</i> | <i>172</i> | <i>102</i> | <i>124</i> | <i>167</i> | <i>152</i> | <i>151</i> | <i>98</i> | <i>53</i> | <i>1 356</i> | <i>1 396</i> |
| <i>Standard deviation</i> | | | <i>9</i> | <i>13</i> | <i>14</i> | <i>18</i> | <i>19</i> | <i>41</i> | <i>47</i> | <i>42</i> | <i>22</i> | <i>23</i> | <i>30</i> | <i>32</i> | <i>122</i> | |

Abstracted from WRAP, Sept 1998, Hydroclimatic Studies Report (Draft) Tables 4.1 and 4.3

The maximum drought rainfall patterns can be summarised as follow:

- **Apac, Lira: April to October** – these districts have a strongly uni-modal rainy season with a short relaxation in June/July. The drought at the 50% probability is about three weeks. The variation from 50 to 20% and 50 to 80% probabilities is between one and two weeks: **October to April** – this is the main dry season, between December and March, with the drought variation at the 50% probability lasting about two and a half months. The variation in the region, between 50 and 20% and 50 and 80% probabilities is between two and three weeks.
- **Katakwi: April to October** – this is the driest region, with an uni-modal rainy season between April and October. There are two rainfall peaks in April and August, with drought periods occurring between mid May and mid July. At the 50% probability the drought duration is about one month over the Katakwi area. The variation in the region, between 50 and 20% and 50 and 80% probabilities is between two and three weeks; **October to April** – this is the main dry season, with the drought variation lasting about two and a half months at the 50% probability. The variation in the region, between 50 to 20% and 50 to 80% probabilities is between one and one and a half months.

- **Kumi: April to October** – a transition area from a bi-modal to uni-modal rainy season area; drought periods occur during the transitional dry period between June and July of about three or four weeks at the 50% probability. The variation from 50 to 20% and 50 to 80% probabilities is between one and two weeks; **October to April** – this is the main dry season, between December and March, with the drought variation lasting about two months at the 50% probability. The variation in the region, between 50 and 20% and 50 and 80% probabilities is between two and three weeks.

6.3.2 Hydrology

The 4 Districts area is characterised by various large and small rivers, some of which are perennial. Very few have discharge records. Where accessible, rivers and streams are of local importance as water sources for human and livestock use.

Rivers have not been considered as sources for water supply improvements as under the proposed Programme interventions they would require treatment. Treatment is not considered an affordable option in the current water supply sector.

Records for four rivers – Tochi II, Akokorio, Kapiri and Enget, which are included in WRMD's national streamflow monitoring network – are included in Appendix II.

6.3.3 Hydrogeology

Geology of the 4 Districts area is mapped on Figure 6.1, which indicates the extent of the Basement Complex and limited extents of more recent aquifers. Its extent is indicated by geology, as are the majority of the 4 Districts.

Broadly, basement rocks underlie the 4 Districts. Within these are residual, weathered overburden and fractured basement bedrock which form an important aquifer in terms of rural water supply. In some areas it will sustain abstractions with motorised pumps, but in most areas it is limited to hand-pump use. The surface geology commonly differentiates between two types of basement – gneisses and foliated granites, which are susceptible to chemical weathering, are relatively productive²; quartzites and schists³ are relatively resistant to erosion and are far less productive.

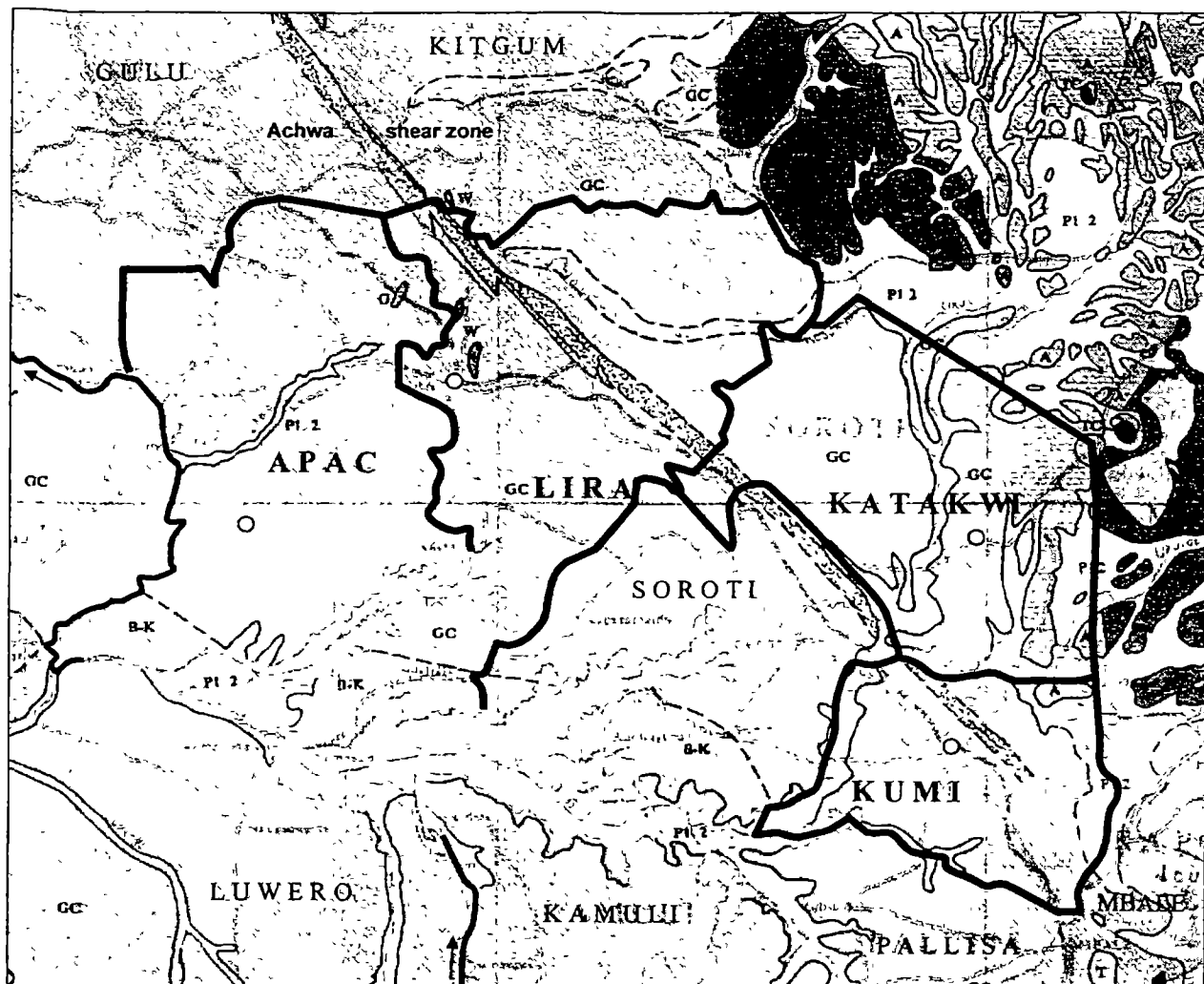
In simplified terms, the 'normal' basement (G-C) underlies the majority of the 4 districts. Although widely variable (see for example the range of borehole depths, yield and depth to watertable for counties in Apac in Appendix 11), boreholes capable of meeting DWD's design yield of 900 l/h (0.25 l/s) can be produced in between say, 50% and 75% of holes drilled, depending on the standard of well siting and borehole design/ construction. It is generally harder to locate and drill sufficiently productive boreholes in the B-K areas (as well known in parts of southern Apac and Lira).

The shear zone that runs northwest through Lira, Katakwi and part of Kumi districts is particularly poor as an aquifer. Further study is required to improve the approach to selecting water sources in the area that it covers.

² approximately delineated as GC on Figure 6.1;

³ approximately delineated as B-K on Figure 6.1;

Geological Map



LEGEND

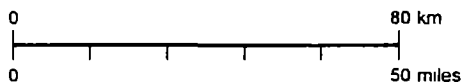
- 4 Districts boundary
- Geological boundary
- Indefinite geological boundary
- River Victoria Nile

- 4 Districts town
- GULU** Neighbouring district
- MUKONO** RUWASA I district
- MBASE** RUWASA II district

- Pl 2** Pleistocene to recent sediments, alluvium, black soils and morainés
- B - K** Precambrian shales, arkoses and quartzites

Wholly granitised or high to medium grade metamorphics:

- A** Banded gneisses
- w** Granulitic facies rocks including charnockites and enderbites and retrograded derivatives
- GC** Undifferentiated gneisses including elements of partly granitised and metamorphosed formations, and granulitic facies rocks in the north
- G** Mobilised and intrusive granites



Elsewhere, there are areas of sediments⁴, which offer good opportunities for shallow, cheap wells. Dug wells and auger-drilled wells have both been successfully installed in the area, although dug wells are less popular due to difficulties with preventing contamination from the surface. There are also good opportunities for cheap, shallow wells to replace the hand-dug pits commonly used for potable water sources on the fringe areas of swamps. The majority of the swamp areas fall within the PI 2 boundaries.

6.3.4 Water Source Mapping

Very little has been done on low flow analysis in rural Uganda, and the whole issue of predicting perennial supplies is somewhat tenuous. In particular we can expect considerable variations in water availability in the Project Area, ranging from perennial sources from swamps and lakes in the south to areas with annual rainfall around 1200 mm in the north and north-east: hydrological conditions can vary considerably over quite short distances.

In view of this paucity of data and anticipated spatial variations, we have attempted to zone areal water availability during the fieldwork. This is based on geological mapping and an inventory of water sources and associated use and reliability, leading to a fairly coarse classification which indicates the extent to which different surface water sources – including springs – might be viable (for planning purposes). Thus the concept of predictability of perennial surface water sources hinges on local experience and on-site judgement supported by procedures for selecting and/ or assessing water sources during implementation. Developing and proving these procedures will require further investigations outside the scope of this assignment.

As river and lake sources require treatment, their use is not deemed appropriate for the 4 Districts Programme.

The concept of “predicting potential” for groundwater sources will involve further assessment of the various groundwater developments and associated use information. This will be linked to proposals for procedures for source selection based on experience and (in the case of boreholes) on a properly systematic approach to surface geophysics and associated interpretation.

These procedures must reflect the participatory approaches to development which are recommended for project implementation, and the experience now being developed in the course of implementing RUWASA II is extremely valuable. Specific further study is required both to review borehole design and associated construction/ drilling rig requirements, and a more-interactive approach to borehole siting, the use of surface geophysics, and actual drilling results.

Figures 6.2 to 6.5 summarise the first, crude attempts to zone the four districts from the point of view of water source selection, summarising knowledge on aquifer potential, swamp zones and counties reported to have significant numbers of springs for new protection or rehabilitation. These need to be developed in more detail, together with the DWOs, as the proposed Programme gets under way.

A comparison of cost estimates for new and rehabilitated water source works is given on Table 6.2.

⁴ approximately delineated as PI 2 on Figure 6.1

Indicative Water Resources Planning Map: Apac

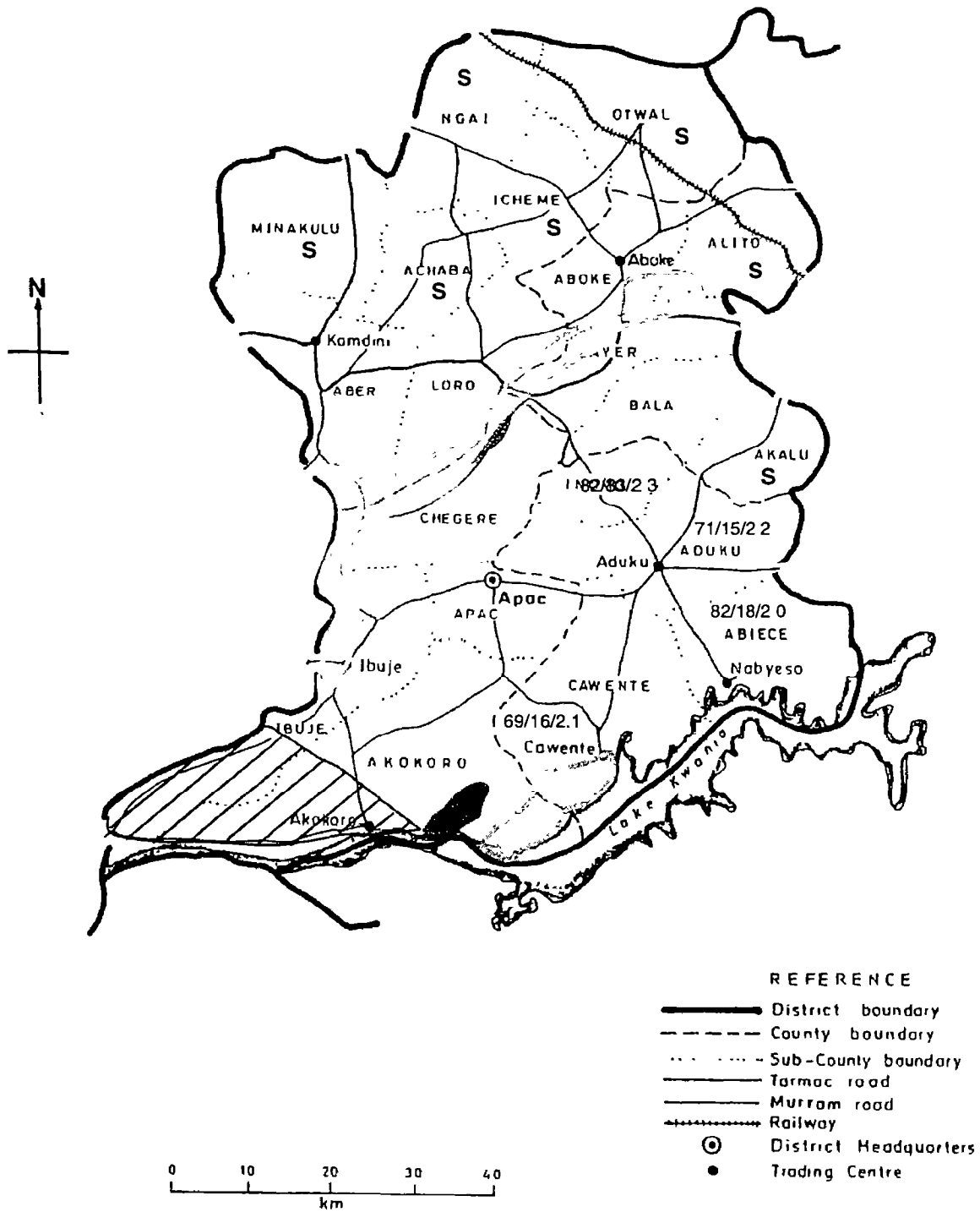


Figure 6.3

Indicative Water Resources Planning Map: Katakwi

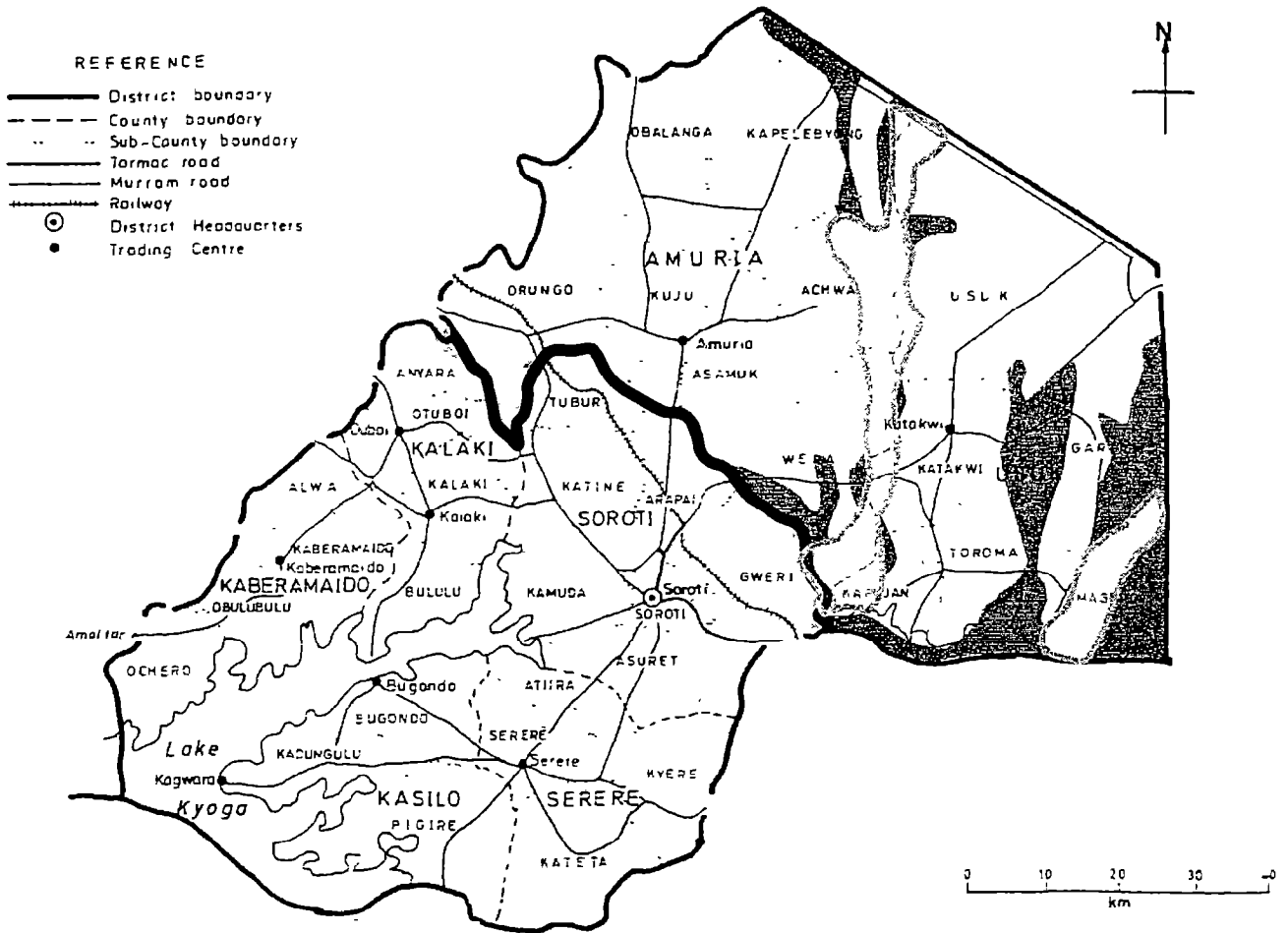
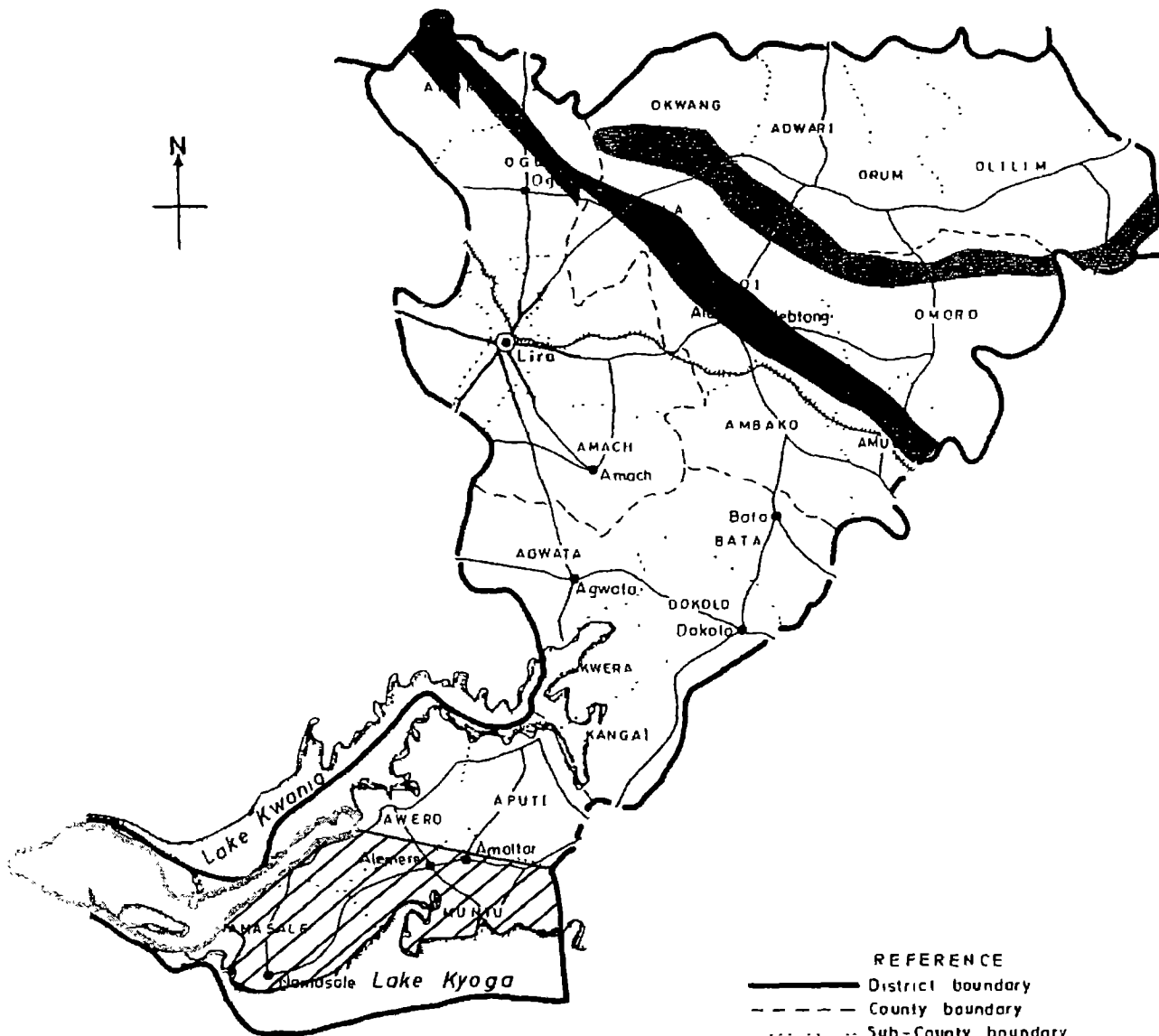
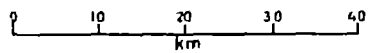


Figure 6.4

Indicative Water Resources Planning Map: Lira



- REFERENCE**
- District boundary
 - - - - - County boundary
 - Sub-County boundary
 - Tarmac road
 - Murram road
 - Railway
 - ⊙ District Headquarters
 - Trading Centre



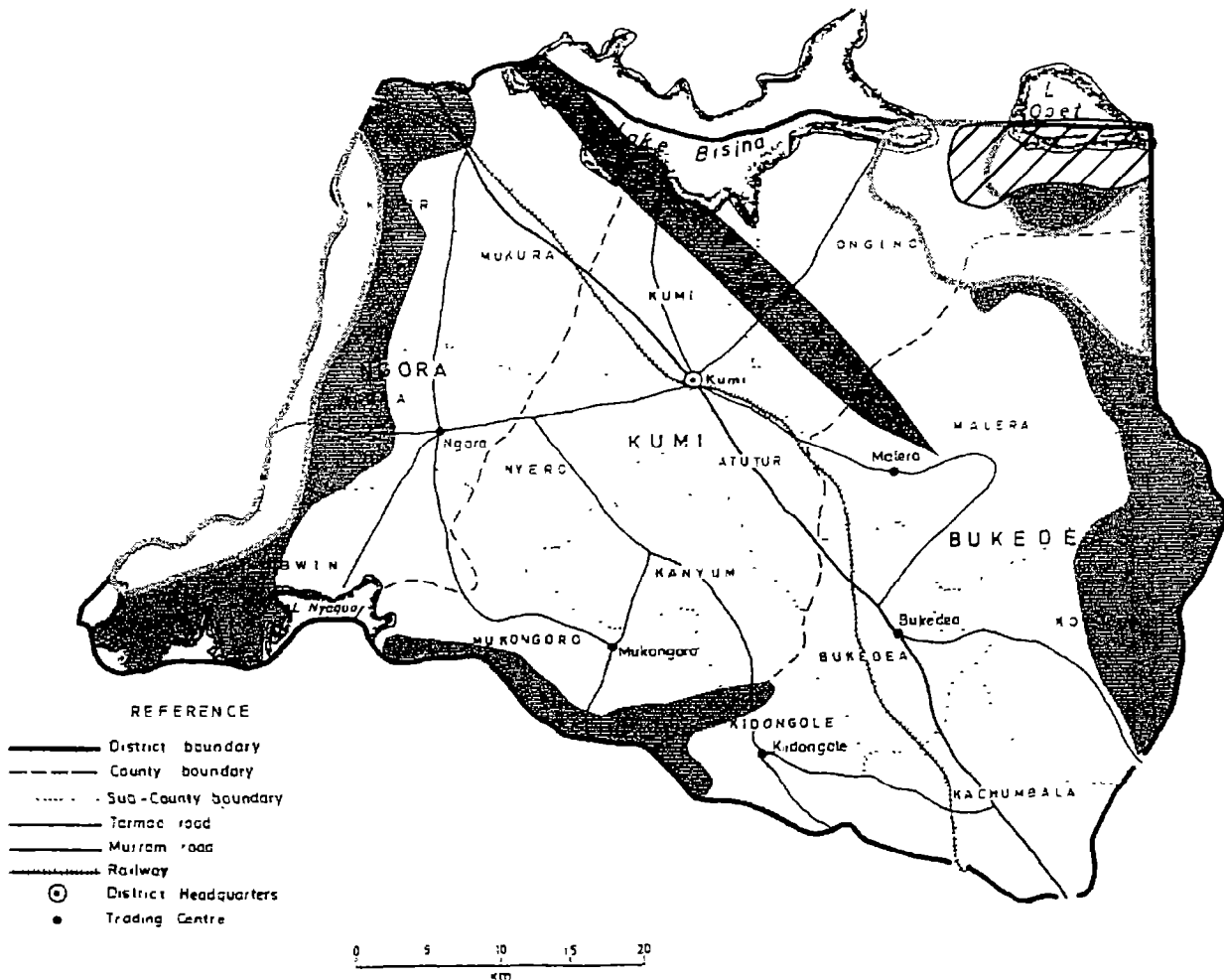
KEY

- S** Reported springs zone
- [Stippled pattern] Area with high incidence of swamps
- [Solid black pattern] Sediments, alluvium and black soils (note. these almost invariably present in swamp areas)
- [Diagonal hatching pattern] Generally poorer basement complex areas
- [Solid black pattern] Achwa shear zone (very poor aquifer)

Note that all unshaded areas are generally underlain by 'normal' basement complex

Figure 6.5





Indicative Water Resources Planning Map: Kumi



REFERENCE

- District boundary
- - - County boundary
- Sub-County boundary
- Tarmac road
- Murrum road
- Railway
- ⊙ District Headquarters
- Trading Centre

KEY

- S** Reported springs zone
-  Area with high incidence of swamps
-  Sediments, alluvium and black soils (note: these almost invariably present in swamp areas)
-  Generally poorer basement complex areas
-  Achwa shear zone (very poor aquifer)

Note that all unshaded areas are generally underlain by 'normal' basement complex

Table 6.2 Comparison of Cost Estimates for New and Rehabilitated Water Sources

| Item | Basic price (USh'000) | Contingency 10.0% | Sub-total (USh'000) | VAT 17.0% | Total (USh'000) | Weighting | Weighted price (USh'000) |
|--|--------------------------|----------------------|------------------------|--------------|--------------------|------------|-----------------------------|
| (a) Deep boreholes: | | | | | | | |
| 100 m | 16,000 | 1,600 | 17,600 | 2,992 | 20,592 | 0% | 0 |
| 70 m | 12,500 | 1,250 | 13,750 | 2,338 | 16,088 | 100% | 16,088 |
| Failures | 9,000 | 900 | 9,900 | 1,683 | 11,583 | 25% | 2,896 |
| | | | | | | | 18,983 |
| Weighted cost of productive borehole | | | | | | say | 19,000 |
| (b) Medium boreholes | | | | | | | |
| 60 m | 0 | 0 | 0 | 0 | 0 | 0% | 0 |
| 40 m | 8,000 | 800 | 8,800 | 1,496 | 10,296 | 100% | 10,296 |
| Failures | 6,000 | 600 | 6,600 | 1,122 | 7,722 | 25% | 1,931 |
| | | | | | | | 12,227 |
| Weighted cost of productive borehole | | | | | | say | 12,000 |
| (c) Borehole rehabilitation | | | | | | | |
| Clean+pump | 2,600 | 260 | 2,860 | 486 | 3,346 | 40% | 1,338 |
| Clean+pump+apron | 3,200 | 320 | 3,520 | 598 | 4,118 | 30% | 1,236 |
| Clean+pump+apron+reline | 6,500 | 650 | 7,150 | 1,216 | 8,366 | 30% | 2,510 |
| | | | | | | | 5,084 |
| Weighted cost of rehabilitated borehole | | | | | | say | 12,000 |
| (d) Hand-augured tubewell | | | | | | | |
| 20m | 2,750 | 275 | 3,025 | 514 | 3,539 | 0% | 0 |
| 16m | 2,500 | 250 | 2,750 | 468 | 3,218 | 100% | 3,218 |
| 12m | 2,250 | 225 | 2,475 | 421 | 2,896 | 0% | 0 |
| | | | | | | | 3,218 |
| Weighted cost of productive augured tubewell | | | | | | say | 12,000 |
| (e) Spring protection | | | | | | | |
| Big | 1,100 | 110 | 1,210 | 206 | 1,416 | 20% | 283 |
| Average | 900 | 90 | 990 | 168 | 1,158 | 70% | 811 |
| Small | 800 | 80 | 880 | 150 | 1,030 | 10% | 103 |
| | | | | | | | 1,197 |
| Weighted cost of 'average' protected spring | | | | | | say | 1,200 |
| (f) Shallow well rehabilitation | | | | | | | |
| Replace pump | 1,300 | 130 | 1,430 | 243 | 1,673 | 70% | 1,171 |
| New pump + apron | 1,800 | 180 | 1,980 | 337 | 2,317 | 30% | 695 |
| Nil | 0 | 0 | 0 | 0 | 0 | 0% | 0 |
| | | | | | | | 1,866 |
| Weighted cost of 'average' rehabilitated shallow well | | | | | | say | 2,000 |
| (g) Shallow well 'protection' | | | | | | | |
| Simple works | 1,200 | 120 | 1,320 | 224 | 1,544 | 40% | 618 |
| New pump + apron | 1,800 | 180 | 1,980 | 337 | 2,317 | 60% | 1,390 |
| Nil | 0 | 0 | 0 | 0 | 0 | 0% | 0 |
| | | | | | | | 2,008 |
| Weighted cost of 'average' protected shallow well | | | | | | say | 2,100 |

Source Consultants

6.4 Water Quality

Water quality is generally poor and an indication of quality of some source water is given in Appendix 11. The impact of the proposed programme on improved water sources is indicated in Table 6.3.

Table 6.3 Indicative Impact of Water Source Improvements on Water Quality

| Source type | Quality of unimproved source | Source improvement | Quality of improved source |
|-----------------------|------------------------------|-------------------------|----------------------------|
| River | Poor to Medium | River-side borehole | Medium to Good |
| Swamp | Poor to Medium | Swamp-side borehole | Medium to Good |
| Valley dam | Very Poor | Borehole | Medium to Good |
| Swamp-side dug well | Poor | Swamp-side borehole | Medium |
| Unprotected spring | Poor to Good | Protected spring | Medium to Good |
| Protected spring | Poor to Medium | Repairs | Medium to Good |
| Unprotected dug well | Poor | Add protection/ pump | Medium |
| Polluted borehole | Poor | Improve seal/ headworks | Medium to Good |
| Old/ damaged borehole | Poor to Medium | Rehabilitate | Medium to Good |

6.5 Environmental Review

6.5.1 Environmental Impacts

Generalised comments on the environmental impacts of the proposed water supply and sanitation improvement activities are as follow in Table 6.4:

Table 6.4 Summary of Environmental Impacts

| Water supply and sanitation improvement activity | Positive impacts | Possible negative impacts ⁵ |
|--|---|---|
| Boreholes | <p>Good quality water</p> <p>Reliability and security (don't dry up)</p> <p>Cheaper with right drilling technology</p> <p>Better wells can have motorised pumps one day</p> <p>Cheap alternatives for swamp perimeter areas</p> | <p>Drawdown (interference between wells)</p> <p>Hand pump breakdowns</p> <p>Expensive; need good siting</p> <p>Difficult to get a decent seal</p> <p>Mosquito breeding in undrained ponds near well</p> |
| Dug wells | <p>Can produce better quality water than open ponds if serious attention paid to protecting access and limiting the number of water abstraction devices (buckets etc)</p> <p>Suitable for hand pumps or buckets</p> | <p>Vulnerable to surface contamination/ vandalism</p> <p>Traps for young children</p> <p>Not popular</p> <p>Can dry up</p> |
| Springs | <p>Can produce better quality water IF the protection work is done properly</p> <p>Cheap</p> <p>Quick to contract and to build</p> <p>Good opportunity for well trained local artisans</p> | <p>Can reduce spring yield if the protection works are poorly designed/ built</p> <p>Some springs understood to have cultural/ religious significance</p> <p>What happens around the spring (lush vegetation leads to more cattle and so to a water use/ zoning/ quality protection issue)?</p> |
| Rainwater collection | <p>Useful close source of water during the rainy seasons</p> <p>Very appropriate for larger buildings such as clinics and schools</p> <p>Popular with more affluent villagers</p> | <p>Limited use as a dry season source; perhaps 2 weeks storage?</p> <p>Need a sheet metal roof and gutters</p> |

⁵ All interventions are vulnerable to rebel and pastoralist activity

| | | |
|----------------------------------|---|--|
| Valley dams | Useful source for livestock Creates a livestock zone away from the potable water sources | Water quality limited (treatment too expensive) Expensive and require skilled technical assessment Many existing ponds are unused/silted ponds |
| River and lake sources | Current source of (poor quality) water Easily accessible | Poor quality without treatment Few sources are perennial Good water sources assessment skills required Contamination from fishing villages |
| Wetlands and swamps | Useful dry season source; good for livestock | Small-scale use is sustainable; any proposals to use motorised pumps would require full EIA |
| Sanitation and hygiene promotion | Improved health Clear link to improved incomes Opportunities to composting and associated crop benefits | Need to separate animal and human water use zones and habits Risk of groundwater contamination Pit latrines fill up |

6.5.2 Recommendations

In general, the environmental impacts of the various works to be implemented through the Programme are positive. Care will have to be taken to promote more careful community management of surplus drainage water at new sources to limit mosquito breeding, and to manage land use – particularly the zoning of potable water, livestock and agricultural water uses. These are items for progressive improvement through community-based environmental sanitation support.

An area of primary environmental and wider concern to the Programme is:

- competition for water between human and livestock use and associated land use; particularly the issue of the Karamojong and other pastoralists.

Secondary issues, which should be considered, are:

- protection of shallow groundwater (where it occurs) from pollution via pit latrines
- protection of water sources from pollution via seepage or vandalism from the surface.

As the new water source proposals do not require motorised pumping (which might have a serious impact on wetlands biodiversity) we do not recommend that a formal EIA is required for the Programme. However, assessment of the pastoralist and pit latrine pollution issues

should be carried out in more detail at the start of Programme implementation (to run concurrently with the proposed pastoralist water use study).

7. District Profile for Katakwi

7.1 Description of District

7.1.1 Geography

Katakwi District was formerly part of Soroti District but was approved as a new district by Parliament on 1 July 1997. The area of the district is 4430 sq. km with a population of 225,300 (1998 projected from 1991 Census). The average population density is 34 people per sq. km, but much of the district is even more sparsely populated as shown on the map in Figure 8.1. The land type is predominantly savannah and plains and there are two lakes in the south of the district which have a total area of 177 sq. km.

7.1.2 Water Resources

The rainfall pattern is bimodal, with an average annual total of 1000mm - 1500mm and the mean annual temperature is 30.2 degC. This high average temperature leads to prolonged drought during the two dry seasons.

The main surface water bodies are Lakes Bisina and Opeta and the perennial swamps which drain into these lakes. Some low lying springs occur on the edge of these swampy areas.

The hydrogeology along the lakesides is Kyoga series which yields shallow but saline water. The rest of the district is predominantly basement complex which yields water only through secondary permeability of cracks, fissures and joints. This fractured zone is normally 30-35 m and the average borehole depth required is 60-65m. In some areas there is shallow well potential due to underlying clays and the average depth to water table is 4m.

Amuria county in the north-west of the district has good water resource potential including springs, shallow wells and deep boreholes. Kapelebyong and Usuk counties have little potential for springs or shallow wells and have to rely on deep boreholes.

7.1.3 Administration

The district is divided into 3 counties which are comprised of 14 rural sub-counties and one Town Council, Katakwi, which has a population of approximately 3000. The sub-counties are further sub-divided into a total of 80 parishes. Figure 7.1 shows the sub-county boundaries

7.1.4 Socio-Economic Data

People from the dominant ethnic tribe in the district, Iteso (90%), are traditionally cattle-rearers who cultivate with oxen-drawn ploughs. Since 1985 the area has been persistently troubled by cattle-rustling from the neighbouring Karamoja tribe and also by civil strife. This constant insecurity has led to shifting populations, famine and a lack of sustainable development in the area. However, the newly formed district administration is optimistic that peace and stability have been restored to the extent that successful development projects can be implemented.

The main economic activity in Katakwi is subsistence farming and livestock rearing (95% of the population). Due to the semi-arid nature of the area the main food crops are cassava,

- REFERENCE
- District boundary
 - - - County boundary
 - Sub-County boundary
 - Tarmac road
 - Murram road
 - + + + + + Railway
 - ⊙ District Headquarters
 - Trading Centre

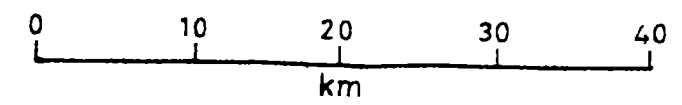
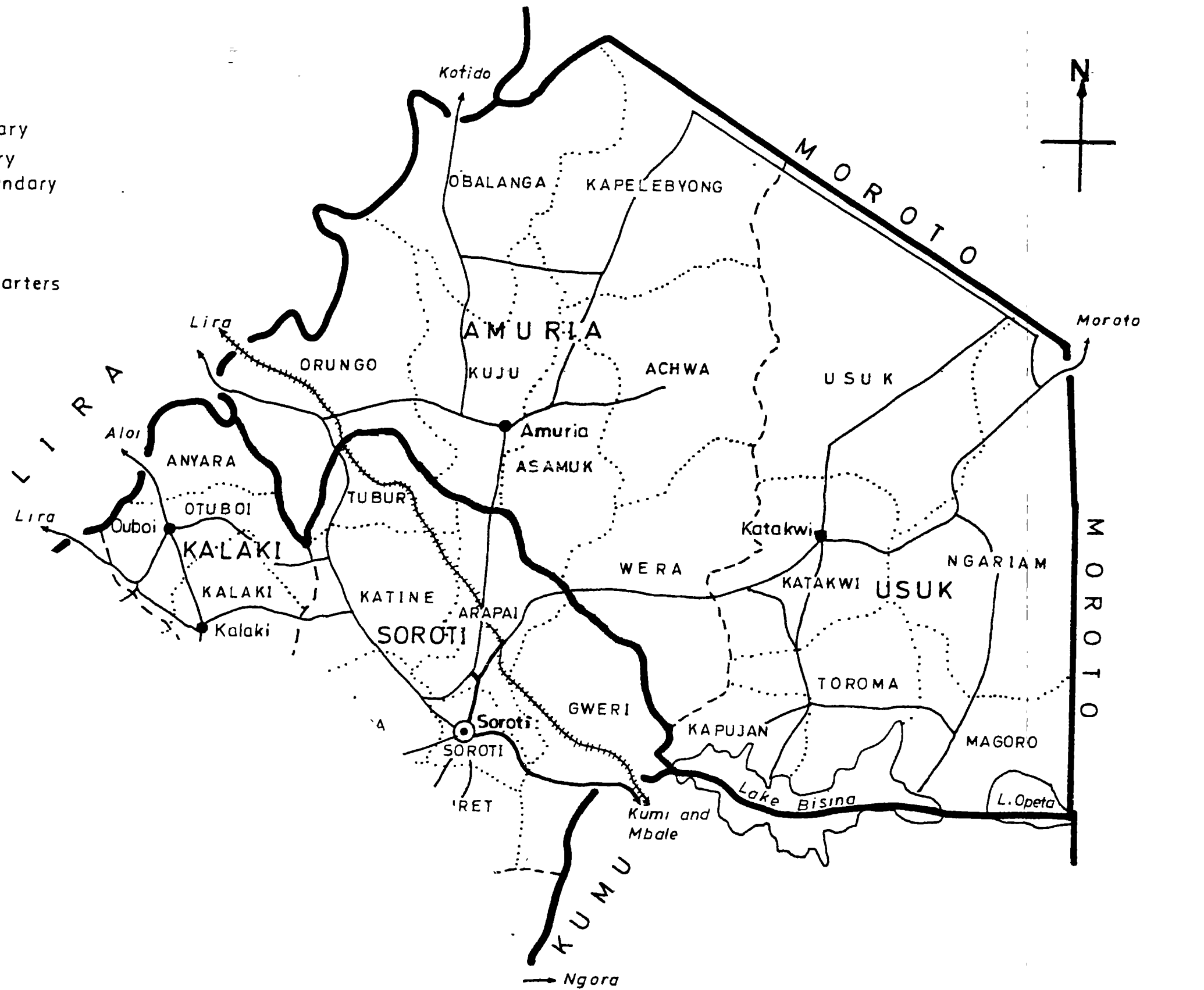


Figure 7.1 Katakwi District Sub-county Administrative Boundaries

millet, sorghum and soya beans. The only exports to other parts of the country are poultry and livestock. The main import is manufactured goods.

The average life expectancy at birth is 46 years. It is estimated that 25% of households are headed by a female. The adult literacy rates are 61.7% for men and 33.5% for women. The top three causes of death are: malaria (25%), acute respiratory infection (13%) and diarrhoeal diseases (13%).

7.1.5 Infrastructure and Social Services

Katakwi district is lacking in basic services; there is no electricity supply, piped water or telecommunications and there is only 73 km of murrum trunk road in the district. There are 156 Primary Schools and 13 Secondary Schools. There are no hospitals in the district but there are three government and three private health centres, five maternity units, nine private clinics and 14 dispensaries.

7.2 District and Sub-County Staffing and Capacity

7.2.1 Existing Staffing Levels - District Level

Many positions in the District are not filled according to the established structure inherited from a larger and by far a more established parent Soroti District. As a result, the staff who are in place are overloaded with work. For instance there is only one staff in the water office making it difficult for him to plan and supervise the implementation of all the water activities in the District. The problem is made worse because the NGOs implementing water in the district that would have complemented the Water Officer, are also weak and need close support and supervision⁶.

Despite the inadequate staffing, the District still finds it very difficult to meet the current wage bill which consumes about 43 million out of about 55 million received by the District as unconditional grant from the Central Government leaving very little resources to be allocated to development activities. To ameliorate the problem, the District has reviewed the staffing structure to make it commensurate to the District needs and capacities and submitted it to the District Executive, Ministry of Public Service and Ministry of Local Government for review and approval. Special attention has been put to staff deployment to make the available staff well positioned to carry out a wide range of duties in a co-ordinated way. For instance, it is proposed that the ACAOs should be based at the District Headquarters instead of in the counties to supplement management on top of executing their roles in the counties.

7.2.2 Existing Staffing Levels - Sub-county Level

The staffing and functionality problem at the Sub-county level is multifaceted. Whereas all sub-counties have Sub-county Chiefs in place, they cannot co-ordinate and handle the devolved functions for planning, budgeting and find it extremely difficult to provide direction and guidance to other extension staff who are more often than not more qualified than them. Some of the Sub-county Chiefs are too old or lack the basic skills

⁶ WaterAid Uganda: Katakwi District Water, Hygiene and Sanitation Scoping Study page 27.

to acquire the new and relevant skills. The option of retrenching them needs systematic appraisal because it may have financial implications, which the District cannot handle. The District also lacks the necessary resources to provide training and support to the Sub-county Chiefs who appear trainable. The situation is not different for the Parish Chiefs.

The Sub-accountants are not functional either. This is evidenced by the poor maintenance and in a number of cases non existence of books of accounts, LPO and stores control system among others. To make matters worse the Internal Audit at the District level section is inadequately staffed and cannot audit, or provide support to the Sub-counties with the frequency and quality required. The District only has two audit assistants in place and lacks a Senior Internal Auditor and Internal Auditor.

Most of the Sub-counties do not have all the required extension staff to support the Sub-county Chief. For instance, the District has five Health Assistants instead of 14 and two Community Development Assistants instead of 14. The few who exist also lack the necessary logistics to facilitate them during the execution of their duties. For instance the technical staff in Toroma Sub-county reported to be using bicycles to cover the whole sub-county. The idea of having a "unified extension worker" has also not taken root. Nevertheless, the District has started the recruitment of graduates as technical staff in the Sub-counties. To-date, three graduates in agriculture have been recruited and strategically placed in sub-counties regarded as models for agriculture modernisation.

7.2.3 Training and Capacity Building

Most of the staff holding the positions do not have the required skills to satisfactorily execute the prescribed functions. The District has also never carried out a comprehensive and systematic capacity building needs assessment. Nevertheless, donors like UNICEF and KDDP have executed pre-packaged training courses and provided funds to departments to implement tailored training respectively. In addition some staff have been trained by line ministries. For instance, the DHI has been trained in PRA and communication material development under the Information, Education and Communication programme in the Ministry of Health.

Despite the piecemeal training interventions and irrespective of lack of capacity needs assessment, there are explicit capacity building needs that cut across the District and Sub-county level as listed below.

- Further orientation to the Local Government Planning process and procedures for District and Sub-county technical staff;
- Developing balanced budgets for prioritised projects following the provided procedures and format;
- Orientation to the Finance and Accounting Regulations 1998 with special emphasis on the proper maintenance of books of accounts;
- Specifying the roles and functions of the TPC at Sub-county and District level and procedures for executing them with a view of making the TPCs functional;
- Clarifying the roles and functions of the Executive, Council and sectoral committees and explaining the relationship of these bodies to the technical staff; and
- Monitoring, evaluation and documentation of interventions.

These capacity building needs are not exhaustive and need to be further assessed in light of the staff capacities in order to come up with tailored contents and appropriate training methods that would ensure the acquisition and adoption of the skills.

7.2.4 Planning and Co-ordination Capacity

The Technical Planning Committees at the District and Sub-county levels are not functional. The Planning Unit has only one person, the Planner/Economist but the District is in the process of recruiting a Population Officer. The District and Sub-counties have not yet produced the three-year Integrated Development Plans. Nevertheless, significant efforts have been put in the process and to-date the following activities have been accomplished:

- a) Sensitisation and training of the Sub-county Local Governments on the decentralised planning cycle and process,
- b) With support from KDDP, PRA activities have been conducted in a number of villages to identify and analyse problems and formulate strategies;
- c) With support from KDDP organised a planning retreat for District technical people and politicians;
- d) Training of the heads of departments on the use of the logical framework approach in planning;
- e) Development priorities for the district have been highlighted;
- f) The District has identified sub-counties to focus on during the ongoing planning process and has planned for follow up meetings. Prioritisation of sub-counties was done because the district does not have the financial and human resources capacity to support all the sub-counties at once; and
- g) The Planning Unit is in the process of compiling the draft Development Plan using the data collected through PRA and surveys. Among other things, the District Planner intends to integrate the plans of the key partners like KDDP into the District Development Plan.

It was however noted that the planning capacity at the Sub-counties is very low because of inadequate and unskilled staffing. Yet the District level, which is supposed to provide support is also inadequately staffed and not well facilitated. Perhaps this problem can be ameliorated through intra District arrangement (using staff from other departments to support the Planning Unit), working in liaison with the NGOs and outsourcing the private sector.

7.2.5 Main Constraints to Service Delivery

- a) **Staff reporting lines:** Some of the staff posted in the sub-counties still report unilaterally to the line department heads at the district level instead of the Sub-county Chief who is the accounting officer. This renders the Sub-county TPC non-functional and co-ordination of activities difficult.
- b) **Staff shortage and capacity:** The District and Sub-county Local Governments have many unfilled established positions. In a number of cases the few staff that exists, cannot cope up with the demands of the positions because they are either too old or not qualified for them. Yet the District find it very difficult to either fill the vacant positions or replace the incompetent ones because they do not have the funds to

cater for the wage bill in the former and to pay the retrenchment packages in the latter.

- c) **Central Government transfers:** The amount of money released from the centre as non-conditional grant fluctuates and makes it difficult for the district to plan for development activities. Moreover most of the funds released from the centre are used to cater for the wage bill.
- d) **Lack of human resource development strategy:** The District lack a human resource development strategy including systematic training opportunities, promotion procedures, clear retention strategy and others. Many staff especially the old ones are under a continued threat for retrenchment. Others lack the confidence to perform because they know that they lack the basic skills for the positions they occupy
- e) **Poor staff welfare:** The Government scales for staff emoluments are very low and payments do not come on time. A number of staff have accumulated salary arrears and there are no provision to cater for capitation, medical care and housing for some staff. This is made worse because the staff have not come up with any sort of internal staff welfare scheme.
- f) **Insufficient transport:** Most of the District and Sub-county staff do not have access to transport facilities. The commonest form of transport in the Sub-counties is the bicycle, which cannot allow the extension staff to cover the spatial areas of their sub-counties. The few extension activities that are carried out are concentrated in communities surrounding the sub-county headquarters.
- g) **Procurement of goods and services:** The District experiences delays in the procurement of materials and services. This is because the system of procuring services through the District Local Government Tender Board is not clear and sometimes violated. The private sector that would have provided the services is also not developed.

7.3 Existing Water Supply, Hygiene and Sanitation Situation

7.3.1 Water Supply

The average safe water supply coverage in the district is estimated by the district to be around 32% and the average distance to a safe water source is 6km. Around 78% of the handpumps in the district are reported to be functional at present.

Table 7.1 Distribution of Water Sources in Katakwi District

| County | Kapelebyong | Usuk | Amuria | Total |
|---------------------------------|-------------|------|--------|-------|
| Source type | | | | |
| Deep borehole -functioning | 59 | 98 | 63 | 220 |
| Deep borehole - not functioning | 12 | 35 | 15 | 62 |
| Protected spring | 0 | 0 | 63 | 63 |
| Unprotected perennial spring | 114 | 158 | 514 | 786 |
| Shallow well - protected | 45 | 98 | 13 | 184 |
| Shallow well - unprotected | 63 | 35 | 86 | 156 |

As the table shows, Amuria is the only county with spring potential but there is reasonable potential for shallow wells in all three counties. There are 17 valley tanks in the district but only one of these is functioning at present.

The field visits and limited number of household surveys carried out in Katakwi district provided a useful insight into the water supply situation in the district. Some of the key issues which arose from visits to water sources and interviews with users, LCs and WSC members are summarised below:

Types of technology and sources:

- Most of the boreholes are sited near primary schools and get heavily overused by pupils and the local population. Normally it is the community, and not the school, who is responsible for maintaining the pump;
- There are many schools without a safe water supply and this seems to be a major concern especially to the LCs met;
- Many people rely on hand dug, unprotected wells in swampy areas. These wells get contaminated by surface water run-off and by people or animals accessing them. In the dry season (Nov- Mar) the Karamajong come and spoil these wells especially in the north-eastern sub-counties of Obalanga, Kapelebyong, Usuk and Ngariam. People would like to have a simple means of upgrading and protecting these simple wells;
- Most of the valley tanks in the district are silted up. Some people expressed a need to have these rehabilitated for cattle-watering;
- Some of the boreholes visited in Obalanga and Asamuk sub-counties have very low yields during the dry season and it can take 20 minutes to one hour to fill a 20 litre jerrycan;

Community Contributions:

- The concept of community contributions and community-based maintenance is well accepted and understood at village level. According to LCs and individuals asked the WTP towards capital cost is Ush1000 and to maintenance is Ush500 per household per month. However only one or two WSCs were found to actually be collecting money on a monthly basis: most mobilise people to collect money when the pump breaks down;
- The NGO CHIPS has been working with communities in some sub-counties to construct hand dug wells up to 15m deep. CHIPS pays the community for their labour and gives the hand pump for free. This may lead to poor ownership of facilities in the long term.

Operation and Maintenance:

- Spare parts for U2 and U3 pumps are difficult to obtain in the sub-counties. There is a privately-run spares shop in Katakwi Town but the turn-over is very low. This may be partly because not enough people are aware of it (many people told us they had to go to Soroti to get spares) and also because the WSCs are not well organised enough to collect money and arrange transportation;
- At least one pump mechanic was reported to be active in each sub-county visited. The NGO YWAM have trained some and equipped them with tools. The community is prepared to pay them to do work when the pump breaks down, but not for routine maintenance;

7.3.2 Sanitation

The average latrine coverage in the district is estimated to be around 18% as shown in the table below.

Table 7.2 Latrine Coverage in Katakwi District

| Method | County | Kapelebyong | Usuk | Amuria | Average |
|-----------------------|--------|-------------|-------|--------|---------|
| Latrine (traditional) | | 19.4% | 13.1% | 21.6% | 18% |
| Bush | | 80.6% | 86.9% | 78.4 | 82% |

Source: Katakwi District Profile, 1999

Data on the existence of school sanitation facilities at was not available from the district.

As shown in the table open defecation is estimated to be practised by 80-85% of the rural population in Katakwi. This fact was borne out in the field work. Although awareness of the risks in high there is little latrine construction activity going on at present. In all the villages visited people cited a number of factors hindering latrine construction. The main factors mentioned were:

- Technical constraints including hard rock, or loose soils which results in collapse of pits during construction
- Lack of tools such as pick-axes and spades
- Destruction of logs and grass roofs by termites
- Laziness of individuals
- Unavailability of slabs and sanplats
- Lack of financial resources
- Lack of incentive due to "convenience" of open defecation.

Some of these are excuses which veil the underlying reasons for low latrine coverage. For example, the problem of logs rotting or being eaten by termites was given as a reason in a village where no one had actually constructed a latrine from logs so there could be no direct experience of problem. WaterAid's scoping study of Katakwi identified the insecurity in the area as a contributing factor to the low sanitation coverage. During insurgency many people fled from their homes and have only recently begun to return to their homesteads to start life afresh. The situation is made worse when the Karamajong come to the district with their animals. Because they come in big numbers and are not settled in one place they and their animals defecate in the bush and near water sources thus making the already bad sanitation even worse (WaterAid report, 1999).

During the meetings in the different villages most of the people expressed their preference for a traditional pit latrine because they cannot afford the now unsubsidised rates for slabs. The willingness to pay for a slab was very low at Ush 500-1000. However, due to contact with NGOs which have promoted slabs in the past it may be the case that people perceive traditional latrines to be a low class option and are aspiring to sanplats or slabs as the "modern" and acceptable solution. They therefore do not feel motivated to construct inferior traditional latrines.

7.3.3 Hygiene Behaviour

Despite the fact that sanitation coverage in the district is very low people in the villages appear to be well aware of the risks of open defecation. Sanitation and hygiene promotion

activities by YWAM have had some impact and awareness levels were found to be higher where they had been operating.

During the field work several women explained how disgusted they are by the faeces that can be found in the bushes and how ashamed they are of their defecation practices. In the wet season open defecation is not such a problem because they can hide in the fields. However, in the dry season they find it much more difficult to find a place for defecation as there are no crops or vegetation to hide behind.

Women were generally found to be more motivated than men to improve their sanitation arrangements. Specific problems women face are lack of money and the fact that the men, who usually control resources and are the ones who traditionally dig, do not put a high priority on sanitation. No cultural beliefs or constraints were admitted to during the in-depth village surveys.

The main risk behaviours identified in Katakwi district during the field work were:

- ***Unsafe disposal of human faeces and in particular children's faeces***
Sanitation coverage in the district is low and estimated 80-85% of people practice open defecation. The majority of people do attempt to bury their faeces in the bush. Children defecate in the compound and the mother will normally throw their faeces in the latrine, the bushes or bury them not far from the house.
- ***Poor hand washing practices after defecation and before feeding children***
The majority of households lack soap or hand-washing facilities. Most people did say that they wash their hands before eating but hand-washing after defecation was not found to be a common practice
- ***Consumption of unsafe water due to the lack of access to safe water and use of dirty containers for transportation or for drawing drinking water***
Access to safe water is only around 32% in the whole district and the majority of people rely on unsafe source. There is a high level of awareness that this is unsatisfactory and people want access to safe water in the form of boreholes or protected springs. However, those that do access clean water are usually using dirty jerrycans for transportation so the safe water chain gets broken immediately. Other are storing the water in clay pots but using dirty cups and dirty hands to draw the water so the chain gets broken in the household
- ***Eating with animals wandering around the compound***
Most households have some animals living in the compound (e.g. pigs, goats, poultry, dogs and cats) and these are present (and in close proximity) at meal times.
- ***Use of dirty utensils for food preparation and eating***
Many people keep utensils and plates on the floor and do not have dedicated drying racks or areas for storing them.

7.4 Village Snap-Shots

In-depth surveys were conducted in villages in the sub-counties of Toroma, Obalang and Asamuk. Table 7.3 summarises the main characteristics of these villages. The community maps and detailed information from the PRA fieldwork carried out in Katakwi district are presented in Appendix 6.

The village of Olupe was located close to the lake shore, and was the most isolated and poorest of the villages. Agalibu and Asamuk were surrounded by swamps and were relatively well off by comparison, and bounded by other villages.

Water collection

Water was collected in Olupe from the one and only source, the lake, and the water used for all purposes. In the other two villages water was collected from both protected and unprotected sources, with women and children typically walking up to 6 km round trip distance. However, problems and conflicts had developed over the installation of a shallow well by YWAM, as the NGO had insisted on community contribution of Ush 116,000 and the community had only collected Ush. 9000. The well was not functioning properly and was likely to break down very shortly.

In none of the villages was an active water user committee identified, and although the structure existed in one case this comprised 'uppers' who had no clear idea of their roles and responsibilities.

In only one village, Agalibu, did men assist women in the collection of drinking water, using bicycles to collect water from the borehole. In the other villages, more traditional attitudes were found, where especially older men argued that having paid bride-price, their wives were obliged to collect water in return.

Awareness levels hygiene and sanitation

Awareness on the benefits of using clean safe water was found to be high in all villages, as was awareness of the links between poor sanitation and diseases.

Practices in all cases did not reflect this awareness. Latrine coverage was found to be very low in two of the villages (2.5-6%) but considerably higher in the third village, Asamuk (34%) where the NGO YWAM had been working up to 1997. Hygiene awareness was also found to be higher in this village for the same reason.

WTP for water

Even in the very poor villages, communities were prepared to make contributions to the capital costs as well as O+M costs for a new water source, from Ushs.500-1000.

Currently in the poorest village, Olupe, women were prepared to pay Ushs. 300 to hire a canoe to obtain water from the deeper, therefore less polluted areas of the lake.

With regard to latrine slabs, these same villagers were prepared to pay even more, but this was to a maximum of Ushs. 2000.

Table 7.3 Village Profile Summary for Katakwi District

| Village | Sub-County | Toroma Olupe | Obalang Agalibu | Asamuk Morupus |
|-----------------------------------|------------------------|---------------------|------------------------|-----------------------|
| Main characteristics | | | | |
| Water a priority need? | | yes | yes | yes |
| Population: | | 234 | 576 | 282 |
| Water sources: | | | | |
| | (nr. Protected) | 0 | 1 | 1 |
| | (nr. Unprotected) | 1 | 8 | 4 |
| Awareness level water/hygiene: | | | | |
| | (high) | X | X | X |
| | (low) | | | |
| WTP for water: | | | | |
| | (capital cost): | 500-1000 | 500-1000 | Local materials |
| | (O&M): | | | |
| Water Source Committee: | | | | |
| | (Active) | X | X | X |
| | (Inactive) | | | |
| Water collection: | | | | |
| | (distance round trip): | 6km | 6km | 2km |
| | (women/children only): | X | | X |
| | (men assist): | | X | |
| Average consumption (l/c/d): | | 10 | 8 | 12 |
| Conflicts over water use: | | Potential | - | Potential |
| Control over resources: | | | | |
| | (Male): | X | X | X |
| | (Female): | | | X |
| Latrine coverage: | | 2.5% | 6% | 34% |
| Awareness sanitation/hygiene: | | | | |
| | (high): | X | X | X |
| | (low): | | | |
| WTP for latrine slabs: | | 500-5000 | 2000 | 2000 |
| Active village level workers: | | CHW/TBA | TBA | YWAM CF |
| Active village institutions (nr): | | 0 | 1 | 0 |
| Potential for managing source: | | | | |
| | (good): | | X | X |
| | (limited): | X | | |
| CDA in sub-county? | | no | no | yes |
| NGO/CBO Activity: | | - | CHIPS & SOCADIDO | YWAM |
| Cattle watering distance: | | 6km | 4km | 2km |
| Vulnerability: | | | | |
| | (drought): | | | |
| | (Karamajong): | Nov-Mar | Nov-Mar | Nov-Mar |
| | (other): | | | |
| Economic level: | | very poor | poor | moderately well-off |

Risks and vulnerability

Risks and vulnerability were found in two of the villages, which suffered annual Karamajong incursions, which caused much disruption and even greater problems with access to water, as the pastoralists monopolise the only seasonal sources available.

NGO/CBO activity

The range and number of institutions varied considerably between the villages. The activities of NGOs such as CHIPS and YWAM were found to have created a sense of disillusionment among the villages concerned, where the intervention in water and sanitation had been inappropriate and not carefully worked out in consultation with villagers. For example, CHIPS, a Christian NGO, had attempted to construct a hand dug well in Agalibu, but it was abandoned half-way through. Villagers had made contributions for this, which were not refunded and consequently they felt disillusioned and disappointed. This has set an unfortunate precedent in the village.

At the sub-county level, CDAs had not been in two of the three sub-counties.

Cattle watering needs

There are only three valley dams for the whole of the Sub-County of Toromo, and consequently during the seasonal influx of Karamajong, there is an acute shortage of water for both the pastoralists and the residents, giving rise to considerable conflict, disruption and according to villagers, an increase in diseases.

7.5 Key Stakeholders and Partners

7.5.1 WaterAid

WaterAid Uganda's approach over the past three years has been to work through local partner organisations which implement water and sanitation projects at community level. One such organisation is the Wera Development Association (WEDA) which implements water, hygiene and sanitation projects in Katakwi district. WaterAid has provided support to WEDA mainly in the form of capacity building and training.

In 1999 WaterAid Uganda reviewed its Country Strategy and identified the need to start promoting a more integrated approach to fully incorporate participatory planning and effective community management on a district-wide basis. WaterAid Uganda selected Katakwi as one of the districts it would like to develop this new approach through working closely with the district administration. The first stage in this process was to carry out a detailed water, hygiene and sanitation scoping study in Katakwi district in order to assess the existing situation and problems and to develop a strategy for working with the local government structures.

The scoping study was undertaken in June 1999 and so at the time of carrying out this 4 Districts programme design only a draft scoping report was available and WaterAid had not yet finalised the exact nature of their proposed support to Katakwi district.

WaterAid is proposing to have permanent representation within the district to assist in planning and co-ordination of all water, hygiene and sanitation activities. The proposed programme is for three years, commencing April 2000. It will be important to liaise closely with WaterAid staff in order to ensure that the two proposed programmes in Katakwi are

complementary and do not overburden the local government staff or implementing partners. WaterAid activities will focus on low cost technologies such as protected springs and shallow wells and it may be appropriate for the 4 Districts programme to concentrate activities in areas where drilling of deep boreholes is necessary. WaterAid is planning to commit around £50,000 per year to implementation of water supplies.

7.5.2 Netherlands/KDDP

As described in Section 5.4, this is a bilateral support by the Government of Netherlands to the District. KDDP focus on improving the living conditions of rural poor communities through:

- Extension of credit to farmers (in form of oxen and ploughs) and to small-scale enterprises. The credit component is managed by community based Parish Credit Committees (PCC). The PCC identifies credit beneficiaries and participates in credit recovery. The PCC is a potential structure to co-ordinate development activities in the parishes;
- Further support to agriculture improvement include supply of improved seeds, farmer training and rehabilitation of cattle dips;
- Supporting the District and lower local councils to develop planning capacity focusing on participatory needs identification and strategy formulation. KDDP promotes the use of PRA techniques in planning and programme design;
- Support to education improvement including school construction (27 primary schools, 2 vocational schools and 1 secondary school), provision of desks and text books;
- Support to road construction (20 km from Usuk to Acowa)
- Support to the provision of safe water (31 and 16 boreholes drilled and installed respectively);
- Building institutional capacity by supporting the construction of administration buildings, staff training and provision of materials.

KDDP co-ordinates the implementation of programme activities, monitors progress and ensures accountability of programme resources. To-date KDDP has covered ten (10) sub-counties in the District.

7.5.3 GoU/UNICEF WES Programme

The programme has been implemented mainly through the NGO Youth with Mission (see below). Katakwi district administration has received around Ush 162,000,000 from WES this financial year and the district contribution required is Ush 12,000,000.

The principal programme activities have are capacity building, support to the WES Committee and water and sanitation for institutions. In 1999 the following activities have been undertaken under WES: ten springs protected, one shallow well installed, five rainwater tanks provided for primary schools, 5-stance pit latrines constructed in 24 primary schools and two motorcycles provided for the district administration.

7.5.4 NGOs and CBOs

Wera Development Association (WEDA): This is a Multi-sectoral NGO engaged in health, agro forestry, income generation and WES projects. It has participated in the provision of water (2 shallow wells with pumps), hygiene education and sanitation to communities in Wera Sub-county for the last two years.

Since it has a Board of Directors composed of members from each village in Wera and Abaleva Sub-counties responsible for determining the direction and framework in which the organisation will operate it is likely to represent the interests of the constituents. WEDA has also adapted a participatory approach and is likely to address the real needs of the communities. WEDA report regularly to the District Local Government and co-ordinate with other NGOs. It gets support from Water Aid.

Christian International Peace Service (CHIPS): Implemented water projects without components of hygiene education and sanitation. CHIPS plans to facilitate the local staff to form an independent NGO and hand over responsibility for activities to them within the next two years. It collaborates with the District Water Office and other NGOs in the District. It has a management team based in the area, dedicated staff and has plans for the future.

Victory Revival Ministry (VRM): This is a Ugandan religious NGO operating in Katakwi since 1992. Has staff directly responsible for water and sanitation activities. Started activities for WES in 1998 under the DHSP. The NGO uses the church structure to mobilise communities to participate in projects. Collaborates closely with the District Administration and other NGOs.

Youth with a Mission (YWAM): This is an International Voluntary Multi-sectoral NGO operating in Uganda since 1983. It uses volunteers in the delivery of services. The organisation has a project office in Katakwi headed by a Team Leader. In liaison with UNICEF under the WATSAN/WES programme, the organisation drilled and protected water sources, provided latrine slabs, established WATSAN Committees in Sub-counties, trained pump mechanics, spring masons and documented the process between 1991 and 1997. YWAM co-ordinates with Katakwi District Local Government and other NGOs in the area like SOCADIDO, and CHIPS.

ACAV: This is an International Italian NGO. It has experience in deep borehole drilling and rehabilitation of wells. Facilitated the formation of community structures to operate and maintain water sources. Plan to focus on the rehabilitation of existing water sources as opposed to drilling new ones. ACAV collaborates with KDDP and the DWO in the drilling of boreholes in the District

ActionAid: This is a British Multi-sectoral NGO with many years of experience of working in Africa. It conducted activities in Kapujan and Ngariam Sub-counties and plans to cover Toroma and Magoro. ActionAid has a long and broad experience in using PRA tools at community level. ActionAid has supported the drilling of boreholes (9), rehabilitation of earth dam, construction of Health Units and facilitated the communities in the planning, implementation and trained in O&M of water projects. ActionAid has also had interventions in hygiene and sanitation. It co-ordinates with DWD in the drilling of boreholes, the CDO in the soft ware component and District Administration in general.

Soroti Catholic Diocese Integrated Development Organisation (SOCADIDO):

SOCADIDO started as a community managed water and sanitation programme in 1995. The entry point of SOCADIDO to the communities is the church parish in consultation with the local leadership. SOCADIDO has done spring protection in Orungo, has given credit in form of goats and seeds to a few women's groups. It has experience in community mobilisation, use of participatory approaches, community planning and management. SOCADIDO plans to build the capacity of its staff to be able to effectively implement its activities. It has been collaborating with other NGOs and local authorities.

Other NGOs in the District are:

- Christian Children's Fund for education;
- GTZ for children's welfare and education,
- Redd Barna for Children's welfare;
- Church of Uganda offering credit for micro projects;
- THETA for health;
- AMREF for health;

Community Based Organisations (CBOs):

There are a number of CBOs in the District but most of them are not registered and have never received any training. Since most of these CBOs are operating at the village level with close interface with the community enhancement of their capacities should be focused on and used in the delivery of programme activities. An analysis of their capacities and needs should precede capacity building efforts. They include among others:

- Farmer to Farmer for agriculture and agro-processing;
- Matilong for agriculture;
- Orungo Development Association for credit for micro projects and agriculture;
- Nutrition and Sanitation (NUTSAN) for nutrition and sanitation in Asamuk;
- Opot Development Association for agriculture, health and education
- Acowa Family Helper Project for agriculture, education and health.
- A number of women's and youth groups

7.6 Key Design Issues for Katakwi

7.6.1 Social and Community Development

- CDAs currently in post at Sub-County number 2 out of a quota of 14.
- Capacity building required as well as underwriting of a further 12 therefore required for effective programme implementation.
- Water needs assessment for pastoralists who spend up to six months of the year sharing water sources with resident villagers will be required
- Identification of NGOs with which to work in partnership e.g. CHIPS, a Christian NGO is working with pastoralists in Kapelbyong sub-county.
- Capacity building of some NGOs identified as potential partners would be required, particularly on technical and software issues. NGOs were found to have made a number of inappropriate and potentially damaging interventions at village level
- In siting new installations, adequate and gender sensitive identification of the users will be effected. In those cases where a village has not previously had a borehole, experience of creating a water user committee, and therefore the management issues of sharing the source with other villagers, such as contribution arrangements will need

special attention. Potential conflicts are likely to arise in the case where a new installation is likely to be used by neighbouring villages either in the short or long term.

- Policy of only one borehole per village in line with the RUWASA model may need to be considered in certain cases
- The activities of NGOs with which partnership is being considered such as YWAM need to be reviewed critically in order to ensure consistency of approach, technology, messages etc.
- Design of further hygiene activities, community development activities need to be tailored to communities where previous interventions may have created confusion or ambiguity.

7.6.2 Water Supply

- Distribution of boreholes in the district is uneven and there is a high demand for boreholes in areas where there are no alternative sources,
- There is potential for simple hand-dug wells to be protected in swampy areas;
- There is a need for safe water sources at schools;
- Some boreholes have extremely low yields during the dry season or actually dry up. The cause of this problem needs to be identified;
- About 30% of handpumps are currently not functioning. It is estimated that the majority of these require major repair (e.g. fishing pipes) since communities are generally taking responsibility for minor repairs albeit in an ad hoc way. A survey will need to be carried out to assess rehabilitation potential;
- There is reported to be a high number of springs with potential for capping, especially in Amuria County. This is a preferred low-cost, low-maintenance technology which should be fully exploited. A survey will need to be conducted to assess actual potential. Spring funds need to be identified and trained;
- WSCs need to be trained and strengthened in their roles. This is central to the sustainability of all technologies;
- Improved mechanisms for supply of spare parts need to be developed: private initiatives should be encouraged and supported in some way.
- Simple rainwater harvesting technologies should be developed and promoted both for households and institutions.

7.6.3 Sanitation and Hygiene Promotion

- There are only five Health Assistants in place instead of the required 14. Since these sub-county personnel will be key to implementing the hygiene and sanitation component of the 4 District Programme it is essential that the additional nine are put in place over the period of implementation;
- Close links and co-operation will be established between WaterAid and their local NGO partners who have experience and expertise in hygiene promotion and sanitation;
- Further investigation into the real reasons and constraints which prevent people from starting, or in some cases completing, latrine construction may be required;
- The institutional water and sanitation component will be implemented in close partnership and co-ordination with the ongoing WES and KDDP Programmes which both have a direct stake in working with schools and other institutions;

Key Sanitation Issues:

- Further investigation into the real reasons and constraints which prevent people from starting, or in some cases completing, latrine construction may be required;
- Latrines need to be promoted on basis of status and privacy to make them an integral part of the accepted home environment.
- Traditional latrines should be promoted as an acceptable and affordable (but *not* a low-class) option. Incremental upgrading at a later stage is possible and should be encouraged in the medium-term.
- Technical advice and guidance is needed to show people how they can construct latrines in “difficult” conditions and with available tools and resources (e.g. mattocks instead of pick-axes). Appropriate designs to deal with specific problems need to be developed locally.
- The fear of rotting logs and termites attack needs to be overcome.
- Communities could be encouraged to share the cost of digging to overcome problems of affordability in the poorest area.
- Advice and training on operation and maintenance is essential so that they do not become too unsafe or unpleasant to use.

Key Hygiene Behaviour Issues:

- Lack of hand-washing after defecating is a key high risk behaviour which needs to be changed;
- Weak links in the safe water chain are in the transportation and handling of clean water and behaviours need to be changed to address this problem.
- Promotion of latrines should emphasise privacy and convenience benefits and also status associated with household latrines;
- Men need to be targeted during hygiene promotion to raise awareness and create a real demand for latrines amongst male peer groups (drinking groups may provide a good entry point).

7.6.4 Institutional

Since Katakwi District is newly formed it has inadequate numbers of and inexperienced staff, less developed structures including the District Local Government Tender Board, District Public Service Committee, District Public Accounts Committee, Council, Executive and Sectoral Committees⁷. This implies that a lot institutional building activities will have to be in built in the programme in the short run involving provision of direct technical support.

There is need to prioritise Sub-counties with the basic staff (functional Sub-county Chief, Sub-accountant, Health Assistant and Community Development Assistant) for initial programme activities and put a condition for others to demonstrate that these functions are being performed before accessing the programme funds. Further efforts should be devoted to building the capacity of NGOs and the private sector to supplement the Government structure in the execution of the functions.

⁷ Refer to appendix 5 for detailed District and Sub-county Institutional profiles.

8. District Profile for Apac

8.1 Description of District

8.1.1 Geography

Apac District has an area of 6541 sq. km with a total population of 544,300 (1998 projected from 1991 Census), 98% of which is rural. The population distribution is shown in Figure 6.1; the average density is 90 people per sq. km but the south-western county of Maruzi has a much lower density of 0-49 people per sq. km. The land type is predominantly wooded savannah and open grasslands with relative relief of less than 30m, apart from the occasional granite rock outcrop. The largest body of water in Apac is Lake Kwanja; swamps and wetlands also cover a significant proportion of the district (17%).

8.1.2 Water Resources

The rainfall pattern is bimodal, with average annual totals ranging from 875mm in the south of the district (Maruzi and Kwanja counties) to 1500mm in the north. The higher average temperatures in the south of the district, coupled with the lower rainfall, mean that the areas around Lake Kwanja are prone to drought.

In the south of the district, namely Nabyeso, Cawente, Akokoro and Ibuje sub-counties, there is little potential for shallow wells or springs and the water resource is deep wells in the fractured zone of the basement complex. The average depth to water table in these areas is 30-40m. The area around the lakeshore is reported to yield slightly saline groundwater.

The centre and north of the district have a better range of water resources and there is potential for protected springs and shallow wells. The higher rainfall in this area allows for rainwater harvesting from April to May and August to October.

8.1.3 Administration

The district is divided into four counties which are comprised of 20 rural sub-counties and one Town Council, Apac, which has a population of approximately 6,900 (1997 projection from 1991 census). The sub-counties are further sub-divided into a total of 111 parishes. The trading centres of Aduku, Kamdini and Aboke are reported to be urban growth areas. Figure 8.1 shows the administrative boundaries for Apac at sub-county level.

8.1.4 Socio-Economic Data

The dominant ethnic group in Apac is the Langi, who constitute 98% of the population. The district has experienced relative stability in recent years and the net migration trend is typically 2% in-migration from the troubled districts of Gulu and Lira (1991 census data: continuing instability in neighbouring districts suggests in-migration still persists).

At least 75% of households in Apac are engaged in subsistence farming, whilst less than 0.5% of the population is engaged in commercial farming of cash crops including tobacco and cotton. The main traditional crops are maize, sorghum and simsim all of which show a surplus in an average year. The population traditionally are also cattle rearers, but the district has suffered from cattle rustling and there is a livestock deficit in Apac. The populations living around the lakeshores are engaged in fishing; there are currently 32 active fishing villages in the district.

Cottage industries include brick making, pottery and carpentry and mechanical repairs. The main import into Apac is manufactured goods.

The literacy rate is 70.4% for males, and 36% for females. The drop out rate from school is particularly high for girls. Due to lower educational achievements, women are not well represented in the higher decision-making levels, and culturally men have a dominant, and women a subordinate, position in the family decision-making process. Women are increasingly faced with a heavier work burden in agriculture and are generally denied access to, and control over, resources such as land, agricultural inputs, etc.

8.1.5 Infrastructure and Social Services

Apac district has electricity and telecommunication services which are limited to the Town Council area. There is no piped water supply in the district, with the exception of private supplies to one school and two hospitals. The road network comprises 192 km of murrum trunk road and 632 km of feeder roads. There are 260 public primary schools, two private ones and 25 Secondary Schools. There are two hospitals, three health centres 12 clinics, 6 aid posts and 22 dispensaries or sub-dispensaries.

The average life expectancy at birth is 50.3 years. The top three causes of death are: malaria (21%), acute respiratory infection (19%) and diarrhoeal diseases (10%). Bilharzia is prevalent in the lake-side communities.

8.2 District and Sub-County Staffing and Capacity

Out of the four Districts to be covered by the programme Apac is the only one without substantial donor assistance at present. As a result the district staff has not benefited from the same level of capacity building as Lira, Katakwi and Kumi and consequently some of the decentralised functions are not performed and the level of service delivery is relatively lower.

8.2.1 Existing Staffing Levels - District

Most of the staff in the District are in place but some of them newly recruited and need induction and orientation to the Local Government procedures. The District Service Commission recently constituted and trained has advertised a number of positions and they will be filled soon. The posts advertised include the Principal Internal Auditor, Internal Auditors in charge of Schools and Administration, Production Manager, and Principal Finance Officer.

The District Technical Planning Committee is not functional. The District Local Government Tender Board is in place but its work is affected by the incapacity of some District staff to prepare detailed tender documents and also by political influences. The District Council and Executive are functional and their minutes show that they discuss issues related to their roles.

APAC DISTRICT

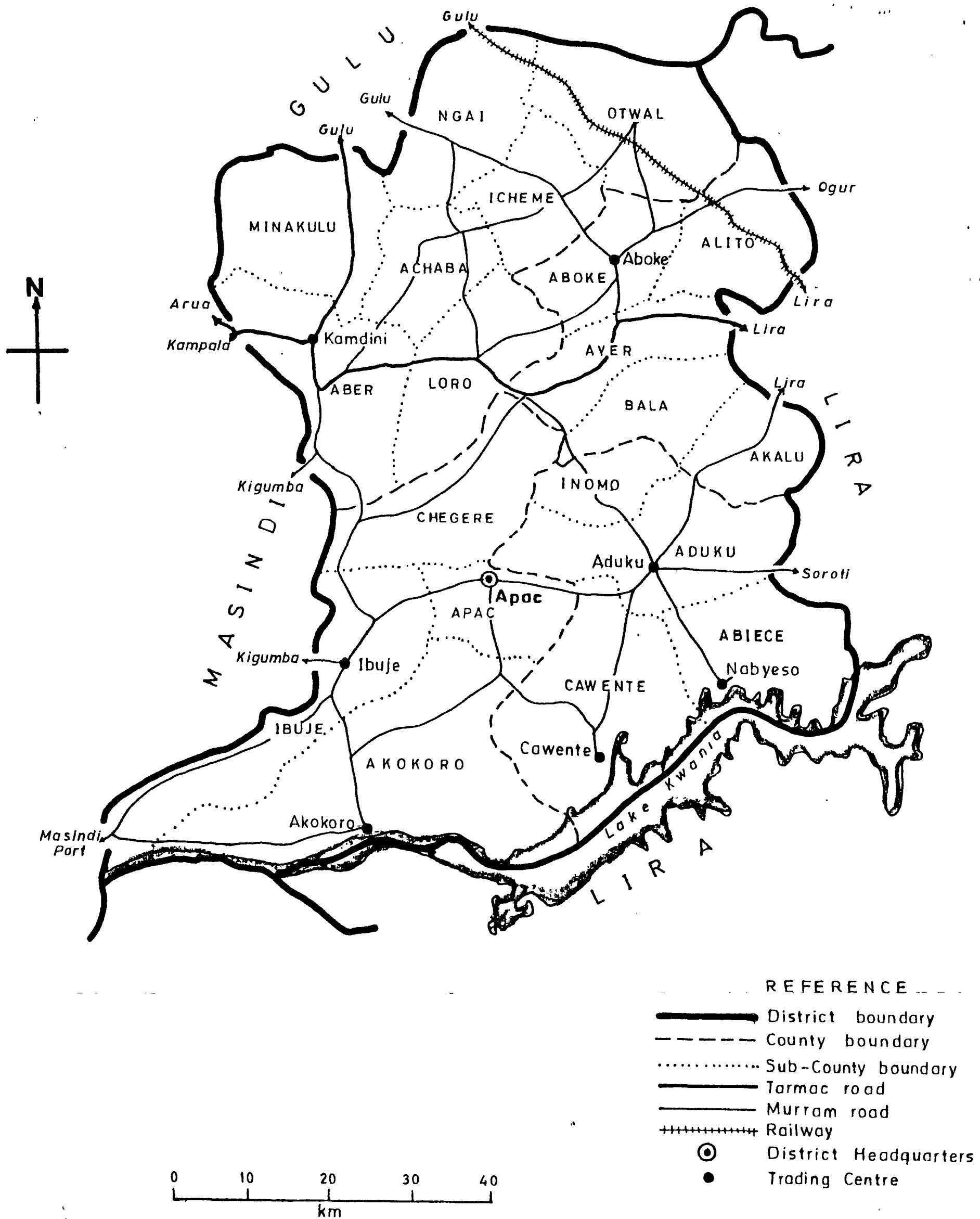


Figure 8.1 Apac District Sub-county Administrative Boundaries

8.2.2 Existing Staffing Levels - Sub-county

The capacity in the Sub-counties and Parishes to perform the mandated duties is low. Five Sub-county Chiefs retired due to old age and their posts are in the process of being filled. The majority of those who still occupy the positions lack the basic qualifications. The District is in the process of revamping the whole system to recruit Sub-county Chiefs with a Diploma as minimum qualification. Like the Sub-county Chiefs, most of the Parish Chiefs lack the basic qualifications to fulfil their roles.

The Accounting section in the Sub-counties is poor and some of the mandatory outputs are not in place. The Sub-accountants are assisted by the Personnel Assistants posted in the Sub-counties are given support by the Internal Audit Department. The District has recently recruited nine CDAs and posted them in the Sub-counties. The Central Government also requested the District to recruit and promised to meet salaries for 10 Agriculture Officers and four Veterinary Officers who are degree holders to support the Sub-counties.

The Sub-county staff lack transport and use their own bicycles during the execution of their duties. The Sub-county Technical Planning Committees are not functional and need guidance from the District.

8.2.3 Training and Capacity Building

The District has not developed a staff development programme that outlines the capacity gaps and capacity building strategies. Nevertheless some staff have received training financed by Central Government Ministries at Uganda Management Institute. The staff trained includes the Population Officer and two ACAOs. The District has also supported one person to attend a Finance Officers Diploma at UMI. The Community Development Department and District Health Inspector also carries out some training in the Sub-counties. The Institutional Capacity Building Project gave a photocopy for records management, typewrites, chairs and twenty cabinets.

There is need for the District to carry out a detailed needs assessment for staff, politicians, the NGOs and private sector. This will result into a human resource development strategy with annual capacity building schedules. Like for other Districts in the programme, the main emphasis should be on hands on training rather than pre packaged training programmes based outside the job situation. The training should be immediately followed up with action and continued support.

In general training should cover local government planning process, finance management, record management, monitoring and evaluation, contract and contract management among others.

8.2.4 Planning and Co-ordination Capacity

Apac District and Sub-county Local Governments have no council approved Development Plans. In place is a District draft, which was entirely produced by the technical staff⁸ at the District level without any reflection of lower level needs. The

⁸ The existing Development Plan was produced by a task force composed of the DCAO, Statistician, Population Officer, Environment Officer and 2 ACAOs to meet the deadline of Ministry of Local Governments assessment of Minimum Conditions for accessing funds from the World Bank under the Local Government Development Programme

District has now launched the DTPC to ensure that an integrated Development Plan produced through the recommended procedures and written as per Local Government format is produced.

The DTPC has written letters to Sub-counties requesting them to put in place the STPCs to spearhead the planning process. They are expected to use the planning skills given to them by Redd Barna during the production of the plans. This however, may not be satisfactory and the District may have to offer more training and support. In the first year the Development Plan should at least meet the requirements of the basic version but should be progressively updated and refined. The Planning Unit is in the process of refining the district level sector plans that will be integrated with those from the sub-counties to come up with the three year District Development Plan.

The major constraint faced by the District in planning is lack of up to-date sector basic data. Moreover, the process of gathering accurate data takes a lot of time, which the District does not have before the statutory dates of producing the plans. The District also lacks the funds for facilitating the planning process.

8.2.5 Main Constraints to Service Delivery

- a) **Low capacity of staff at the Sub-county and Parish level:** Many people occupying positions at the parish level lack the basic training and are too old to appreciate training and adopt new skills.
- b) **Low local revenue and donor support:** The District and Sub-county estimated annual revenues are very low and not forthcoming. A number of Sub-counties cannot raise revenue above 50% of their estimated revenue. Therefore it is difficult to implement most of the planned activities. In light of absence of a major donor in the district, most of the services cannot be delivered to the community.
- c) **Lack of transport:** The majority of sub-county staff uses their own bicycles to execute their duties and to communicate to the District Headquarters. This demotivates staff and hinder timely flow of information necessary to effect service delivery.

8.3 Existing Water, Hygiene and Sanitation Situation

8.3.1 Water Supply

Data was obtained from the District Water on the current number of water sources in the district. The data were collected under the WEC MIS village data collection exercise in 1998. The definition of shallow well is unclear so the total number of 176 may be misleading since some may be unprotected or non-functioning. The estimated 1999 coverage in the district is 46.4% but this does not take into account functionality of boreholes.

Table 8.1 Distribution of Water Sources in Apac District

| County | Oyam | Kole | Kwania | Maruzi | Total |
|---------------------------------|------|------|--------|--------|------------|
| Source type | | | | | |
| Deep borehole - functioning | 113 | 57 | 138 | 131 | 439 |
| Deep borehole - non functioning | 11 | 7 | 8 | 20 | 46 |
| Shallow well | 60 | 54 | 30 | 32 | 176 |
| Protected spring | 116 | 219 | 2 | 0 | 337 |

Source Apac District Water Office, 1999

The district also has a total of 24 valley dams and 35 valley tanks, many of which are silted. Many have been abandoned but some are used for watering cattle. There were no reports of people using these for domestic water supply.

Types of technology and sources:

- Most of the boreholes are sited near primary schools or along the main roads so more remote villages have long distances to travel. 55% of respondents from the household survey said they use borehole water for drinking ;
- Many boreholes have a very low yield even in the wet season. In the dry season people have very long waits while the borehole recharge. This contributes to the fact that 39% of people spend more than two hours fetching water each day;
- The sub-counties along the lakeshore have particularly difficult groundwater conditions. The NGO IAS was drilling in Nabyeso s/c and two out of three holes failed to a depth of 120m. Other boreholes have relatively high salinity but people are still using them (see Water Quality Table below);
- Most of the valley dams in the area are silted up but some people expressed a need to have them rehabilitated;
- Many people rely on hand dug, unprotected wells which are 1-2 m deep near swampy areas. These wells were found to be highly contaminated due to surface water run-off and people accessing the wells (see results of faecal tests). There is a demand to have these simple wells protected.
- ActionAid has introduced a new technology (which they call a valley dam) in the district by constructing a large open tank (about 50m x 20m x 3m) and then connecting a shallow well to this tank via an "infiltration gallery". The well is equipped with a U3 handpump. The problem with this technology is that the infiltration gallery is poorly designed and does not infiltrate at all so the water quality from the pump is very poor as shown in the table. However, if the gallery was well-designed and constructed with a graded filter this could prove to be potentially useful technology.
- CPAR have been constructing shallow wells with handpumps in some sub-counties. The standard of construction appears to be high. However, one well had been abandoned in Chegere s/c allegedly because the "water turned bad" (one person said that someone deliberately sabotaged it).

Table 8.2 Results of Water Quality Tests for Point Water Sources in Apac

| County | Sub-county | Source type | Installed by | Colour | Turbidity NTU | pH | Conductivity | Faecal coliforms/100ml |
|--------|------------|-------------------------|--------------|--------|---------------|-----|--------------|------------------------|
| Kwania | Nabyeso | Borehole | UNICEF | Clear | <5 | 7.0 | 470 | - |
| Kwania | Nabyeso | Borehole | UNICEF | Clear | <5 | 7.2 | 510 | - |
| Kwania | Nayieso | Valley dam/infiltration | ActionAid | Brown | 800 | 7.7 | 70 | 21 |
| Kwania | Nabyeso | Shallow well with pump | UNICEF | Clear | <5 | 7.3 | 1440 | - |
| Maruzi | Chagere | Hand dug water hole | Community | Cloudy | 27 | 6.0 | 130 | >2000 |
| Maruzi | Chagere | Hand dug water hole | Community | Clear | 8 | 6.5 | 160 | >2000 |
| Maruzi | Chagere | Borehole | UNICEF | Clear | <5 | 6.4 | 110 | 0 |

Community Contributions:

- The concept of community contributions and community-based maintenance is well accepted and understood at village level. However most WSCs, even the relatively organised ones, only collect money if the pump actually breaks down;
- ActionAid paid community members to dig the tank for the valley dam project and did not ask for any financial contributions towards construction.
- Willingness to pay was found to be about Ush1000 per household towards capital cost and Ush500 per household per month for operation and maintenance.

Operation and Maintenance:

- Spare parts for U2 and U3 pumps are difficult to obtain in the sub-counties. At Nabyeso we were told that some parts had been bought to be held at s/c HQ but they “disappeared”;
- There is one pump mechanic per sub-county and these are apparently paid a small retainer by the sub-counties but get contracted direct by the community to undertake repairs. We met a pump mechanic in Chegere sub-county. He had been trained by UNICEF and was still using the original toolkit. He had had a refresher course with UNICEF in 1994. He said he was working on a daily basis but also did work for communities in other sub-counties. He charges around Ush5000 for a small job such as repairing a leaking pipe. Communities have to buy the spares themselves.

8.3.2 Sanitation

Latrine coverage is estimated to be around 45% in Apac district with a very high number of people allegedly using uncompleted pits as shown in the table.

Table 8.3 Latrine Coverage in Apac District

| Method | County | Kwania | Kole | Oyam | Maruzi | Average |
|----------------|--------|--------|------|------|--------|---------|
| Latrine | | 55% | 35% | 41% | 50% | 45.3% |
| Bush | | 30% | 29% | 26% | 24% | 27.3% |
| Incomplete pit | | 15% | 36% | 33% | 26% | 27.4% |

Source WES/MIS Household Survey in Apac Draft 3 Year District Development Plan, 1999

There are no clear objectives in the Draft Development Plan to increase sanitation coverage in the district.

Some limited data was available on school latrine coverage: it is estimated that there is an average of 77 enrolled pupils per latrine stance at primary schools. However it this does not take into account the distribution of latrines between schools.

The household survey found a high incidence of latrines with only 17% of people using the bush, 69% owning a traditional latrine and 14% owning an upgraded latrine with a slab. This correlates with the results of the in-depth surveys which found that there was a particularly high awareness of latrines in Apac district. This can be attributed to the fact that the latrine bye-law (whereby people get fined Ush5000 for not having one) is relatively strictly enforced in many sub-counties. This effect was most apparent in the areas near the sub-county head-quarters which are most frequently visited by HAs and CDAs. However, these latrines are apparently generally not used by the owners, but reserved for visitors, and are built only

to avoid paying fines. This enforcement could explain why so many people are allegedly using uncompleted pits; they probably tell the HAs this to avoid being fined!

The main constraints which people say prevent them from building latrines are:

- Technical constraints including hard rock, or loose soils which results in collapse of pits during construction;
- Affordability of unsubsidised slabs at Ush15000 (sold by CPAR);
- Difficulty of transporting slabs from sub-county to home;
- Traditional latrines whilst more affordable are considered to be too “low class”.

Although there is an apparent demand for slabs, the willingness to pay was found to be low at around Ush500 to 2500. Until recently the NGO CPAR sold slabs at the heavily subsidised rate of Ush2000 but demand was extremely low even at this price.

8.3.3 Hygiene Behaviour

The main risk behaviours identified in Apac district during the field work are similar to those found in the other districts:

- **Unsafe disposal of human faeces and in particular children’s faeces**
Sanitation coverage in the district is low and estimated 80-85% of people practice open defecation. The majority of people do attempt to bury their faeces in the bush. Children defecate in the compound and the mother will normally throw their faeces in the latrine, the bushes or bury them not far from the house. The average age of a child to start using a latrine was found to be 5.2 years, with one household reporting children being as old as eight before they start to use the latrine.
- **Poor hand washing practices after defecation and before feeding children**
Most people did say that they wash their hands before eating but hand-washing after defecation was not found to be a common practice. The household survey found that only 10% of households had soap for hand-washing.
- **Consumption of unsafe water due to the lack of access to safe water and use of dirty containers for transportation or for drawing drinking water**
Access to safe water is estimated to be around 46% for the district so many people are relying on unsafe sources. Two hand dug wells in Maruzi County were tested for faecal coliforms and found to be highly contaminated with in excess of 2000 coliforms/100ml. The people using these sources were well aware that they were unsafe and attributed many health problems from worms and diarrhoea to tooth decay to the quality of the water. However they have no choice since the nearest borehole is 6km away. People accessing clean water are usually using dirty jerrycans for transportation so the safe water chain gets broken immediately. Other are storing the water in clay pots but using dirty cups and dirty hands to draw the water so the chain gets broken in the household
- **Use of dirty utensils for food preparation and eating**
Around 60% of homes were found to have no drying rack: this may mean that people are using unclean utensils and plates which get contaminated from lying around the compound with children and animal faeces.

8.4 Village Snap-shots

In-depth surveys were conducted in villages in the sub-counties of Nabyeso, Ibuje, Bala and Chegere. Table 8.4 summarises the main characteristics of these villages. The community maps and detailed information from the PRA fieldwork carried out in Apac district are presented in Appendix 6.

The villages of Atiira and Amunomia P_{II} were surrounded by swamps, Abalia was located close to the River Nile, and Emin 'A' was located 5 km from the lake.

Water sources:

Water was regarded as a priority need in all four villages, as protected sources were very limited. In Ibuje, the lake was the main source for all purposes, while in the other two villages, the protected sources were insufficient for the population and round trip distance was 6 km.

Water collection

In Atiira, women collect water from the swamps during the wet season, digging 1 metre deep holes. At the start of the wet season these fill up with dirty surface run-off, and this has to be drained off before the source recharges. Recharge time is approx. 10 minutes. This water is perceived to be cleaner than that of the earth dam, which was constructed in 1948 for human consumption, but has become polluted and is now generally used for cattle, bathing, swimming and fishing.

Table 8.4 Village Profile Summary for Apac District

| Village Main characteristics | Sub-County | Nabyeso Emin A | Ibuje Abalia | Bala Atiira | Chegere Amunomia Pii |
|-------------------------------------|-------------------|-----------------------|---------------------|---------------------|-----------------------------|
| Water a priority need | | yes | yes | yes | yes |
| Population | | 540 | 366 | 378 | 462 |
| Water sources: | | | | | |
| (nr. Protected) | | 1 | - | 1 | 1 |
| (nr. Unprotected) | | - | 1 | 4 | 3 |
| Awareness level water/hygiene: | | | | | |
| (high) | | | X | X | |
| (low) | | X | | | X |
| WTP for water | | | | | |
| (capital cost): | | Local material | Materials/200 | Materials/300 | Material/accom. |
| (O&M): | | 1000 | 0 500 | 500 | 1000 |
| Water Source Committee: | | | | | |
| (Active) | | X | | X | X |
| (Inactive) | | | X | | |
| Water collection: | | | | | |
| (distance round trip): | | 6km | 4km | 3km | 8km |
| (women/children only): | | X | X | X | X |
| (men assist): | | | | | |
| Average consumption (l/c/d): | | 7-13 | 22 | 13-15 | 12 |
| Conflicts over water use: | | yes | no | yes | potential |
| Control over resources: | | | | | |
| (Male): | | X | X | X | X |
| (Female): | | | | | |
| Latrine coverage: | | 26% | 50% | 44% | 38% |
| Awareness sanitation/hygiene: | | | | | |
| (high): | | | X | X | X |
| (low): | | X | | | |
| WTP for latrine slabs: | | 500 | 1500 | 2500 | 1000 |
| Active village level workers: | | ActionAid CF | - | - | - |
| Active village institutions (nr): | | 3 | 3 | 3 | 0 |
| Potential for managing source: | | | | | |
| (good): | | X | X | X | X |
| (limited): | | | | | |
| CDA in sub-county? | | yes | yes | yes | yes |
| NGO/CBO Activity: | | ActionAid | - | - | - |
| Cattle watering distance: | | 5km/lake | 2km/lake | 2km | - |
| Vulnerability: | | | | | |
| (drought): | | X | - | - | - |
| (Karamajong): | | - | - | - | - |
| (other): | | - | - | - | - |
| Economic level: | | Moderately well off | Moderately well off | Moderately well off | Poor |

Women and children are the main collectors of water in all villages, and men do not assist. However, many more women were seen to be using bicycles themselves to collect water than was the case in the other three Districts.

Water user committees were found to be active in three of the three villages, with caretakers, actively collecting funds for spares and repairs for the shallow well. In Atiira, a bye law was introduced which stipulates that each water user must pay Ushs. 500 for O+M, before water can be collected.

The potential capacity for managing a new source appears to be good in all four villages, taking into account the efficiency with which this activity is currently carried out.

Awareness levels hygiene and sanitation

Awareness levels were found to be low in two villages, Emin A and Amunomia Pii, but high in the other two villages. Practices did not reflect this high awareness however. Latrine coverage was found to range between 26% and 50%, reflecting the much stricter enforcement of bye-laws in Apac generally.

WTP

Villagers were prepared to contribute local materials and cash contributions of up to Ushs. 2000, while contributions for O&M were between Ushs. 500 and 1000. In each village people were willing to contribute between 500 and 2500 for latrine slabs.

At the sub-county level, CDAs were appointed in all four sub-counties.

8.5 Key Stakeholders and Partners

8.5.1 NGOs and CBOs

There is an NGO/CBO network in the District but it has not produced a comprehensive directorate elaborating what the different organisations do, their methodologies and areas of operation. The main NGOs working in the water and sanitation sector are detailed below:

ActionAid Project Apac: This is a multi sectoral NGO that base its intervention on the needs of a particular community. They only operate in three sub-counties in Apac: Chawente, Nabieso and Akokoro. Major areas of focus are water and sanitation, agriculture, income generation, community capacity building, health and education.

Regarding water they have accomplished the following:

- Drilled 6 boreholes but only 2 of them functioning;
- Constructed 15 valley dams using human labour;
- Shallow wells, which usually dry up during the dry seasons; and
- Rain water tank for demonstration hoping for replication.

ActionAid has carried out sanitation campaigns especially along the lakeshores and constructed VIP latrines in primary schools. It plans to invest more in water and sanitation should it remain a community priority. They also carry out annual participatory needs identification and strategy formulation from village through parish

level but have not supported the Sub-counties to use the same information in the production of their three year development plans.

The relationship between this NGO and the district does not appear to be good as there is little or no co-ordination and communication. This was reflected in the fact that the ACAO for WES decided not to invite any ActionAid representatives to the stakeholder meeting which was held in Apac on completion of the field work.

Uganda Red Cross: It is involved in capacity building for emergency issues and disaster preparedness. For instance when Lake Kwana flooded Red Cross participated in the training of people on how to respond to disaster

Canadian Physician for Aid and Relief (CPAR): Based in Loro and have programmes for water and sanitation, HIV/AIDS activities, health education, training of TBAs and vaccinators, Agro-forestry and agriculture production.

Association for Sustainable Development Initiatives (ASDI): They conduct training in the different sectors targeting skills development and income improvement. They have micro projects and a loan scheme. ASDI is also involved in adult education, bee-keeping and Agro-forestry.

Redd Barna/National Council of Children (NCC): Its major focus is child advocacy but is also involved in capacity building and support to planning.

Other NGOs are:

- Uganda Women's Efforts to Save Orphans;
- Appropriate Technology;
- Uganda National Farmers Association, Apac Branch;
- Food for the Hungry; and
- Christian Children Fund

Community Based Organisations (CBOs)

Kole Development Agency, Kwana Development Fund and Maruzi Development Association: These are County based CBOs involved in rehabilitation of feeder roads, water and sanitation programmes and adult education.

Other CBOs are:

- Aloro Voluntary Service (AVS)
- Alito Foundation Rural Project;
- Noto Tam Kelo Kuc Development Association;
- Aber Community AIDS Project;
- Youth AIDS Association of Chawente (YAAC);
- Minakula Safe Motherhood and Traditional Birth Attendants (MISAAMBA); and
- Aduku Olanyotai Association for the Blind.

The other commonly occurring type of CBOs are Drinking Groups (AKIBA). In every village there are a number of drinking groups composed of 10 -15 male members. Individuals in each group makes local brew in turns for sell to the members and non

members once a week. Those interested in drinking more than once week become members of more than one group. The money raised by the group is kept by an individual selected as treasurer, shared among members at the end of the year and is mostly used to pay taxes. These groups could potentially be used to spread sanitation messages and the programme can borrow lessons especially in regard to funds mobilisation and ensuring accountability.

8.6 Key Design Issues for Apac

8.6.1 Social and Community Development

- All 20 CDA posts are now filled. However 12 have only recently been recruited and training/capacity building will be required
- Levels of awareness of the links between unsafe water and poor sanitation/diseases is high in general, but practice does not comply with this awareness
- 'Programmed' reactions as a result of top down mobilisation has implications for the design of training and capacity building programmes, to progress to converting awareness into practice
- The majority of the more isolated communities have had little or no contact with CDA/HA in comparison with those close to S-C HQ which receive more than their share
- Lakeshore communities were found to be poorest, and most difficult geological conditions for borehole drilling. ActionAid is covering the majority of these sub counties, with the exception of Ibuje, where ActionAid does not plan to work.
- Partnership with ActionAid to investigate optimal and alternative solutions for both the sub-counties where ActionAid is working as well as those in which it is not.
- The Planning Unit proposes to undertake a Rural Infrastructure Survey (ADDRIS) with the objective of drawing up a Development Priority Identification document. Since there has been little to no guidance on the ways in which Sub-counties assess their development priorities, the approach and focus on identification of community level development needs will need to be addressed

8.6.2 Water Supply

- The areas along the lakeshore have extremely problematic groundwater conditions which need to be carefully studied and surveyed if boreholes are to be successfully drilled in these areas. The water is also saline in many boreholes in this area;
- There is potential for traditional hand-dug wells to be protected in some sub-counties;
- Some boreholes have extremely low yields during the dry season or actually dry up. The cause of this problem needs to be identified;
- There are no data available on borehole functionality and so a survey will need to be carried out to assess the actual number of boreholes needing rehabilitation;
- The quality of the work carried out by ANCC and their approach to work with communities is at present incompatible with a programme of this nature.
- The role and potential usefulness of the graduated water tax being collected by sub-counties needs to be reviewed.
- WSCs need to be trained and strengthened in their roles. This is central to the sustainability of all technologies;
- Improved mechanisms for supply of spare parts need to be developed: private initiatives should be encouraged and supported in some way;

- Pump mechanics may need to be provided with tools and some further training to work with communities.
- Simple rainwater harvesting technologies should be developed and encouraged both for households and institutions.

8.6.3 Sanitation and Hygiene Promotion

- There are only eight Health Assistants in place instead of the required 20. Since these sub-county personnel will be key to implementing the hygiene and sanitation component of the 4 District Programme it is essential that the additional 12 are put in place over the period of implementation.
- The expertise of local NGOs such as ActionAid and CPAR as well as some CBOs will be sought to strengthen the hygiene promotion component and ensure good contact and communication at grass-roots level.
- The institutional water and sanitation component will be implemented in close partnership and co-ordination with the ongoing WES Programme which has a direct stake in working with schools and other institutions;

Key Sanitation Issues:

- Latrines need to be promoted on basis of status and privacy to make them an integral part of the accepted home environment instead of something which the government forces people to build.
- Further investigation is needed into the real reasons why people start to dig pits but never complete them. The “demand” for slabs which is not at present backed up by a willingness to pay needs to be tested further. If there is a genuine demand for slabs then mechanisms need to be developed to meet this demand.
- The enforcement of the sanitation bye-law needs to be review and possibly revised since it can be counter-productive to encouraging sustainable behaviour transformation.
- Although traditional latrines are perceived as “low class” they need to be promoted as a stepping-stone to something better so the potential for upgrading to a slab later should be emphasised.
- Technical advice and guidance is needed to show people how they can construct latrines in “difficult” conditions and with available tools and resources (e.g. mattocks instead of pick-axes). Appropriate designs to deal with specific problems need to be developed locally.
- Communities could be encouraged to share the cost of digging to overcome problems of affordability in the poorest area.
- Advice and training on operation and maintenance is essential so that they do not become too unsafe or unpleasant to use.

Key Hygiene Behaviour Issues:

- Lack of hand-washing after defecating or handling children’s faeces is a key high risk behaviour which needs to be changed;

- Weak links in the safe water chain are in the transportation and handling of clean water and behaviours need to be changed to address this problem.
- Promotion of latrines should emphasise privacy and convenience benefits and also status associated with household latrines;
- Men need to be targeted during hygiene promotion to raise awareness and create a real demand for latrines amongst male peer groups (drinking groups may provide a good entry point).

8.6.4 Institutional

Although the staffing levels in Apac District are improving, the experience of the newly recruited staff is low and some functions are not performed. The emphasis should be put on enhancing the capacity of existing staff in executing their duties and co-ordinating their efforts. Since the TPC is constituted, it should be encouraged to meet regularly, synthesise sectoral issues and integrate them and advise the sectoral committees and council to make informed decisions.

The structures for ensuring accountability especially the District Local Government Tender Board and Public Accounts Committee should be trained in their responsibilities and procedures for execution. The District staff should also be equipped with skills necessary for them to submit quality input to allow for effectiveness of these organs.

The structures already formed at the community level should be used in programme implementation. These include the local councils, Water User Committees, Community Health Workers, women's groups, drinking groups (AKIBA) and digging groups. In addition, where ActionAid works the structures also include the Parish Beneficiaries Fora, Community Facilitators and Project Committees.

9. District Profile for Lira

9.1 Description of District

9.1.1 Geography

Lira District has an area of 7251 sq. km with a total population of 619,600 (1998 projected from 1991 Census), approximately 90% of which is rural. The population distribution is shown in Figure 7.1; the average density is 81 people per sq. km but the northern county of Otuke has a much lower density of 0-49 people per sq. km. The land type is high plateau savannah with tall grass and wetland areas. Swamps and surface water cover approximately 1100 sq. km of the district.

9.1.2 Water Resources

The rainfall pattern is bimodal, with average annual rainfall of 1300mm. This figure is much lower in the drier northern counties of Otuke and Moroto, and in the southern county of Kyoga. These areas also have higher temperatures and are more prone to drought.

In the Kyoga and Otuke counties there is almost no available springs or shallow groundwater so the only option for water supply is deep boreholes in the fractured zone of the basement complex. Some valley dams and tanks have also been constructed in these areas to collect surface run-off.

The centre district has a better range of water resources and there is potential for protected springs and shallow wells. Protected spring potential is particularly high in Erute and Moroto counties. The higher rainfall in this area allows for rainwater harvesting from April to May and August to October.

9.1.3 Administration

The district is divided into 5 counties which are comprised of 24 rural sub-counties and one Municipal Council, Lira, which has a population of approximately 33,000 (1997 projection from 1991 census). The sub-counties are further sub-divided into a total of 155 parishes and 2,099 villages. There are no Town Councils but the trading centres of Barr, Aloii, Dokolo and Kwera are urban growth areas. Figure 9.1 shows the administrative boundaries at sub-county level for Lira district.

9.1.4 Socio-Economic Data

The dominant ethnic tribe in Lira is the Langi, who constitute 92% of the population. Other tribes present in significant numbers include Kunam, Iteso and Acholi. The civil insurgency experienced throughout Uganda between 1981 and 1985 was prolonged in the North Eastern area in which Lira is located. Social and economic life was disrupted further by cattle raiding, and displacement of whole villages into camps. This impacted negatively on the productive sectors. Over the period 1982-92, the livestock census indicates a 95% drop, from 233,000 to 11,200. This has had a major negative impact, cattle being a major source of livelihood in Lira, as a source of draught-power for crop production, income and milk. Cattle is perceived as the main source of wealth. Government programmes on cattle re-stocking have had little impact to date. The production of the major food crops, cassava, millet, sorghum, beans, sweet potatoes and soya beans was disrupted as a result of insurgency. The impact on the rural population was experienced as loss of earnings,

malnutrition, food insecurity and loss of savings. Local and central government was unable to generate revenue through taxes, unemployment and dependence on external assistance for funding development activities. The District has as yet not fully recovered from these problems.

The predominant cottage industry is shea oil and seed oil production which accounts for 3.2% of livelihoods whilst petty trade accounts for 2.2%. The average monthly household per capita expenditure is estimated to be US\$ 11,503 (UNDP 1995). A 1993 World Bank report estimated that 42% of the rural population has a real per capita monthly household income of less than US\$3.

9.1.5 Infrastructure and Social Services

Electricity supply and telecommunications are limited to Lira Town. There is a relatively reliable NWSC piped water supply to the town and some of the surrounding peri-urban settlements. Dokolo Trading Centre has small reticulated community managed water supply from a motorised borehole but no other centres have a piped water supply at present.

The road network comprises 350 km of tarmac trunk road from Kampala, which is in a good state of repair. The district also has 365 km of all weather gravel roads and 404 km of murrum or dirt feeder roads. There are 282 government and 8 private primary schools in the district. There are 23 government secondary schools and 13 private secondary schools.

There is one government and one non- government hospital in the district and there are five health centres, 30 dispensaries and sub-dispensaries and 6 aid posts.

The average life expectancy at birth is 49.6 years. The top four causes of morbidity are: malaria (18%), diarrhoeal diseases (18%), acute respiratory infection (18%) and worms (9%).

9.2 District and Sub-County Staffing and Capacity

Of the four Districts covered by the programme Lira is the one that has been in existence for the longest period of time. It was also among the first batch of the Districts to be decentralised and thus has been implementing decentralisation for a relatively longer period. Hence the structures in the District are more established as compared to those in the other Districts.

9.2.1 Existing Staffing Levels - District

In conformity to the Government policies, the District reduced the number of established positions on the staff structure in anticipation of using the private sector, which is not well developed. The role of the District staff was anticipated to mainly be the supervision of the private sector. The District is in the process of reviewing the structure again to ensure that the relevant human resources are in place without contradicting the existing Government policies.

One of the key policy issue is that if a district employs staff above the establishment, it meets the salary obligations. The District has applied for support from the Ministry of Public Service

LIRA DISTRICT

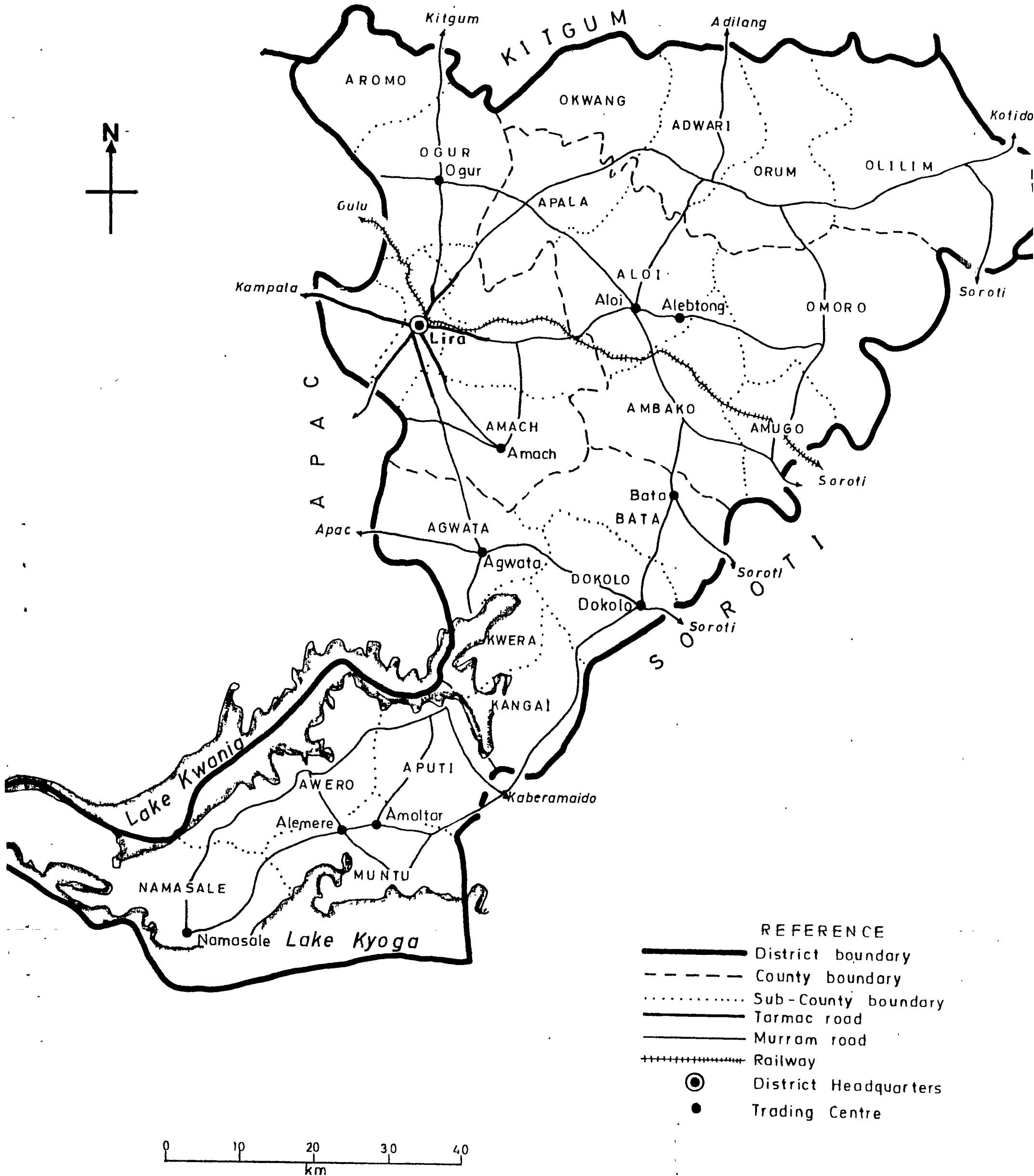


Figure 9.1 Lira District Sub-county Administrative Boundaries

and Ministry of Local Government in the process of review. However, on the whole the District is well staffed even though some of the Departments do not have in place the required outputs that would demonstrate functionality.

9.2.2 Existing Staffing Levels - Sub-county

Staffing levels at sub-county are generally high: out of the 24 Sub-counties in the district 20 have substantive Sub-county Chiefs and 20 also have Accounts Assistants. Each Sub-county has a Health Assistant in place and there are eight Senior Community Development Assistants in charge of Sub-counties. However, despite the presence of staff, the Sub-county TPCs are not functional.

Whereas most of the established positions are filled, the capacity in the Sub-counties and Parishes to perform the mandated duties is low. The Personnel Office is in the process of collecting data on personnel status for Sub-counties and Parishes. This data will be submitted to the District Service Commission for the necessary action.

Three options can be taken to reduce the amount of money to be paid as retrenchment packages. The staff who are not substantively appointed will be advised to resume their rightful positions, those who are above 60 years of age will be advised to retire and those that do not perform their duties as expected will be disciplined. The District is encouraging Degree and Diploma graduates to apply for the position of a Sub-county Chief. The Accounting section in the Sub-counties do not have some of the mandatory outputs in place.

Support to sub-counties is supposed to come from the Counties but in light of the limited resources at this level and given the high recurrent costs the support is not forthcoming.

9.2.3 Training and Capacity Building

With support from LDDP the Personnel Office is in the process of identifying training needs for staff in the Parishes and Sub-counties. The District also intends to contract the Management Training and Advisory Centre (MATAC) to carry out a detailed capacity building need's assessment for all district departments. The District plans to develop a human resource development strategy.

Within the strategy, training will be contracted out to NGOs like DETREC. The Development Facilitators under Lira DDP will monitor adoption of skills and the District staff will offer follow up support as part of their mentoring role. Main emphasis will be on hands on training rather than pre packaged training programmes based outside the job situation. The training will be immediately followed up with action and continued support.

Nevertheless the District has already trained Sub-county and parish staff in the concept of Good Governance. This involves orientation and training on laws governing local government administration, financial regulations, leadership and management, gender and development, resource mobilisation, records and record management, planning processes, monitoring and evaluation among others.

9.2.4 Planning and Co-ordination Capacity

At the District level, the major problem is not lack of technical skills but lack of co-ordination among the District sectoral Departments. Heads of Departments need to be further oriented to the requirements of the decentralisation policy and given management skills to enable

them comply with the provisions of the law. There is also need to emphasise the contribution of each sector in the implementation of any particular activity (cross-sectoral analysis and implementation of activities).

Lira District and Sub-county Local Governments have no council approved Development Plans. The District draft, which was entirely produced by the technical staff at the District level was rejected by the District Executive because it did not reflect lower level needs.

In 1998/99 Financial Year, Redd Barna assisted the District to develop planning capacity at the parish level in Dokoro, Kioga and Otuke counties. They formed Parish Development Committees composed of members of the parish council and co-opted experienced and special interest groups. The Parishes were trained and mobilised to identify their needs using PRA but the needs were not consolidated and the parishes did not design strategies to address them.

Basic Education, Childcare and Adolescence Development programme (BECAD) funded by UNICEF also facilitated the formation of PDCs in Erute county and Lira Municipality. Lira DDP also works through the PDCs who are responsible for identification of needs and credit delivery.

Since there was little follow up for the PDCs, most of them are no longer functioning and the lower local council plans are not likely to be integrated into the Sub-county and District Development Plans for the current financial year. To-date the following activities have been carried out leading to the production of the Development Plans:

Using the Sub-county Profiles⁹ with basic data about the parishes, produced with facilitation from Lira DDP, the Planning Unit held workshops with the Sub-county technical staff and politicians to discern development problems and formulate strategies feeding into the draft Development Plans. The planning processes therefore omitted the lower local councils input on strategy formulation and this may provide a challenge during implementation and ownership of the outputs.

The Planning Unit is in the process of generating district level sector plans that will be integrated with those from the sub-counties to come up with the three year District Development Plan.

9.2.5 Main Constraints to Service Delivery

- a) **No money for development:** The unconditional grant from the centre mainly caters for salary obligations and leaves about 8 million for development activities. The staff in departments that do not benefit from the conditional grants and donors therefore find it difficult to operate and are demotivated.
- b) **Low capacity of staff at the Sub-county and Parish level:** Many people occupying positions at the parish level lack the basic training and are too old to appreciate training and adopt new skills. The District is planning to retire those above 60 years with gratuity, those who are poor performers will be forced to retire in public interests. The retirement

⁹ Sub-county profiles were developed using PRA and will be used to come up with the District Profile. They basically include general information and administrative set up, revenue, sectoral issues, NGOs and CBOs, communication and priority needs

process will be phased to allow the District handle affordable gratuity and retrenchment packages at any particular moment.

9.3 Existing Water, Hygiene and Sanitation Situation

9.3.1 Water Supply

The safe water supply coverage given in the Draft Development Plan is estimated at 45.8%. However, there is some inconsistency between the data presented in the Draft Lira Three Year District Development Plan (March 1999) and the data collected from the WES village MIS data collection exercise: the data are compared in the table below:

Table 9.1 Distribution of water sources for Lira district (WES MIS data)

| County | Dokolo | Erute | Kyoga | Moroto | Otuke | Total |
|-------------------------------------|--------|-------|-------|--------|-------|-------|
| Borehole (no data on functionality) | 55 | 91 | 90 | 55 | 51 | 342 |
| Protected spring | 98 | 237 | 0 | 202 | 6 | 543 |
| Unprotected spring | 34 | 289 | 6 | 216 | 71 | 616 |
| Shallow well | 20 | 32 | 166 | 23 | 15 | 106 |

Source: WES/MIS data collection for Lira District 1998

Table 9.2 Distribution of water sources for Lira district (development plan data)

| County | Dokolo | Erute | Kyoga | Moroto | Otuke | Total |
|-------------------------------------|--------|-------|-------|--------|-------|-------|
| Borehole (no data on functionality) | 69 | 90 | 91 | 55 | 44 | 349 |
| Protected spring | 101 | 249 | 0 | 259 | 3 | 612 |
| Unprotected spring | - | - | - | - | - | - |
| Shallow well | 26 | 33 | 14 | 23 | 15 | 111 |

Source: Engineering Department, 1998 in Lira Draft District Development Plan, March 1999

Unfortunately the District Water Officer died a few days before the team visited Lira District and there was no-one available to clarify the discrepancies in these data. The figures from the MIS survey have been taken for the purposes of developing the water source implementation programme for Lira.

Types of technology and sources:

- There is a high number of protected springs particularly in Erute and Moroto Counties. The survey found that 24% get their drinking water from boreholes, 25% from protected springs and 3% from protected wells. The remaining 48% use unprotected sources for drinking water throughout the year. Average per capita consumption was found to be 16 litres/day.
- There is good potential for shallow wells in Erute, Dokolo and Moroto sub-counties but in Otuke and Kyoga the only solution is deep boreholes.
- There is good potential for further spring protection in Erute and Moroto Counties. A spring fundi was met in Apala. He was trained by UNICEF in 1991 and had protected 60 springs since then. All his work had been through the district programmes since communities cannot afford to contract him direct.
- LDDP has contracted the NGO ANCC to drill shallow wells in five sub-counties. This work has now been completed. During a field visit to Apala s/c the standard of construction was seen to be extremely poor.

- International Aid Sweden (IAS) is due to drill 30 boreholes in the district under WES. These will all be at Primary Schools.
- The sub-counties along the lakeshore have particularly difficult groundwater conditions. Most people are relying on lake water and bilharzia is rampant in fishing communities.
- The District Water Office would like to test infiltration galleries as a possible solution to the water problems along the lakeshore areas.
- In the northern and eastern sub-counties the Karamajong come and share water sources during the dry season and they spoil the local wells.
- 33% of households were found to harvest rainwater on an informal basis.

Table 9.3 Results of water quality tests for point water sources in Lira district

| County | Sub-county | Source type | Installed by | Colour | Turbidity NTU | pH | Conductivity | Faecal coliforms/100ml |
|--------|------------|------------------------|--------------|--------|---------------|-----|--------------|------------------------|
| Moroto | Apala | Protected spring | UNICEF | Clear | <5 | 5.9 | 100 | 34 |
| Moroto | Apala | Protected spring | Red Cross | Milky | 18 | 5.8 | 80 | - |
| Moroto | Apala | Shallow well with pump | ANCC | Clear | <5 | 6.2 | 220 | - |
| Moroto | Apala | Unprotected spring | - | Clear | 6 | 6.5 | 180 | 7 |
| Moroto | Apala | Stream/swamp | - | Cloudy | 5.5 | 7.3 | 130 | 54 |
| Kyoga | Muntu | Borehole | UNICEF | Clear | <5 | 7.4 | 480 | 0 |
| Kyoga | Muntu | Home sample | (UNICEF) | Clear | <5 | 7.7 | 450 | 770 |

Community Contributions:

- The concept of community contributions and community-based maintenance is well accepted and understood at village level. However most WSCs, even the relatively organised ones, only collect money if the pump actually breaks down.
- Sub-counties are starting to retain Ush200 per household from graduated tax and putting this into a “water” bank account to cover the cost of major repairs to boreholes. The idea has come from the district and the sub-county chiefs seem unclear how they should administer this fund.
- ANCC does not demand any financial contributions from communities toward capital costs of shallow wells. The community is required to provide local materials and unskilled labour.
- Spring protections undertaken by the district and Red Cross require the community to provide local materials and unskilled labour.
- Willingness to pay for boreholes was found to be about Ush1000 per household towards capital cost and Ush500 per household per month for operation and maintenance. The WTP for springs is somewhat lower at...

Operation and Maintenance:

- ANCC does not encourage communities to take responsibility for maintenance since they see this as part of their charitable work and repairs provide a good opportunity to return to communities to evangelise.
- Spare parts for U2 and U3 pumps are difficult to obtain in the sub-counties.
- There should be a pump mechanic in each sub-county but many of them apparently lack tools to carry out their work

9.3.2 Sanitation

The latrine coverage in Lira is be around 47%. This excludes Lira Municipality which has an estimated coverage of 92%. As shown in the table below there is a high incidence of uncompleted pits and the sanitary situation is worst in Otuke County where 68% of people defecate in the bush.

Table 9.4 Latrine coverage in Lira district

| County Method | Dokolo | Erute | Kyoga | Moroto | Otuke | Average |
|----------------|--------|-------|-------|--------|-------|---------|
| Latrine | 60% | 40.6% | 75% | 45% | 15.8% | 47.3% |
| Bush | 25% | 50% | 13.9% | 45% | 68.4% | 40.5% |
| Incomplete pit | 15% | 9.4% | 11.1% | 10% | 15.8% | 12.2% |

Source: Lira DHSA Household Survey, in Lira 3 Year Draft District Development Plan March 1999

According to the District Education Officer most of Lira's 288 primary schools do not have sufficient latrines for the number of pupils. Exact data on the existence of sanitation facilities at schools was not available at district level.

The only information that was made available was about the assistance of the WES programme towards the improvement of the school sanitation facilities. The WES programme has assisted six schools with the installation of rainwater harvesting tanks and will assist 65 schools with the provision of materials needed to build one five stance-latrine.

The household survey found a relatively high number of latrines in the district with 35% of people using the bush, 57% owning a traditional latrine and 7% owning an upgraded latrine with a slab. The latrine coverage in the northern sub-counties of Akwari, Okwang, Olilim, Orum and Adwari is reportedly much lower because people are only just beginning to return to their homes after long periods of insurgency.

As latrine bye-law is fairly strictly enforced in some sub-counties. The effect is most apparent in the areas near the sub-county head-quarters which are most frequently visited by HAs and CDAs. People apparently are scared of getting fined and as a result some have constructed fake latrines to fox the HAs!

In the villages where detailed studies were carried out the main constraints to constructing or using latrines were identified as:

- Problems of obtaining or transporting big logs since they have lost their draught-power (oxen);
- Hard rock and lack of pick-axes or other tools to dig with;
- Insecurity which prevents people putting up permanent structures;
- Fear of witchcraft.

In Olilim sub-county the problem of raiding Karamajong certainly impacts greatly on the lives of many villagers; when we visited there a man had been shot the day before. One of the household survey enumerators reported back that he interviewed a man who lived in a grass house. The man said there was no point in building a permanent structure because he had to move every time the Karamajong came into the area and made life difficult.

Willingness to pay for slabs was found to be low at between Ush 500-2000. Many people said that since the subsidies have been dropped they can no longer afford slabs. However, once again this begs the question why didn't they buy them when they were heavily subsidised?

9.3.3 Hygiene Behaviour

The main risk behaviours identified in Lira district during the field work are similar to those found in the other districts:

- **Unsafe disposal of human faeces and in particular children's faeces**
The majority of people practising open defecation said they do bury their faeces in the bush. *Children defecate in the compound and the mother will normally throw their faeces in the latrine, the bushes or bury them not far from the house.* The average age of a child to start using a latrine was found to be 4.6 years and the upper age limit was found to be 7 years.
- **Poor hand washing practices after defecation and before feeding children**
Most people did say that they wash their hands before eating but hand-washing after defecation was not found to be a common practice. The household survey found that only 12% of households had soap for hand-washing. One woman during a village study said "Washing hands after toilet use? our hands don't look dirty, so why should we wash them?" Another woman, when asked if she washes her hands before feeding her children said "Women are busy: When working in the field women can not wash their hands and once at home they are in too much of a rush. Anyway, why behave differently from our mothers, we grew up all right!!"
- **Consumption of unsafe water due to the lack of access to safe water and use of dirty containers for transportation or for drawing drinking water**
Access to safe water is estimated to be around 46% for the district so as for the other districts many people are relying on unsafe sources.
However, people accessing clean water are often using dirty jerrycans for transportation so the safe water chain gets broken immediately. Most people store their drinking water carefully in a clay pot covered with a plate but the water may be drawn using a dirty cup which is dipped with dirty hands so the chain gets broken in the household. A faecal test was carried out on a sample of drinking water collected from a covered clay pot kept in a dark kitchen. The sample was drawn by a female household member using the special cup which was kept on top of the pot. The water had been fetched the day before from a borehole which is located less than 200m from the home. The results of the test showed that the water had become highly contaminated in the home - 700 faecal coliforms/100ml. A control test at the borehole showed that the source was free of coliforms.
- **Use of dirty utensils for food preparation and eating**
Around 77% of homes were found to have no drying rack: this may mean that people are using unclean utensils and plates which get contaminated from lying around the compound.

9.4 Village Snap-Shots

The villages of Akaidebe and Inomo were both surrounded by swamps, and Agarokato was surrounded by rocky outcrops. While both Agarokato and Inomo were poor villages, Akaidebe was relatively well off by comparison. Table 9.4 summarises the main characteristics of these villages. The community maps and detailed information from the PRA fieldwork carried out in Lira district are presented in Appendix 6.

Water sources

Water was a priority need in these villages, as there were few protected sources available. In Agarokato, the NGO ANCC had installed a shallow well, but the yield was seasonal, and women also made use of unprotected sources such as small traditional wells. In Akaidebe water is collected from unprotected springs and in Inomo from the swamps some 2 km. distant from the village.

Water collection

A round trip distance to collect water was up to 6 km. Women and children were responsible for water collection, and men did not assist in this.

Awareness levels hygiene and sanitation

In all three villages high awareness levels on the benefits of using safe water were found, and also on the links between poor sanitation and disease. Practices however did not support this awareness. In two of the villages, Agarokato and Inomo, the CDA and HAs were found to visit fairly frequently, and this may be the cause for the higher sanitation coverage found, of 66% and 59% respectively. These villages were quite close to the sub-county HQ, 2 km distant, and therefore easier to reach for extension staff from the sub-county. In spite of this regular attention by extension staff, no village workers were working in these two villages.

Village level institutions

Village institutions were found to be quite active, particularly the clan groups, which mobilised funds and resources for travel, bursaries for students, and loans. Other local institutions found included farmer groups, women groups, and youth groups. For this reason, the potential for managing a water source was considered to be good, given the practical experience in the villages of managing funds, etc.

WTP

In all villages, communities were willing to contribute local materials for any new water source, and between 500-1000 in cash terms. For latrine slabs, communities were willing to pay Ushs.500-3000.

NGO/CBO activity

ANCC, a Christian NGO had installed a shallow well but the yield is poor, the water turbid and it dries up completely in the dry season. Due to its siting the water is polluted by a ditch close by. As a consequence, the well is little used.

Risks and vulnerability

Vulnerability and conflicts were experienced annually in the village of Agarokato, during the Karamajong incursions, from December to April during the dry season, when the pastoralists

come in search of pastures and water for their cattle. Villagers experience considerable distress at these times, with the arrival of the armed nomads, as competition for water and pastures becomes intense. Karamajong frequently steal grain from the granaries, and are often accused of bringing diseases to the village with their 'dirty habits'.

Table 9.5 Village Profile Summary for Lira District

| Village | Sub-County | Amugu Agarokato | Apala Akaidebe | Muntu Inomo |
|-----------------------------------|-------------------|----------------------------|---------------------------|------------------------|
| Main characteristics | | | | |
| Water a priority need | | yes | yes | yes |
| Population | | 468 | 450 | 306 |
| Water sources: | | | | |
| (nr. Protected) | | 1 | 1 | 1 |
| (nr. Unprotected) | | 3 | 3 | - |
| Awareness level water/hygiene: | | | | |
| (high) | | X | X | X |
| (low) | | | | |
| WTP for water | | | | |
| (capital cost): | | Local materials | Local materials | Material/2000 |
| (O&M): | | 500 | 1000 | 500 |
| Water Source Committee: | | | | |
| (Active) | | | | |
| (Inactive) | | X | X | X |
| Water collection: | | | | |
| (distance round trip): | | 6km | 3km | 8km |
| (women/children only): | | X | X | X |
| (men assist): | | | | |
| Average consumption (l/c/d): | | 12 | 11 | 12 |
| Conflicts over water use: | | - | - | - |
| Control over resources: | | | | |
| (Male): | | X | X | X |
| (Female): | | | | |
| Latrine coverage: | | 66% | 29% | 59% |
| Awareness sanitation/hygiene: | | | | |
| (high): | | X | X | X |
| (low): | | | | |
| WTP for latrine slabs: | | 3000 | 2000 | 500 |
| Active village level workers: | | - | - | - |
| Active village institutions (nr): | | 2 | 2 | 2 |
| Potential for managing source: | | | | |
| (good): | | X | X | X |
| (limited): | | | | |
| CDA in sub-county? | | Yes | yes | yes |
| NGO/CBO Activity: | | ANCC/GEE | UWESO | OXFAM/UWESO |
| Cattle watering distance: | | 3km | 3km | 3km |
| Vulnerability: | | | | |
| (drought): | | - | - | - |
| (Karamajong): | | Dec-April | - | - |
| (other): | | - | - | - |
| Economic level: | | Poor | Moderately well off | Poor |

9.5 Key Stakeholders and Partners

9.5.1 Netherlands/LDDP

LDDP has supported the District to:

- Drill a total of nine shallow wells per sub-county ;
- Construct schools where communities contribute bricks, sand and stones and pay up front 500,000/= as co-financing obligation. Latrines are not included in the construction programme. 200 schools have been constructed under LDDP to date;
- Construct Health Units;
- Construct Administration blocks;

Provided loans to individuals and groups. The loan beneficiaries are recommended by the local councils, pay up front 20,000/= as commitment fee, get the loan in form of Oxen, pay 22% interest rate and are supposed to repay the loan after one year.

9.5.2 NGOs and CBOs

All Nations Christian Care (ANCC): This is a local NGO contracted by the District to construct Shallow wells in Barr and Kwera sub-counties. They have a simple drilling rig for shallow wells.

Uganda Red Cross: It is involved in health programmes, drills boreholes and protects springs.

The Churches: The two main Churches are Lira Diocese for Catholics and Lango Diocese for Protestants. Both churches have programmes in health, AIDS awareness, participate in community mobilisation and could be a good channel for sanitation campaigns.

LINDCOF: It is involved in assisting communities to get slabs, mobilise for sanitation and hygiene improvement and participate in spring protection.

Christian Children's Fund (CCF): It operates in Dokoro and is involved in building the capacity of people to generate income for orphan's support. They offer assistance to communities in kind and have supported the construction of schools.

Food for the Hungry International: It operates in Moroto County, Moro Sub-county, mobilising communities to protect water sources.

Development Training and Research Centre (DETREC): It carries out capacity building training for NGOs and CBOs, carry out action research and has been contracted by the District to carry out training on its behalf.

Redd Barna/National Council of Children: Norwegian NGO focussing on children. Main focus is capacity building for child focused development child advocacy, capacity building for community development focusing on participatory methods and support networking and collaboration with district and Government departments.

Community Based Organisations (CBOs):

Atabu Development Agency: Located in Dokoro, the CBO is involved in community mobilisation. They received support from DHSSP to carry out malaria control and sanitation improvement campaigns. They also have funding from OXFAM for food security

Other CBOs are:

- Save Youth Action Uganda (SAYOU)
- Auxiliary Foundation (AUXFOUND)
- Dokolo Development Association
- Acan Pe Kun women's group
- Atabu Development Association
- Moroto County Association for Development
- ACAP Young Farmers Association

9.6 Key Design Issues for Lira

9.6.1 Social and Community Development

- CDAs currently in post at Sub-County currently number 8 out of a full quota of 24.
- Capacity building as well as underwriting of an additional 16 therefore required for effective programme implementation
- A detailed water needs assessment study of pastoralists (Karamajong) who spend up to six months of the year sharing water sources with resident villagers will be required.
- Currently villages and communities close to the sub-county tend to get the lion's share of the attention and time of the extension staff, the CDAs and HAs, as well as the DHIs. As a consequence, fines are more frequently imposed for lack of latrines, and threats more often made. This results in a rapid construction of latrines which however, do not get used, or if used are kept for visitors or special occasions such as burials. The latrine coverage statistic is therefore unreliable and unrepresentative of improved practices. Further training design will need to take into account previous top down and coercive forms of hygiene training conducted by the sub-county staff.
- There appears to be a more active enforcement of latrine bye-laws, and more threats and fines imposed in Lira than other districts which provides a different starting point for planning new training programmes.

9.6.2 Water Supply

- There is excellent spring potential in Erute and Moroto Counties and shallow well potential in Erute, Moroto and Dokolo Counties which should be fully exploited.
- In Kyoga and Otuke Counties deep boreholes are the only solution; these areas need to be carefully surveyed to minimise borehole failure rates.
- The potential for infiltration galleries could be tested in the lakeside areas.
- According to available data there is a high borehole functionality rate with only 10% not functioning at present. A survey will need to be carried out to assess the actual number of boreholes needing rehabilitation;
- The ActionAid valley tank/infiltration gallery technology could be built on and improved if they agree to be partners in the project. The existing technology is unsatisfactory;
- WSCs need to be trained and strengthened in their roles. This is central to the sustainability of all technologies;

- Improved mechanisms for supply of spare parts need to be developed: private initiatives should be encouraged and supported in some way;
- Pump mechanics should be encouraged to work without financial support from the sub-counties (as is the case in the other three districts).
- Simple rainwater harvesting technologies should be developed and encouraged both for households and institutions.

9.6.3 Sanitation and Hygiene Promotion

- All 24 Health Assistants are in place in the district so there is no need to recruit additional staff at sub-county level.
- NGOs partners which are strong in hygiene promotion and sanitation will need to be identified. ANCC does not have the capacity or orientation to carry out the software components.
- The institutional water and sanitation component will be implemented in close partnership and co-ordination with the ongoing WES and LDDP Programmes which have a direct stake in working with schools and other institutions;

Key Sanitation Issues:

- Latrines need to be promoted on basis of status and privacy to make them an integral part of the accepted home environment instead of something which the government forces people to build.
- The enforcement of the sanitation bye-law needs to be reviewed and possibly revised since it can be counter-productive to encouraging sustainable behaviour transformation
- Technical advice and guidance is needed to show people how they can construct latrines in "difficult" conditions and with available tools and resources (e.g. mattocks instead of pick-axes). Appropriate designs to deal with specific problems need to be developed locally. If availability of logs is a real constraint then alternative solutions need to be sought.
- Communities could be encouraged to share the cost of digging to overcome problems of affordability in the poorest area.
- Advice and training on operation and maintenance is essential so that they do not become too unsafe or unpleasant to use.
- Appropriate solutions for transitional communities who are still in the process of returning to their homes may need to be considered

Key Hygiene Behaviour Issues:

- Lack of hand-washing after defecating or handling children's faeces is a key high risk behaviour which needs to be changed;
- Weak links in the safe water chain are in the transportation and handling of clean water in the home.
- Promotion of latrines should emphasise privacy and convenience benefits and also status associated with household latrines;

- Men need to be targeted during hygiene promotion to raise awareness and create a real demand for latrines amongst male peer groups (drinking groups may provide a good entry point).

9.6.4 Institutional

The staffing levels and experience in Lira District is quite high. However, some functions are not performed. The emphasis should be put on making the existing staff functional and co-ordinate their efforts. The TPC should be constituted, encouraged to meet regularly, synthesise sectoral issues and integrate them and advise the sectoral committees and council to make informed decisions.

The Parish Development Committees already formed should be followed up to supplement the Parish Council in spearhead planning, mobilisation of communities and materials and programme implementation. Emphasis should be on improving their skills in record management.

The structures for ensuring accountability especially the District Local Government Tender Board and Public Accounts Committee should be trained in their responsibilities and procedures for execution.

10. District Profile for Kumi

10.1 Description of District

10.1.1 Geography

Kumi district has an area of 2,848 sq. km with a population of 333,700 (1998 projected from 1991 Census). The average population density is 96 people per sq. km; the eastern county of Bukedea is much more sparsely populated. The land type is undulating savannah and patches of woodland with scattered volcanic inselbergs of granite. The district is bordered by Lake Bisina and Lake Opeta to the north and three smaller lakes to the south-west; a total of 415 sq. km is covered by open water and swamps and wetlands.

10.1.2 Water Resources

The rainfall pattern is bimodal, with an average annual total of 1000mm - 1250mm but there is often no rainfall for several months during the long dry season lasting from October to March. The swampy areas draining into the lake network are seasonally flooded. There is some spring potential in these areas.

The geology of the district is predominantly Basement Complex which yields water through secondary permeability of cracks, fissures and joints. This fractured zone is normally 30-35 m and the average borehole depth required is 60-65m. In some locations the weathered regolith layers can yield high quantities of water at depths of 4 to 30 m. Drilling of deep boreholes in the district has had relatively low success rate of 40-50% and yields are often poor.

10.1.3 Administration

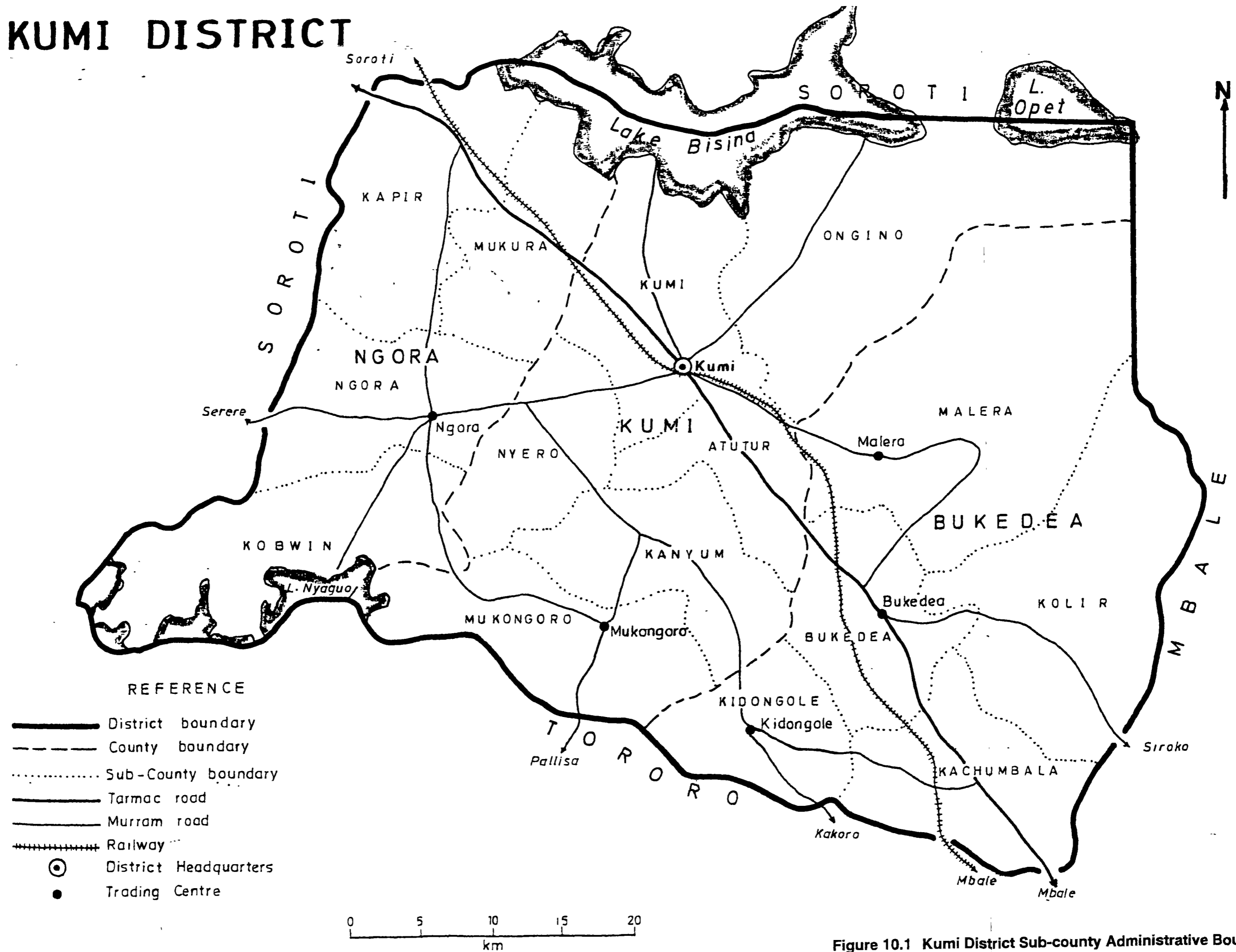
The district is divided into 3 counties which are comprised of 15 rural sub-counties and one Town Council, Kumi, which has a population of approximately 15,900. The town of Ngora in the west of the district has an estimated population of 19,400 but has not been given Town Council status. The sub-counties are sub-divided into a total of 106 parishes. Figure 10.1 shows the administrative boundaries at sub-county level.

10.1.4 Socio-Economic Data

The dominant ethnic tribe in Kumi district is the Iteso (96%). These people are traditionally cattle-rearers but, like all other Teso areas, Kumi has suffered greatly from raiding by the Karamojong. The years of insurgency from 1987 to 1991 seriously depleted cattle stocks and much infrastructure was also destroyed. The district has achieved peace and stability in recent years, but still suffers the lasting effects of civil strife. However, floods of 1997 together with the outbreak of a measles epidemic in 1998 caused a high number of child deaths.

The main economic activity in Kumi is subsistence farming (84% of the population). The principle food crops are cassava, millet, sweet potatoes, sorghum and soya beans. Cash crops include rice, groundnuts and sim-sim. Fishing is mainly done on a subsistence basis to supplement household diet. Charcoal burning and selling firewood are increasingly common, especially by women as income generating activities.

KUMI DISTRICT



REFERENCE

- District boundary
- - - County boundary
- Sub-County boundary
- Tarmac road
- - - Murram road
- ++++ Railway
- ⊙ District Headquarters
- Trading Centre

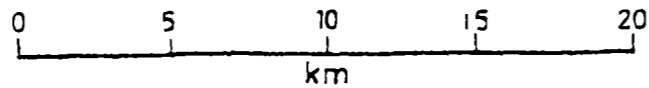


Figure 10.1 Kumi District Sub-county Administrative Boundaries

Other economic activities in the district include brick-making, petty trading and food processing (e.g. maize milling). The average household per capita monthly expenditure is estimated to be US\$ 10,163 (UNDP, 1995) which is significantly lower than the national average of US\$ 14,568.

10.1.5 Infrastructure and Social Services

The district has limited service infrastructure: Kumi Town is served by electricity and telecommunications but the rural areas are largely unserved. Kumi and Ngora towns both had piped water supply systems in the 1950s but the systems were destroyed during insurgency. Kumi town has recently had a new system constructed under the Small Towns Water and Sanitation Project, but unfortunately the borehole supply has completely failed. There is approximately 50 km of tarmac trunk road running north-south through the district and there is a reasonable network of murrum feeder roads. In 1998 there were 132 Primary Schools and 15 Secondary Schools in the district. Unfortunately the District Development Plan is still in the process of being prepared and so no up-to-date information could be made available to the team at the time of their visit.

The average life expectancy at birth is 47.0 years. The top three causes of child mortality are: malaria (34%), acute respiratory infection (33%) and diarrhoeal diseases (15%).

10.2 District and Sub-County Staffing and Capacity

Despite the fact that Kumi has existed as a District since 1974, most of its institutions are not well developed to handle the decentralised functions because it underwent a period of conflict and insurgency between 1985 and 1993. However Irish Aid has been working with the district for almost two years to assist in building the capacity of institutions and human resources.

10.2.1 Existing Staffing Levels - District

A number of District Departments are understaffed and out of 1010 approved District positions only 668 are filled¹⁰. However, the District has made significant efforts to recruit staff. For instance it recently recruited an Economist, One Engineering Assistant, three Assistant District Inspectors of Schools and is in the process of recruiting a Population Officer and a District Water Officer.

Since some of the key staff are new in the service, there is a need for orientation, hands-on training and support to have them satisfactorily execute their functions.

10.2.2 Existing Staffing Levels - Sub-county

There is only one Sub-county without a substantively appointed Sub-county Chief. However, the Sub-county Chiefs are not well equipped to co-ordinate and handle the devolved functions for planning, budgeting and find it extremely difficult to provide direction and guidance to other extension staff who are often better qualified than the Chiefs themselves. To try and address this problem, Irish Aid has encouraged the sub-counties to appoint one

¹⁰ Kumi District Local Government: A Study on Institutional Capacity Building and Training. Details of staffing levels are provided in appendix 5.

of the extension staff as the sub-county focal point person to co-ordinate the planning function.

Most of the sub-accountants lack the relevant training and need to be oriented to cope with the demands of the new financial and accounting regulations. This is because most of them are being introduced to the tasks for the first time.

Some of the positions in Sub-counties are not filled but staffing levels are relatively high compared to those in Katakwi District. For instance the District has all the 32 established positions of the Residential Pump Mechanics filled, 12 out of the 16 established Community Development Assistants, 10 out of the 15 established Health Assistants, all the 16 Nutrition Officers in charge of Sub-counties, and all the established 15 Assistant Commercial Officers.

However, the staff lack the necessary resources to execute their duties. Most of these extension workers use bicycles to cover their sub-counties, lack sufficient office space and accommodation facilities in the Sub-counties. There is still need for improved co-ordination and functionality to ensure programme implementation.

10.2.3 Training and Capacity Building

Despite the fact that there is no well-developed and reliable training programme, some District staff have benefited from training sessions organised by agencies such as CARE, ABD, UNICEF and Line ministries especially the Ministry of Local Government. Irish Aid, under its institutional capacity building and training component, facilitated the district to carry out training needs assessment for staff and other district organs. The key areas identified include¹¹:

- Leadership, management and human relations skills;
- Functions, roles, procedures and relationships of staff, local councils and other statutory committees;
- Resource mobilisation and revenue collection for finance and administrative staff;
- Planning and management of investments and projects following the approved procedures;
- Budgeting, budgetary management and expenditure control;
- Strategic procurement and management of supplies procedures;
- Financial management and accounting for accounting and non accounting staff;
- Skills improvement for Internal Audit;
- Computing skills;
- Office and records management;
- Training of trainers

There is however still need to develop a human resource development strategy that will ensure improved staff performance and service delivery. Such a strategy should not only list training needs but also highlight the most appropriate training approaches, timing, resources, monitoring and follow up arrangements to allow for acquisition of skills and avoid interfering with other staff activities. Training needs assessment should be made part of the staff performance appraisal exercises.

¹¹ Detailed training needs per department are listed A study on Institutional Capacity Building and Training by Kumi District Local Government.

10.2.4 Planning and Co-ordination Capacity

The District has not yet finalised the production of a the Three-year District Development Plan. At present only the draft sub-county development plans are in place. Notwithstanding the above the District is being facilitated by Irish Aid to undergo a systematic bottom-up planning process. To date the following activities have taken place:

- a) One-day sensitisation sessions on planning at Sub-county level involving the Local Councillors, Sub-county staff, NGOs and CBOs. However, the NGO plans are not yet part of the Draft Sub-county Development Plans. It was noted that NGO activities will be integrated at the District level where most of the NGOs have operational offices;
- b) Identification of one Sub-county Extension staff as a Focal Point Person to co-ordinate planning activities in the Sub-county. The Sub-county Chief who would have co-ordinated planning is in most cases pre-occupied by administration work and in other cases lacks the skills which some of the Extension Workers have;
- c) Guiding the Sub-county Technical Planning Committees (TPC) and ensuring that they are functional. Most of the TPCs were not functional because the Sub-county Chiefs were less qualified than the Technical staff and could not offer guidance. In some Sub-counties, the Chairmanship of the TPC was shifted from the Sub-county Chief to one of the Technical staff. The Focal Point Person who is in charge of co-ordinating planning is the secretary to the TPC;
- d) Making planning a responsibility of one of the Council Committee in every Sub-county. It was however noted that some council committees are dormant and others need training about their roles, in order to effectively execute their functions;
- e) Forming Sub-county data banks including the provision of facilities for storing data;
- f) Provided a bicycle for the Sub-county Focal Point Person to facilitate his movements within the Sub-county;
- g) Conducted a 10 day PRA training for the Sub-county Focal Point People and Sub-county Chiefs to enable them to develop Sub-county Plans. However, there is no evidence to demonstrate that the PRA skills were used to come up with village action plans. Whereas basic data was collected from the communities, the analysis and strategy formulation is being done by the technocrats at the Sub-county level;
- h) Trained one member per village (in most cases LC 1 executives) for three days in data collection and the whole concept of Community Based Management Information System;
- i) The trained people collected basic data using the provided formats;
- j) Analysis of the basic data at the Sub-county level;
- k) Holding a five-day residential training for the STPC together with the Sub-county Chairman on the planning process and format. This was hands-on training using real data collected from the villages to come up with Sub-county Draft Development Plans;

- l) The Sub-counties which had data gaps were requested to fill them and submit the drafts to the District for word processing; and
- m) The District Heads of Departments are coming up with sectoral plans to be integrated with the Sub-county plans to form the District Development Plan. The DTPC will spearhead the process of having a cross-sectoral integrated analysis. The DTPC has allocated some funds for its training to make it more functional.

There is still a need to develop comprehensive sectoral but integrated work plans to ensure improved co-ordination, rational utilisation of resources and interdepartmental complimentary during the implementation of activities.

10.2.5 Main Constraints to Service Delivery

- a) **Insufficient and unreliable revenue:** The District has three sources of revenue; district local revenue, donor funds and central Government transfers. The central Government transfers in form of the unconditional grants mainly cover the wage bill and the local revenue greatly fluctuates. It therefore becomes very difficult for the departments to implement their activities as planned and scheduled leading to poor performance, co-ordination and demotivation of staff. In some cases like in the UNICEF WES programme, delayed fulfilment of accountability requirements has led to delay in release of funds which in turn hinders the implementation of programme activities.
- b) **Donor based planning and performance:** Some departments plan to satisfy the needs of donors and do not integrate the work plans with those of other departments. As a result, a number of staff commit most of their time to donor programmes, which have assured funding and neglect the routine district functions. This scenario underlines the need to integrate the programme activities with those of the District as a form of institutional support.
- c) **Poor co-ordination of activities:** The District Technical Planning Committee is non-functional. Departments develop independent plans and execute activities in isolation. In most cases this leads to duplication of activities and irrational utilisation of the few resources at the disposal of the District.
- d) **Lack of office space:** In some departments a number of officers crowd in one room denying them good working atmosphere and concentration. This significantly reduces the person time devoted to direct service delivery.
- e) **Donor pre-packaged training:** Donors have on a number of occasions organised pre-packaged training for staff in Agriculture, Medical and Community Development departments among others. Some of this training is either not tailored to the roles and responsibilities of these officers or does not necessarily offer new skills.
- f) **Salary arrears:** The District has a debt of over 150 million in salary arrears incurred when the Government granted tax exemption to the people in the District during the period of insurgency. The affected staff are demotivated;
- g) **Inadequate human resource development strategy:** Some of the staff have been occupying positions in the District for a very long period of time on probation. Most of them have never been promoted and do not have hope for promotions in the near future.

The few who were promoted did not have their salaries revised. This coupled with the use of the traditional performance appraisal format in form of annual confidential reports that do not allow for open discussion and identification of constraints to performance has greatly contributed to the demotivation of staff.

10.3 Existing Water, Hygiene and Sanitation Situation

10.3.1 Water Supply

The current safe water coverage in the district is estimated by the District Water Assistant to be 23%. At present around 47% of the boreholes in the district are not functioning but the district is in the process of rehabilitation their service rig which will allow them to repair some of these non-functioning boreholes.

Table 10.1 Distribution of water sources in Kumi district

| County | Kumi | Ngora | Bukedea | Total |
|---------------------------------|------|-------|---------|-------|
| Source type | | | | |
| Deep borehole -functioning | 68 | 54 | 29 | 151 |
| Deep borehole - not functioning | 50 | 48 | 38 | 136 |
| Protected spring | 53 | 25 | 43 | 121 |
| Unprotected perennial spring | 71 | 20 | 68 | 159 |
| Shallow well | 2 | 4 | 3 | 9 |

Source. Interpretation of WES/MIS data 1998 and WES Programme Progress Report April-June 1999

The potential for spring protection is concentrated in the sub-counties of Kachumbala Ngora and Kanyum whilst the dry north-eastern sub-counties of Malera, Kapir and Kolir have no spring or shallow well potential. These sub-counties also have the highest number of non-functioning boreholes.

Types of technology and sources:

- The functionality rate of boreholes in the district is extremely low at 53%. Most of the non-functioning boreholes in the drier sub-counties and are probably deep boreholes. The causes of failure need to be investigated.
- The household survey found that 61% of people use boreholes for drinking water in the wet season, 23% use protected springs, 2% use protected wells and 14% use unprotected sources. Average per capita consumption was found to be 16 litres/day in the wet season and 19 litres/day in the dry season. 45% of households were found to harvest rainwater on an informal basis
- There is a good spring potential and shallow well potential in Kumi and Bukedea Counties. In some sub-counties the water and sanitation committees are active and submit requests for spring protection to the district. Two shallow well masons have been trained in six sub-counties under Irish Aid Programme.
- The sub-counties along the lakeshore have particularly difficult groundwater conditions. The NGO ACAV has done a study and is planning a programme of borehole drilling and rehabilitation.
- CARE, YWAM and Vision Terudo have all been active in developing wells and springs in the district.
- Some private homes, particularly in Kobwin sub-county, have constructed private hand-dug wells to a depth of around 10m. However, the water quality of these wells is

extremely poor as shown in the table. They probably get contaminated by using dirty containers to draw water.

Table 10.2 Results of water quality tests for point water sources in Kumi

| County | Sub-county | Source type | Installed by | Colour | Turbidity NTU | pH | Conductivity | Faecal coliforms/ 100ml |
|---------|------------|--------------------|----------------|--------|---------------|-----|--------------|-------------------------|
| Ngora | Mukura | Unprotected spring | Community work | Milky | 45 | 6.5 | 80 | 0 |
| Ngora | Mukura | Borehole | UNICEF | Clear | <5 | 7.6 | 480 | 0 |
| Ngora | Mukura | Unprotected well | - | Milky | 100 | 6.1 | 70 | 18 |
| Ngora | Mukura | Borehole | UNICEF | Clear | <5 | 6.8 | 480 | 0 |
| Kumi | Ongino | Borehole | UNICEF | Rusty | 27 | 7.0 | 270 | - |
| Kumi | Ongino | Borehole (deep) | ACAV | Clear | <5 | 7.1 | 480 | - |
| Kumi | Ongino | Borehole | UNICEF | Clear | <5 | 6.9 | 500 | - |
| Bukedea | Kachumbala | Borehole | Irish Aid | Clear | <5 | 6.1 | 170 | - |
| Bukedea | Kachumbala | Unprotected spring | - | Clear | <5 | 5.9 | 50 | test failed |
| Bukedea | Kachumbala | Unprotected spring | - | Milky | 11 | 5.7 | 70 | 114 |
| Bukedea | Kachumbala | Protected spring | CARE | Milky | 15 | 5.8 | 60 | 20 |
| Bukedea | Kachumbala | Home sample 1 | (CARE) | Brown | n/k | 6.1 | 70 | 77 |
| Bukedea | Kachumbala | Home sample 2 | (CARE) | Clear | n/k | 6.4 | 70 | 9 |
| Ngora | Kobwin | Borehole | UNICEF | Clear | <5 | 7.0 | 470 | 0 |
| Ngora | Kobwin | Hand dug well | Private home | Clear | <5 | 6.7 | 300 | 800 |
| Ngora | Kobwin | Protected spring | CARE/ | Milky | 30 | 6.3 | 80 | 68 |

Community Contributions:

- The concept of community contributions and community-based maintenance is well accepted and understood at village level. A few WSCs were found to be actively collecting money and managing the pump. At one borehole in Kobwin s/c a caretaker kept the pump locked between certain hours to prevent school children from over-using it. The majority of WSCs are inactive or collect money when the pump breaks down.
- CARE requires each person to benefit from a spring protection to contribute Ush100. They are also required to contribute labour and local materials. YWAM and Vision Terudo do not require financial contributions for their interventions.
- Willingness to pay for boreholes was found to be about Ush1000 per household towards capital cost and Ush500 per household per month for operation and maintenance. The WTP for springs is somewhat lower at...

Operation and Maintenance:

- Spare parts for U2 and U3 pumps are difficult to obtain in the sub-counties.
- Communities are well aware of their responsibility for maintenance of sources. However, in the case of protected springs they are not clear what they should be doing in the way of routine maintenance
- There are reported to be two pump mechanics in each sub-county who are being contracted by communities.
- The district has a service rig which is currently under repair. Once it is fixed they intend to undertake borehole rehabilitation where pipes have dropped.

10.3.2 Sanitation

The latrine coverage in the district is estimated to be around 39% as shown in the table below. The coverage of latrines varies greatly between different sub-counties and villages. In Kayembe Zone (Kachumbala sub-county, Amus sub-parish) we found a latrine coverage as high as 89%. However, in Aguya village (Ongino sub-county, Akide Parish), it was found that only 2 out of the 79 homesteads have a latrine, putting latrine coverage in this village at 2.6% only.

The main reason for the high coverage in Kayembe Zone could be the high number of Moslems living in this area. Other reasons mentioned were; people from Kampala had visited the village and sensitised them on hygiene and sanitation issues and the mobilisation by the LC1.

Table 10.3 Latrine coverage in Kumi district

| Latrine Type | County | Kumi | Ngora | Bukedea | Average |
|----------------------|--------|-------|-------|---------|---------|
| VIP | | 0.5% | 0.9% | 0.2% | 0.5% |
| Improved traditional | | 2% | 3.5% | 0.6% | 2% |
| Traditional | | 31% | 0.6% | 38% | 36% |
| Bush | | 66.5% | 2% | 61.2% | 61.5% |

Source: WES/MIS data May 1998

The sanitation problem at the schools in the district is quite acute. As per the first of March, the average ratio of latrines to enrolled primary pupils is estimated to be one latrine for 87 boys and one latrine for 86 girls. It is estimated that 42% of the schools have hand-washing facilities and 77% of the schools in the district have urinals for boys. However, these are reported to be of poor quality and lacking adequate drainage facilities. 46% of the schools have access to a safe and functioning water source.

The household survey found 49% of people using the bush, 43% owning a traditional latrine and 8% owning an upgraded latrine with a slab. This agreed with the findings in the villages where most people did not have access to slabs. There is no bye-law being enforced in Kumi district but NGOs such as Vision Terudo and CARE may have had some impact on raising awareness and demand for latrines. Latrine coverage was found to be lowest in the lakeside communities where people defecate in the lake. In areas with shallow water tables people allegedly start digging latrines but when they hit water they decide to use them as wells instead.

In the villages where detailed studies were carried out the main constraints to constructing or using latrines were identified as:

- Lack of tools to construct latrines in hard rock;
- A need for demonstration latrines to show them how they could be constructed;
- A lack of a "history" of latrines in the area;
- Some cultural beliefs and constraints were mentioned.

Willingness to pay for slabs was found to be between Ush 500-3000. Most people said that they cannot afford the unsubsidised latrines that Vision Terudo are now selling at Ush17000. However, the HA at Ongino sub-county pointed out that people have higher expectations

since slabs were promoted and consequently no longer want to construct traditional latrines with logs.

10.3.3 Hygiene Behaviour

The main risk behaviours identified in Kumi district during the field work are similar to those found in the other districts:

- **Unsafe disposal of human faeces and in particular children's faeces**
The majority of people practising open defecation said they do bury their faeces in the bush. Children defecate in the compound and the mother will normally throw their faeces in the latrine, the bushes or bury them not far from the house. The average age of a child to start using a latrine was found to be 5.3 years and the upper age limit was found to be 9 years.
- **Poor hand washing practices after defecation and before feeding children**
Most people did say that they wash their hands before eating but hand-washing after defecation was not found to be a common practice.
- **Consumption of unsafe water due to the lack of access to safe water and use of dirty containers for transportation or for drawing drinking water**
Access to safe water is estimated to be very low at 23% for the district so it would seem the majority have to rely on unsafe sources. However, 34 out of the 56 respondents (61%) in the household survey were found to get their drinking water from boreholes. However, people accessing clean water are often using dirty jerrycans for transportation so the safe water chain gets broken immediately. Most people store their drinking water carefully in a clay pot covered with a plate but the water may be drawn using a dirty cup which is dipped with dirty hands so the chain gets broken in the household. To check the safe water chain, samples of drinking water were taken from two homes, both of which fetch water from a spring protected by CARE. The spring itself was found to have a relatively low level of contamination at 20 faecal coliforms/100ml. One home sample was found to have a higher level of contamination at 77/100ml. The other sample (which was taken from the spring caretaker's home) was found to actually have a lower count than the source at 9/100ml.
- **Use of dirty utensils for food preparation and eating**
Around 46% of homes were found to have a drying rack: this is higher than for the other districts but it still means that a significant proportion of people still may have poor food and utensil-related hygiene practices.

10.4 Village Snap-shots

In-depth surveys were conducted in villages in the sub-counties of Mukura, Ongino, Kachambala and Kobwin. Table 10.4 summarises the main characteristics of these villages. The community maps and detailed information from the PRA fieldwork carried out in Kumi district are presented in Appendix 6.

The village of Aguya-Akum was located close to the lake shore, while the three other villages were surrounded by swamps.

Water sources

In the four villages the majority of sources were unprotected, such as the lake (Bisina), traditional hand dug wells. A supply of safe water was felt to be a priority need, as the available sources were perceived as polluted, and round-trip distances to collect were over 6km in Akiet.

Water collection

Women were responsible, together with children for water collection and men generally did not assist in this task.

In none of the villages with a protected source was an active Water User Committee found, indicating the lack of investment in training by previous NGOs.

There was a more equal sharing of household resources between men and women and men did not control the household income.

Awareness levels hygiene and sanitation

Awareness levels of the relation between safe water and improved health was found to be high, however practices did not reflect this awareness. For example, in Aguya-Akum village, defecation in the lake was common for example, which was the main source for drinking water.

Latrine coverage in this lakeshore village was the lowest of all four villages, being only 2.5%. In the remaining three villages, by contrast, the highest latrine coverage was found to be in Amus village in Kachambala Sub-county, with a predominantly Moslem population. A similarly high latrine coverage was found in Pokure, Kobwin Sub-county, of 60% which may be attributed to a previous cholera outbreak in the area and consequent enforcement of by-laws.

WTP

Typically contributions to the capital cost of a new water source would be in the form of local materials, while cash contributions varied from Ush. 500 to 2000. In villages where the water was seen as a top priority, even if these were poor villages, people were prepared to pay upwards of 1500 in the form of contributions.

For latrine slabs, villagers were willing to pay between 2000 to 3000, the exception to this being the poorest village of Aguya, where this was 500 to 1000..

Village level institutions

In all four villages, indigenous institutions were found to be active. These included clan groups, drinking groups, women groups, burial groups and farmers groups. Clan groups in particular were found to be very effective in mobilising village resources.

This indicates a good potential for managing any future water source installed, with the experience already existing in the villages of fund raising, resource mobilisation, etc.

At the sub-county level, the CDA posts had been filled for all four sub-counties.

NGO/CBO activity

NGOs were active in two of the villages, Vision Terudo in Akiel and CARE in Kachumbala in Amus. The activities of Vision Terudo appear to have been quite unsustainable and little impact was evident after five years of involvement in the village.

Table 10.4 Village Profile Summary for Kumi District

| Village | Sub-County | Mukura Akiet | Ongino Aguya-Akum | Kacchambala Amus | Kobwinn Pokore |
|-----------------------------------|-------------------|---------------------|--------------------------|-------------------------|-----------------------|
| Main characteristics | | | | | |
| Water a priority need | | yes | yes | yes | yes |
| Population | | 1340 | 366 | 810 | 360 |
| Water sources: | | | | | |
| (nr. Protected) | | 1 | - | 5 | 1 |
| (nr. Unprotected) | | 14 | 1 | 1 | 4 |
| Awareness level water/hygiene: | | | | | |
| (high) | | X | X | X | X |
| (low) | | | | | |
| WTP for water | | | | | |
| (capital cost): | | local materials | local materials | local materials | local materials |
| (O&M): | | 2000 | 500-1000 | 1000-2000 | 1000 |
| Water Source Committee: | | | | | |
| (Active) | | | | | |
| (Inactive) | | X | X | X | X |
| Water collection: | | | | | |
| (distance round trip): | | 6km | 2km | 3km | 4km |
| (women/children only): | | X | X | X | X |
| (men assist): | | | | | |
| Average consumption (l/c/d): | | 8-11 | 8-9 | 17 | 11 |
| Conflicts over water use: | | no | no | potential | no |
| Control over resources: | | | | | |
| (Male): | | X | X | X | X |
| (Female): | | X | X | X | X |
| Latrine coverage: | | 29% | 2.5% | 62% | 60% |
| Awareness sanitation/hygiene: | | | | | |
| (high): | | X | X | X | |
| (low): | | | | | X |
| WTP for latrine slabs: | | 2000 | 500-1000 | 3000 | 3000 |
| Active village level workers: | | VHW | - | - | - |
| Active village institutions (nr): | | 2 | 3 | 3 | 2 |
| Potential for managing source: | | | | | |
| (good): | | X | X | X | |
| (limited): | | | | | X |
| CDA in sub-county? | | Yes | yes | yes | yes |
| NGO/CBO Activity: | | Vision Terudo | - | CARE/UNFA/ UWESO | - |
| Cattle watering distance: | | 7km | 2km | - | 2km |
| Vulnerability: | | | | | |
| (drought): | | - | - | - | - |
| (Karamajong): | | - | - | X | - |
| (other): | | - | - | - | - |
| Economic level: | | Moderately well off | Poor | Moderately well off | Moderately well off |

10.5 Key Stakeholders and Partners

10.5.1 Irish Aid/KDDP

As described in Section 5.3 this is an Irish Bilateral Programme of support to Kumi District. The programme is in the second year of implementation and key activities include:

- Support to primary education through school construction, provision of latrines and water tanks;
- Water and sanitation improvement through drilling and rehabilitation of boreholes, protection of springs and hand dug wells;
- Food security; and
- Support to the District and Sub-counties in the production of the three- year Development Plans.

10.5.2 UNICEF WES country programme

The programme provides sanitary platforms to primary schools. The District makes quarterly work plans, get quarterly financial releases and make quarterly accountabilities. Most of the funds under the programme are devoted to the hardware component and little is allocated to the software component.

10.5.3 NGOs and CBOs

Kumi District has an NGO network Kumi Network of Development Organisations (KUNEDO). KUNEDO with support from GTZ compiled an NGO/CBO directory that gives a quick snap shot of the CBOs/NGOs in the district, areas covered, objectives, and major activities¹². However, the directorate lacks an assessment of the CBOs/NGOs capacity and hence does not give a satisfactory hint on how they can be used in the programme. Some International NGOs operating in the District and some CBOs identified during the PRA exercises are also not included. The Directorate therefore is not exhaustive and hence further identification and capacity assessment is thus needed. Some of the key NGOs are given below:

CARE: CARE, with funding from DFID, is implementing a large health component pr, constructing health units, protecting springs, carrying out capacity building activities and support to the construction of DDHS offices.

Vision Teso Rural Development Organisation (Vision Terudo): This is a multi-sectoral NGO dealing in food security, school construction, protection of springs and casting of slabs. The District is already using Vision Terudo in the implementation of some activities like the protection of springs. The NGO is the financial intermediary for PAP and Entandiikwa credit schemes in Ngora County. Implementation of other donor-funded activities makes it a potential channel for the implementation of programme activities. It has technical staff and has the capacity to implement some programmes especially in Ngora County.

¹² For Details of NGOs/CBOs in Kumi District refer to Kumi Network of Development Organisations (KUNEDO) NGO/CBO Directorate 1999/2000.

Bukedea Women Struggler's Association (BUWOSA): It is a multi-sectoral organisation having an agriculture component, food processing (has oil-milling equipment). BUWOSA is an intermediary for PAP and has disbursed about 27 million in loans. BUWOSA is a potential entry point to the community especially in regard to targeting the women in Bukedea.

Soroti Catholic Diocese Integrated Development Organisation (SOCADIDO): It has programmes in agro-forestry raising and selling seedlings. SOCADIDO provides extension services and have an animal revolving scheme for goats and cattle.

Other NGOs include:

- Foundation for African Medicine;
- Pamo Volunteers;
- Baptist Union of Uganda Kumi Oxen Project;
- National Council of Children;
- Faith Action Limited;
- Bible Christian Literature Centre;
- Joint Heifers Ministries; and
- Hosanna Development Project.

Community Based Organisations (CBOs)

The four most commonly occurring type of CBOs in both Kumi and the other four districts are:

Women groups: Most of the women groups have been formed with facilitation of NGOs. A number of them have received loans from NGOs in form of cash and materials. However, the experience is that whenever, the NGO support is no longer forthcoming most of the women's groups tend to collapse. If they are to be a channel for programme activities there is need to make them more cohesive and self-reliant.

Burial Groups: A number of villages have organised themselves into burial groups. These groups contribute money and foodstuffs to be used during the burial ceremonies. Most of them reported that they are willing to contribute money because they know how it is going to be used. The lesson for the programme is that people are willing to pay so long as they are sure that the funds will not be misappropriated or diverted. The programme can also adopt the experiences and modalities of collecting money used by the burial groups.

Drinking Groups: In many communities, there are drinking groups. The members of the drinking groups contribute money to buy local brew and in some cases to lend to members on a rotational basis. The drinking groups are also used to collect money for community functions and could be used as a means of collecting money for the O&M of water sources.

Farmers Groups: There are a number of farmers groups engaged in group farming. A number of them also save and loan out money to fellow members. It was noted that the farmers groups started without external support have been more successful than those supported.

Some of the specific CBOs dealing in water and sanitation in Kumi are:

- Widows, Orphans and Destitute Care engaged in literacy promotion, ox ploughing and health promotion with emphasis on sensitisation of women;
- Unite Youth to Kick Poverty focusing on improving standards of living of the youth,
- Mukura Moral Restoration Group to improve health in families;
- Kegangakinos Farmers Association for food security, water, sanitation and child support;
- Elim Pentecostal Evangelistic Fellowship of Uganda planning for water and sanitation activities;
- Kanyipa Farmers for tree planting, poultry and sanitation improvement;
- Abwobwotoi Women's Group for sanitation, water protection and training of AIDS counsellors; and
- Atamata United Kachumbala engaged in apiary, spring protection and wetland conservation.

10.6 Key Design Issues for Kumi

10.6.1 Social and Community Development

- CDAs currently in post at Sub-County currently number 10 out of a full quota of 15.
- Capacity building as well as underwriting of an additional 5 therefore required for effective Programme implementation.
- In many cases, S-C staff seem quite unaware and/or are misinformed on the actual situation on the ground in villages illustrating the need for an intervention level which can operate more closely with Parish and village levels.
- A detailed water needs assessment study of pastoralists (Karamajong) who spend up to six months of the year sharing water sources with resident villagers will be required.
- NGO assessment for selection potential partners
- Identification of modalities for partnership with NGOs also involved in water source protection will be required.
- Lakeshore communities were found to be among the poorest and facing the most difficult geological conditions with regard to borehole drilling.
- Income generating activities undertaken by women, such as charcoal burning, are also environmentally unfriendly and represent a source of livelihood under threat, particularly with District environmental policy of reducing such activities
- In Moslem communities, cultural beliefs and practices tend to result in high(er) latrine coverage, providing a very specific basis for design of hygiene training. Additional and culturally sensitive gender sensitisation for men in these communities will be required, in relation to their entrenched attitudes to women's traditional role.
- NGO interventions in villages often appear to be a source of confusion and mystification to villagers

10.6.2 Water Supply

- There is a high number of non-functioning boreholes in the district. The potential for rehabilitation needs to be assessed.
- The areas along the lakeshore have extremely problematic groundwater conditions which need to be carefully studied and surveyed if boreholes are to be successfully drilled in these areas;

- In the drier eastern sub-counties of Ongino, Malera and Kolir deep boreholes are the only solution;
- There is potential for spring protection and shallow well construction in many of the other sub-counties. The district, under the Irish Aid Programme and using YWAM, CARE and Vision Terudo, is already exploiting this potential;
- WSCs need to be trained and strengthened in their roles. This is central to the sustainability of all technologies;
- Improved mechanisms for supply of spare parts need to be developed: private initiatives should be encouraged and supported in some way;
- Simple rainwater harvesting technologies should be developed and encouraged both for households and institutions.

10.6.3 Sanitation and Hygiene Promotion

- 10 out of the required 15 Health Assistants are in place in and so the remaining five should be recruited in order to ensure that the hygiene and sanitation component can be implemented effectively in all sub-counties.
- NGOs partners which are strong in hygiene promotion and sanitation will need to be identified. Vision Terudo is generally more hardware-oriented
- The institutional water and sanitation component will be implemented in close partnership and co-ordination with the ongoing WES and Irish Aid KDDP Programmes which have a direct stake in working with schools and other institutions;

Key Sanitation Issues:

- Latrines need to be promoted on basis of status and privacy to make them an integral part of the accepted home environment instead of something which the government forces people to build.
- Some of the cultural beliefs relating to hygiene and sanitation need to be examined further
- Technical advice and guidance is needed to show people how they can construct latrines in "difficult" conditions and with available tools and resources (e.g. mattocks instead of pick-axes). Appropriate designs to deal with specific problems such as rock outcrops or high water tables need to be developed locally.
- Communities could be encouraged to share the cost of digging to overcome problems of affordability in the poorest area.
- The demand and willingness to pay for slabs needs to be assessed in more detail
- Advice and training on operation and maintenance is essential so that they do not become too unsafe or unpleasant to use.

Key Hygiene Behaviour Issues:

- Lack of hand-washing after defecating or handling children's faeces is a key high risk behaviour which needs to be changed;
- Weak links in the safe water chain are in the transportation and handling of clean water in the home.

- Promotion of latrines should emphasise privacy and convenience benefits and also status associated with household latrines;
- Men need to be targeted during hygiene promotion to raise awareness and create a real demand for latrines amongst male peer groups (drinking groups may provide a good entry point).

10.6.4 Institutional

Since the District and Sub-counties are relatively well-staffed, emphasis in the programme design should be on ensuring optimal utilisation of existing human resources. This will require improved co-ordination of staff activities, skills development focused on the execution of duties related to broader responsibilities like planning rather than sector specific and facilitation in the form of transport.

The programme should build on the efforts already under way in the District to make the TPC functional. The innovative idea of having a Sub-county Focal Point Person in the Sub-county given the heavy workload and lack of skills by the Sub-county Chief could be supported.

Focal people in charge of collecting data and running the Community Based Management Information System at village level should be supported. Their role should be broadened from the collection of basic data to the collection, storage and use of information necessary to guide improved performance at the lower local council levels, learning and policy refinement at the higher local governments and donors.

11. Key Design Criteria for Implementation

11.1 Social Issues and Challenges

11.1.1 Equity and Gender

A Gender Policy was drafted in 1998 by DWD in consultation with the Ministry of Gender and Community Development. Its main emphasis is on affirmative action on the placement of women in both the public and private sector.

While there exists a quota for women's representation in Local Government administrative posts, their actual representation is much less. The majority of extension staff, CDAs and HAs are male, and no female extension staff were encountered at the Sub-county level. Underwriting of CDA staff proposed in the programme will incorporate a gender balance to ensure that more women are recruited as extension staff.

At village level, in those Water User committees which were found to be active, it was found that there was awareness of the need to retain the ratio 5:4 male to female. However, in general, women in these posts are a token presence only, and are not aware of their roles or tasks. In village discussions and public meetings, women tend to stay in the background until invited to speak. (This is even more pronounced in areas with a predominant Moslem population.)

Women's increasing role in agriculture as a result of changing environmental factors impacts on the day-to-day household responsibilities, and particularly the time available for water collection. The typical amount of time needed to collect water was found to be between two and three hours per day.

While women's role in agriculture is increasing, however, that of men is not increasing at the same rate, and these changing patterns will be addressed in programme design to avoid adding to women's burden during planning and implementation.

It was found that traditional roles and division of labour between men and women is changing in the rural areas. Particularly in Katakwi and Kumi, men were found to be assisting women in the collection of drinking water from boreholes, using bicycles. Women were found to be using bicycles themselves in Lira and Apac. This provides an important base for the design of appropriate gender training at Parish and village levels building on the nascent co-operation between the genders. Gender sensitisation programmes will make use of District comparisons, by showing examples from one District to another during training workshops, and arranging exchange visits between communities of different districts.

11.1.2 Marginal Communities and User Conflicts

The pastoralist tribes of the Karamajong, living on the borders of Katakwi, Kumi and Lira come in search of pastures and water for their cattle and usually spend up to six months of the year near or in communities where water is available. Although this group frequently uses force to obtain its needs, they are in fact marginal communities whose needs are not taken into account and are bypassed in the planning process. The Districts most affected are Katakwi (particularly the northern-most sub-counties), Kumi and Lira.

The other significant marginal group which is present in Apac, Lira and Kumi districts are the fisherfolk who live along the shores of the larger lakes such as Lake Opeta, Lake Kwania and Lake Bisina. These communities depend on fishing for their livelihoods and their settlements are only semi-permanent because if a sud (floating island) blocks the landing site then they move to another location on the lakeshore. A landing site was visited at Naluboyo, Muntu sub-county in Lira district. This fishing community has a population of around 500 people and comprises a total of 17 different tribes. There are six communal latrines for the entire village and these are in a extremely poor condition so no-one uses them. The high water table around the lakeshore and lack of space between huts makes it very difficult for individuals to construct latrines even if they are motivated to do so. Fishing communities only represent about 1% of the four districts' population but since their hygiene behaviour and sanitation facilities are particularly poor they should be given adequate consideration and attention in the programme.

11.1.3 Prioritisation of Needs

In each of the four Districts, the District planning process is at different stages of development in terms of a successful incorporation of development need priorities generated by communities into Sub-county and District Development Plans.

In Katakwi and Lira, supported by the Netherlands supported KDDP and LDDP, an intensive process of participatory planning has been conducted at village, parish and sub-county levels, resulting in a Situation Analysis for each Sub-county. Priority needs of communities were identified and collated and redefined at Parish level. The objective was to enable communities to identify priority actions which would subsequently be incorporated into the sub-county development plan. These would then form the basis for creating the District Development Plan.

In Katakwi District the process has only recently begun, but in Soroti the process has been successful in alerting first Parish and then sub-counties to the priority needs of communities. However a subsequent incorporation of needs into sub-county plans has as yet not taken place in Katakwi, and therefore District Development Plans do not reflect community priorities.

In Lira District under LDDP, a similar process has been undertaken, and PRAs conducted in all sub-counties. However the status is similar to that in Katakwi in that the sub-counties and consequently District plans do not reflect community priorities.

In Kumi District, Irish Aid have supported a participatory planning process but with similar results to those in Katakwi and Lira. District versions of community priorities do not reflect community definitions. For example, local government draft estimates of 1998/9 indicated the following as priorities : primary education, PHC, rural roads food security,/agriculture extension and rural water and sanitation in that order. By contrast, communities accorded a much higher ranking to clean safe water, as either a first or second priority.

In Apac District, the District Development Plan is still in a very preliminary stage. The Planning Unit is currently proposing to undertake a Rural Infrastructure Survey (ADDRIIS) with the objective of i.a. drawing up a Development Priority Identification document. However, this will be based on the development priorities which Sub-counties

have identified, a process which has as yet not been informed by an assessment of community priorities.

It is therefore evident that support to the process of prioritisation of community level needs and their incorporation in sub-county and subsequently District Development Plans is required in all four Districts, although in different degrees according to their existing capacities at each level, District, Sub-county and Parish. In view of the fact that Apac has had the least support of all the Districts, support will need to be targeted at all levels, from Parish through Sub-county to District level.

11.1.4 Further Studies Required

Two further studies will be undertaken as an initial activity to inform the Inception Phase. These are i) a Water Needs Assessment and ii) an NGO Assessment.

i) Water Needs Assessment

A water needs assessment will be required to investigate the situation and water needs of the Karamajong. As indicated in , living on the borders of Katakwi, Kumi and Lira. The Karamajong come in search of pastures and water for their cattle and usually spend up to six months of the year near or in communities. Although this group frequently uses force to obtain its needs, they are in fact marginal communities whose needs are not taken into account and are bypassed in the planning process. District level, while there is awareness of the social problems and unrest caused by these annual incursions of pastoralists in search of a water supply for their cattle, it is seen as too politically risky to undertake action to resolve the problem.

The Districts most affected are Katakwi (particularly the northern-most sub-counties) Kumi and Lira and the study will be undertaken in those sub-counties particularly affected by this annual event.

ii) NGO Assessment

In all four Districts, NGOs and CBOs were found to be working in the W&S sector, although the majority did not appear to be maintaining liaison or co-ordination with the District. Village level experience of various NGO initiatives on water and sanitation indicates that this has not been universally successful. In all four Districts, villages reported various degrees of dissatisfaction with the activities undertaken by NGOs. Instances were encountered during field visits of interventions by NGOs in water and sanitation, resulting not only in inappropriate technology but also in some cases in increased health hazards.

As a result of these findings, capacity building of those NGOs which have experience in the sector should be a condition for partnership, to ensure common line of approach, and reduce the incidence of such events happening in the future.

11.2 Health and Hygiene Promotion

11.2.1 Current Attitudes and Practices

The team carried out extensive field work to assess current knowledge, attitudes and practices at village level. The three key risk hygiene behaviours which were identified through this field work were:

- Unsafe disposal of human faeces,
- Absence of hand washing at critical times(after defecation, before feeding children, before preparing food and after handling children excreta);
- Consumption of unsafe water, due to lack of access to clean sources and use of dirty containers for transporting water and drawing it for drinking in the house.

People were generally found to be aware of the risks of open defecation and the use of unsafe drinking water. NGOs and some of the district extension staff have been promoting better hygiene and sanitation practices for a long time. The government has carried out public health campaigns during recent cholera outbreaks. At district level the District Health Inspector, often in collaboration with the District Health Educator and their assistants, has been promoting hygiene and sanitation on village level.. Despite these efforts latrine coverage in the four districts remains low and high risk practices are common everywhere.

Most of the approaches that have been used for hygiene and sanitation promotion in the area so far have been didactic. The proposed project approach will encourage communities to move through a sequence of steps with the aim of developing community capacity to identify, analyse and solve their problems.

The main constraints to improving their sanitation mentioned by the people are:

- Technical constraints including hard rock and loose soils
- Lack of tools
- Lack of time
- The availability of logs and the fact that these are destructed by termites
- Lack of financial resources mainly to afford concrete slabs

There are no doubt other reasons, such as a lack of motivation to improve their sanitation facilities. The challenge of the programme will be to help people in the villages discover the benefits of hygiene behavioural change and improved sanitation and for them to solve problems that they are encouraged to identify and consider.

11.2.2 Hygiene Promotion Options

It is advisable to focus hygiene and sanitation promotion activities on achieving a change in the three key high risk hygiene behaviours that have been identified, taking into account the local constraints and trying to discover underlying reasons for a lack of action in the past.

Various hygiene promotion options have been identified. It is important to build on lessons learnt and good practice developed elsewhere, while also being innovative, at acceptable levels of risk within the local context. This is reflected in the proposed promotion options outlined below:

- a) The PHAST participatory methodology** as a central part of the proposed project process. PHAST has already been successfully utilised elsewhere in Uganda, including the RUWASA project in Iganga, Jinja and Mukono districts for water and sanitation promotion. Communities should be given sufficient time to think and discuss problems and the underlying causes identified before being taken into the phase of looking for solutions. Facilitators will also have to resist the temptation of dealing with too many hygiene issues and of delivering too many hygiene messages. Prioritisation should lead

to the selection of a few key-behaviours (such as handwashing with soap) for which conditions will have to be put in place with the help of the project.

- b) **Piloting the introduction of District Hygiene and Sanitation Promotion Teams** that would work in collaboration with the Sub-county- extension workers (CDAs and HAs) and local NGO inputs. The teams could include facilitators and technical staff, as well as local private sector people, who, for example, are involved in latrine digging or slab construction and marketing. The aim of this initiative would be to develop an on-going long term and effective hygiene and sanitation promotion capability for the period after the project is completed. The teams would need to demonstrate their worth, if the arrangement is to be replicated.
- c) **School Sanitation Programmes including child to child and child to adult approaches.** This would involve adapting processes used successfully on other projects, such as the Hesawa project in Tanzania. The aim would be to improve sanitation and hygiene behaviour in schools as well as the wider communities through innovative child-centred approaches. A UNICEF research report has identified that only 2 % of the surveyed schools had the recommended pupil-stance ratio of 40:1. In Apac the pupil-stance ratio was found to be 83:1 and in Kumi 86:1. Although many government, NGO and community efforts are being put into the improvement of the school sanitation facilities, the situation is still very serious. The lack of appropriate sanitation and hand washing facilities at schools, means that there is a high risk of disease transmission.. Therefore it seems appropriate that the programme addresses not only sanitation promotion in the villages but also in schools.
- d) **Support to public health campaigns,** for example by assisting in marketing research and printing and distribution of campaign materials. Public health campaigns can reinforce community level hygiene promotion efforts, provided the target groups have access to the means of communication selected for the campaign.

Continuing dialogue with potential project partners (including local government and NGOs) will be needed to confirm the viability or otherwise of the options suggested above.

11.2.3 Sanitation Options

The sanitation technology options are limited to on-site excreta disposal. The options range from a traditional latrine with logs plastered in mud to cover the pit and a grass superstructure, to a concrete slab or sanplat and a permanent structure. The basic traditional pit latrine can be upgraded over time. When discussing various options with communities it is important that a realistic overview of advantages and disadvantages and of costs involved is given.

Which options to promote depends on geographic conditions, anal cleansing practices and the availability of construction materials. People need to be provided with adequate information on which to base their choice of latrine. Demonstration latrines constructed in people's homes will help people to see how to construct affordable latrines that meet their needs.

It is extremely important that latrine maintenance is given sufficient attention. People may easily stop using their latrine if it is unclean and/or starts to smell.

Institutional latrines should be promoted for schools and other institutions in the sub-counties involved. The Environmental Health Division of the Ministry of Health is in the process of updating its technical guidelines school for latrine and these guidelines should be followed once they have been approved, and if they are appropriate to the local environment.

Technical guidance needs to be developed for household latrine options and HAs will be trained to provide technical advice on appropriate latrine construction.

During the fieldwork many people mentioned that they are willing to contribute towards the cost of a concrete slab. However, this may not be an affordable option for all households. The amounts that were mentioned (between 500 and 3000 shilling) do not cover half the production cost of a slab.

The main reasons given by people for the low coverage of sanitation facilities are: the lack of the necessary materials and tools, environmental conditions like loose soils which results in collapsing of pits, hard rock formations and high water tables, destruction of logs and grass roofs by termites and the lack of financial resources to purchase slabs. The Programme will need to tackle these constraints in the initial stages through trials and the construction of demonstration latrines at village level. The aim of the demonstration latrines at selected homes in villages will be to show, at grassroots level, that most of the above technical challenges can be solved using affordable techniques. It is intended that these demonstration latrines will be constructed in areas where there are particular technical challenges to overcome. The latrines will be built under a cost-sharing arrangement and priority will be given to people who have already started digging a pit in their home

Through observations and discussions the team came to the conclusion that most of the necessary materials to build the most common traditional pit latrines in the four districts, (a pit with a mud smeared log floor, mud and pole walls and grass thatched roofs), are available in the districts. The issue of the destruction of the logs and the grass roofs by termites can be tackled by treatment of the logs. During the study different local existing treatments were identified. These include the treatment of the logs with used oil, the carbonising of the outside of logs, the use of salt in the mud which is used for smearing the floor and by putting ashes around the latrines. Further research will need to be done and several methods of treatment piloted.

The real demand for concrete slabs is unclear at present. Whilst people are expressing a demand for slabs in many villages there is an extremely low willingness to pay for them. Even when the slabs were being sold at subsidised rates of Ush2000-5000 the demand was low. Now that subsidies have been removed and NGOs are charging around Ush 17,000 for a slab, almost none are being purchased. Therefore it is proposed that in the first three years of the programme traditional pit latrines will be promoted as the preferred option. During this period the effective demand for slabs needs to be assessed and possibly created if appropriate. At the three year review it is proposed that the sanitation strategy be reviewed. It is anticipated that a component could be introduced to the programme to promote and develop strategies for sustainable production of slabs at an affordable price. Two possible options for slabs may be considered at this stage:

1. A very small, unreinforced, or very lightly reinforced, concrete slab (0.6 m × 0.6 m × 0.05 m) can be used to construct a new pit latrine or to improve an existing one by placing on the existing floor. The advantage of this small slab is that:

- It is relatively cheap to make;
- It can be transported by bicycle;
- It provides an easily cleaned surface;
- It provides raised footrests which reduce the risk of fouling of the slab;
- It provides a sealable squatting hole to prevent the entry of flies and cockroaches and to reduce odours.

2. Larger reinforced concrete slabs (e.g. 1.3 m diameter × 0.06 m) are sometimes known as sanplats. These are strong enough and large enough to span a pit (e.g. 1.0 m diameter) without log supports. This option may be cheaper than the smaller slab option if the logs have to be purchased and it can be reused on a new pit when the first one becomes full. It should also have a lid for the squatting hole to control flies and odour.

11.3 Water Supply

11.3.1 Technology Choice

In the light of the GOU policy and on the basis of field work and discussions with key stakeholders, the following range of point water source technologies are recommended to be included in the Programme:

- Protected springs
- Protected shallow wells
- Hand augered wells
- Medium depth drilled boreholes
- Deep boreholes

It is possible that other technologies may be locally accepted or preferred in some areas and the programme should have the flexibility to encourage any appropriate, local solutions to water supply.

11.3.2 Demand Responsive Approach

The Programme has been designed to be responsive to the demands of communities. This implies that communities will be allowed to make an informed choice on the type of technology they want. However, in some areas the actual choice will be limited by the availability of water resources. Some areas, particularly in the drier north-eastern areas and along lakeshores, will have to rely on deep borehole drilling as the only acceptable solution. In areas where there is an abundance of springs, communities will be encouraged to select spring protection as the preferred option since it has low capital and recurrent costs. However if, for their own reasons, they have a strong preference for a borehole and if this can be backed up by a willingness to pay then the programme should respond to this demand.

11.3.3 Community Contributions

The GoU policy is that point water sources in rural areas are to be owned and managed by the communities themselves. This concept is well understood and appears to be fully

accepted in the four districts. In order to reinforce the sense of ownership it is important that communities are prepared to make a commitment to the implementation of the source. This concept is also well-accepted in most communities.

The actual contributions demanded from communities at the moment tend to vary between programmes and some NGOs are still “giving” sources with little commitment or involvement of the community. This type of approach is certain to undermine long-term sustainability and cannot be supported in this programme.

The proposed community contributions for this programme are related to the level of service which is selected. The financial contribution is particularly important for the handpump technology in order to demonstrate that communities are capable of raising cash for regular operation and maintenance of the pump.

The proposed community contributions are shown Table 11.1. These contributions are only indicative and should be negotiated by the individual districts. However, they are in line with the well-established RUWASA contributions which may be adopted nationally as a result of the Rural Water Sector Reform Study.

Table 11.1: Recommended Community Contributions by Source Type

| Type of Source | Total % capital contribution (labour, materials, cash) | Value of total contribution (Ush) | Cash contribution required (Ush) |
|-----------------------------|--|-----------------------------------|----------------------------------|
| New protected spring | 25% | 300,000 | 50,000 |
| New deep borehole | 1.5% | 285,000 | 180,000 |
| New medium borehole | 2% | 240,000 | 180,000 |
| New hand augered well | 10% | 320,000 | 80,000 |
| Rehabilitated deep borehole | 2.5% | 125,000 | 80,000 |
| Rehabilitated shallow well | 5% | 120,000 | 80,000 |
| Shallow well protection | 5% | 100,000 | 50,000 |

11.3.4 Construction of Sources

The siting of all sources should be done through discussion and, in some cases negotiation, between technical staff and community members. It is important that this process is facilitated by Community Development Assistants to ensure that the views of women and disadvantaged groups are taken into account.

The actual construction of protected springs, shallow dug wells and hand-augered wells can be done with a high level of community participation including collection of local materials such as sand, bricks and gravel and unskilled labour. Private sector artisans will be trained to construct these relatively low-cost technologies. The construction of boreholes will also require community participation, but to a lesser extent. Supervision of all source construction needs to be overseen by staff with technical expertise (e.g. local NGO staff, government staff) but communities should be trained to supervise work on a daily basis.

11.3.5 Operation and Maintenance

The responsibility for routine O&M lies with the communities. The established Water Source Committee structures will be built on and trained to give them skills in book-keeping, routine maintenance needs, monitoring etc. There are already well-established and trained pump mechanics in some sub-counties and this system needs to be strengthened. The availability of spares is a problem in all sub-counties and some innovative solutions need to be developed to encourage the private sector to supply common spare parts for U2 and U3 pumps to communities.

11.3.6 Design Assumptions

In order to develop an indicative cost estimate for the programme it was necessary to estimate the number of water points which will be installed under the programme. The initial programme target was to achieve 100% coverage of potable water supply in all four districts by the end of the programme in 2006. However, this was found to be an unrealistic target in view of the number of sources which would need to be constructed over a six year period, and the associated costs. The Water Sector Reform Study recommends a national target of 75% by 2005 and a realistically achievable target for this programme has therefore been set at 75% coverage by 2006. Other design assumptions which have been made in order to build up a programme design are:

- Level of service for all handpump sources have been assumed to serve 400 people per day (yield of 800 litres per hour for 10 hours pumping and per capita consumption of 20 litres). This is lower than the National recommended level of service of 300 people per source but is deemed to be an acceptable compromise in light of the fact that many sources serve in excess of 1000 people at present. The carefully planned groundwater strategy will help to ensure that wells can be developed with sufficient yield to meet this level of service;
- Level of service for protected springs has been assumed to be 250 people per source. This is slightly higher than the conservative National recommendation of 200 people per source but is considered to be acceptable since it is based on an average spring yield of 0.14 litres/second which is much lower than most of the springs measured in the field;
- The population growth for the districts has been calculated based on the 1991 Census data and a medium growth forecast has been assumed.
- For the purposes of estimating number of sources required the activities of other players in the sector have not been taken into account. In reality there will be many other water development activities taking place in the four districts and so the actual water supply coverage achieved in each district by 2006 should be much higher than 75%
- The relative number of different types of source to be developed has been based on existing data and estimated water source potential in the different counties. It is purely indicative estimate and the numbers should not be considered as final. In view of the demand-responsive and process approach to be adopted the actual numbers of each type of source constructed in the districts may vary considerably.

11.4 Institutional Issues

In order to ensure that the institutional arrangement which is proposed for the programme is effective there is need to manage a wide range of management risks

associated with it and design an effective institutional/capacity building strategy. The institutional/capacity building strategy should have a balance between demand driven and supply driven training components. The demand driven issues will be those identified and reflected by the local governments in the annual capacity building schedules. The supply driven issues are those critical issues not prioritised by the local Governments but which the PCU take as vital for improving performance.

11.4.1 Management of Risks

Some risks have been identified at national, district, sub-county and community level that may hinder effective implementation of programme activities through the proposed framework. Here below is an outline of some of the risks and how they can be managed.

- a) The central Government ministries may fail to execute their functions on time and with the quality required given the reduction of staff and insufficient funding. In such cases, the PCU should liaise with the respective ministries to either provide the missing logistics or contract private firms to execute the functions together with or on behalf of the Ministries. This should also hold for the Office of the Auditor General should it not be in position to carry out the required audit exercises on time.
- b) Possible marginalisation of hygiene and sanitation components. In most of projects where water and sanitation have been merged, there is gross marginalisation of the sanitation components. This is especially because the lead Ministry is Water, Lands and Environment, water is more of felt need and it has physical outputs. It is therefore proposed that the lead Ministry in the programme be Ministry of Local Government with a neutral Programme Co-ordination Unit to spearhead implementation. However, to maintain the technical input and guidance of the directly relevant ministries, it is also proposed that a Programme Steering Committee composed of representatives from MoLG, DWD, EHD, DFID, PCU be formed to offer technical guidance.
- c) The creation of the PCU may increase dependency of the Local Governments to it and reduce the pace of institutional strengthening. To manage this risk, the PCU should not be involved in direct project implementation and day to day management but rather guide and facilitate the relevant departments to execute their roles;
- d) The communities, sub-counties and districts may not prioritise water, hygiene and sanitation issues in the Development Plans yet they will form the basis for programme support. The respective levels should therefore be sensitised on their problems especially sanitation currently marginalised and the planning process.
- e) The Local Governments and committees may fail to account for programme resources. To improve on accountability, the following strategies are proposed:
 - Water User Committees should publicise resources from the programme or contributed by the communities and the accountabilities;
 - The internal audit department of the District should be functional making at least quarterly internal audits of the district accounts including those of the Sub-counties;
 - The internal audit reports should be presented to the respective Councils and District Public Accounts Commission for action. The programme should cater for

some allowances of the PAC since some districts do not have the capacity to cater for them rendering them ineffective;

- The programme should offer support to the Office of the Auditor General to ensure that the mandated and any other required audits or inspections are carried out;
 - The Local Governments should be assessed annually by MoLG with support from PCU to establish compliance to the provisions of the Financial and Accounting regulations 1998; and
 - All those responsible for making accountabilities should be given hands-on training in financial management and other related issues to make sure that they have all the necessary skills to make accountabilities.
- f) Some of the District and Sub-county councils may be ineffective in making decisions. They should be trained on their roles and how to execute them. The regularity of council meetings, relevance and quality of decisions made and quality of minutes should be made a pre-condition for programme funding;
- g) Non functionality of the District and Sub-county Technical Planning Committees. The functionality of the TPCs should be made a precondition for accessing programme funds. The District Management Teams formed under the UNICEF WES programme should be maintained but should co-ordinated with the TPCs.
- h) The private sector, which is anticipated to play a fundamental role in the programme, is weak. A provision has been made for training, encouraging formation and provision of equipment.

11.4.2 NGOs as Partners

Given the capacity problems in the Local Governments, the need for co-ordination, networking, harmonisation of approaches and rational use of resources, the programme will be encouraging working with NGOs in planning, implementation and monitoring of activities. In particular, the NGOs will:

- a) Assist in the provision of water and sanitation facilities in institutions. NGOs like ActionAid in Apac and Katakwi, ACAV in Katakwi, Vision Terudo in Kumi are already participating in the same. The programme can contract them or channel funds through them to implement such programmes on behalf of the Local Governments;
- b) Be contracted to construct springs and drilling of boreholes (ACAV, Vision Terudo);
- c) Participate in training and capacity building of Local Governments and communities (DETREC, ActionAid, Redd Barna,);
- d) Share strategies for sanitation improvement and assist in the development and implementation of an effective community mobilisation strategy.

There is serious concern over the quality of work carried out by some NGOs and the approaches that they adopt in working with communities. NGOs will therefore have to be carefully selected and trained to build on their particular skills. Some NGOs may not wish to compromise their mandate by conforming to the conditions of the Programme. As stated in Section 11.3.4 an NGO training needs assessment will need to be carried out to identify potential partners and the skills training they require in order to work effectively within the programme.

There is also need to strengthen the NGO networks already in place and the linkage between the NGOs and Local Governments.

11.4.3 Capacity-Building and Training for Districts and Sub-counties

Some Local Governments have received training from line ministries, donors and NGOs. However, this has been done without a systematic capacity needs assessment. There is therefore need for capacity building needs assessment for staff and politicians. The capacity building needs assessments should be participatory, made an integral part of the performance appraisal, and supply driven according to performance gaps. District or PCU procured consultants, firms or NGOs, staff of line ministries, interdepartmental staff at District level and exposure visits, could be some of the means of addressing capacity building activities. The capacity building activities should be tailored, hands-on and followed up to ensure skills acquisition and adoption. A mechanism for monitoring adoption and acquisition of skills should be in built in the programme based on job outputs and performance appraisals.

The crosscutting capacity building and training needs for Local Governments include among others:

- a) Enhancement of planning, financial management, monitoring and technical service delivery at District and Sub-county level;
- b) Empowering the beneficiaries to participate in planning, construction and be fully responsible for O&M; and
- c) Special emphasis should be given to the training of women to ensure their participation in planning and management of services and facilities.

The capacity building strategy should include a mechanism of rewarding good performance: The Districts and sub-counties that perform well should be given a reward in terms of the amount of money allocated to them (allocation of funds should be based on performance).

11.4.4 Strengthening Community Capacity

Community members will be sensitised on the programme design and the benefits that will accrue to them when properly implemented. They should also be educated on the roles they are expected to play in the implementation, O&M of the programme.

11.4.5 Strengthening Private Sector Roles

There will be need to facilitate increased and improved private sector involvement in delivery of programme activities. Training workshops will be conducted for the private sector to sensitise and orient them to the services they are expected to offer/provide in the programme.

11.5 Economic Issues

11.5.1 Population and Demand Forecast

11.5.1.1 Population Forecast

The latest "actual" rather than "forecast" population data available is from the national census undertaken during 1991. The 1991 census was undertaken at a time when the security situation in some districts was significantly worse than it is today. The census personnel were therefore not able to obtain data for a "normal" population, but rather a population in a state of flux due to the dangers of insurgency.

Despite its limitations the 1991 census is the only recognised source of population data available in Uganda. More recent sample population data available at the district level as part of the district development planning exercises provides a useful indication of the current population situation. However, unlike the 1991 census this data was not collected as part of a dedicated population census and should therefore be treated with even more caution.

The approach used to estimate population was to base the forecast on the 1991 census. Actual data between 1969 and 1991 was used to try to determine trends in total, urban and rural population growth in each of the 4 districts. The latest projections for total population from the Key Economic Indicators (36th issue: January 1999) were then taken as the best estimate of overall population growth in each district. These figures for total population growth were then factored against trends in urban and rural population growth so as to estimate growth trends in urban and rural populations respectively.

Katakwi District is a special case as, until 1997, it was part of Soroti District. The 1991 census does not therefore contain any specific information on Katakwi. Data from the District Profile was therefore utilised as the basis for the population projection in Katakwi. The urban and rural population trends calculated for Apac District (Apac and Katakwi are fairly similar in development terms) were then used to estimate urban and rural population growth in Katakwi. This was felt to be more realistic than using figures for Soroti as a whole. The figures for Soroti would be skewed due to larger urban area developments such as Soroti town which do not exist in Katakwi or Apac.

Having derived estimates for likely population growth in the four districts, a low growth scenario and a high growth scenario were then derived. This was calculated by simply factoring the medium or most likely growth scenario by 0.85 to derive the low growth scenario and by 1.15 to derive the high growth scenario. These scenarios provide an indication of the implications for water needs under lower and higher than anticipated population growth situations.

Estimates for population have also been calculated recently by WARDROP Engineering as part of the Water Sector Reform Project. In most cases the WARDROP estimates are closer to the high growth scenario derived as part of this forecasting exercise. In the absence of full details regarding the forecasting methodology adopted by WARDROP it is difficult to identify why the WARDROP forecast predicts a somewhat higher population growth. However, this may be partly explained by two factors. Firstly this projection follows the exact trends indicated in the data derived from the 1991 census, whereas WARDROP appear to

have used a linear population growth trend which has tended to give a higher overall population growth rate. Secondly WARDROP do not appear to have factored urban and rural population growth by historical trends indicated in the 1991 census. This would result in higher rural growth and lower urban growth than in this projection.

The results of the population forecasting exercise are presented in detail in Appendix 9. A summary of the results for the medium population projection is presented in Table 11.2 below.

Table 11.2: Summary of District Population Forecast

| District | Year – 2000 | Year - 2005 | Year - 2010 |
|----------|-------------|-------------|-------------|
| Apac | 556740 | 603408 | 693270 |
| Katakwi | 225850 | 262708 | 297943 |
| Kumi | 331663 | 391846 | 463778 |
| Lira | 599539 | 657505 | 724250 |

11.5.1.2 Water Needs Forecast

It has not been possible to undertake a rigorous demand forecasting exercise. The water needs for each district have therefore been calculated on the basis that a total of 20 litres per capita per day (lcd) of clean water should be provided in the rural areas of all 4 districts. This is in line with The National Water Policy service level criteria. The results from the willingness to pay survey indicate that current water collection at rural clean water sources for household use averages approximately 15 lcd. The use of 20 lcd is therefore not unrealistic and should take account of any potential increase in per capita water consumption during the programme period.

The results of the water needs forecasting exercise are presented in detail in Appendix 9. A summary of the results for the medium population projection is presented in Table 11.3 below. This summary data assumes 100% population coverage.

Table 11.3 Projected Water Demands for Medium Population Growth

| District | Year – 2000 (m ³ /annum) | Year - 2005 (m ³ /annum) | Year - 2010 (m ³ /annum) |
|----------|--|--|--|
| Apac | 11135 | 12068 | 13120 |
| Katakwi | 4517 | 5254 | 5959 |
| Kumi | 6633 | 7837 | 9276 |
| Lira | 11991 | 13150 | 14485 |

11.5.2 Willingness and Ability to Pay for Services

Rural water supply schemes are normally constructed out of low technology that may not involve huge operation and maintenance costs. These technologies comprise of springs,

shallow wells and deep wells presented in order of increasing complexity. They normally do not involve treatment, high cost distribution systems and huge administrative costs. Therefore the recurrent costs for such low technology systems are relative cheaper. In terms of management, the only forms of employment and labour requirements include mainly a caretaker and in many instances a caretaker works as a volunteer. Caretakers are mainly members of the community who are living nearest to the water point.

Willingness and ability to pay for rural water supply systems should be treated differently from urban and peri-urban systems. In Urban and peri-urban areas with piped water supplies communities normally pay cash at the selling outlets and stand-posts for all the water they need. The situation is very different in rural areas dominated by subsistence activities.

WTP studies in rural areas especially in the 4 districts water, hygiene and sanitation project has been based on a different approach. Efforts have been aimed at finding out the ability by the communities to contribute towards capital costs for new facilities as well as their ability to contribute towards operation and maintenance costs for the facilities.

To be able to come up with better ideas on the situation in the Districts, we visited various water points and interviewed several people. The information gathered through this method was cross-checked with primary data from a household survey conducted by the Team.

The results showed that communities had been sensitised and knew that it was their responsibility to look after facilities. They also admitted that they were contributing money for repairing the water points. Water User Committees (WUC) were in place though throughout the 4 districts, many of them were just in words and only known to the Local Council (LC) members. Many people we interviewed did not know when the committees meet and had little knowledge about how they were formed and how election can be conducted.

WUC are responsible for looking after the water points by collecting money from the users and contracting or hiring the district or sub-county staff to do the repairs as and when there is need. The funds collected are supposed to be kept by the treasurer of the WUC who should in turn open an account with any local bank if there is any in the area and deposit whatever money is paid in by the users. However, given the fact that very little funds are normally collected and there are no rural/village banks this was not being one. Often we found when committees were struggling to raise some money to purchase new pipes to replace the worn-out ones. A good number of the deep wells we visited had completely broken down and the communities said that the funds required to repair them were higher than what they could manage to collect and so they needed support from GoU.

The results from the survey show that majority of the people are willing to contribute towards capital costs for a new service. This contribution varies from cash, unskilled labour, supply of building materials to land where the facilities can be constructed. Tables 11.4 shows the average cash amounts in Uganda Shillings each households are prepared to contribute towards the capital costs of a new borehole or spring. This information came out of the household survey that we conducted in the four districts.

Table 11.4 Average WTP Towards Capital Costs for a Borehole or Spring

| Districts | Average WTP for Borehole (Ush) | Average WTP for Spring (Ush) |
|-----------|--------------------------------|------------------------------|
| Katakwi | 1000 | 500 |
| Kumi | 1500 | 1500 |
| Lira | 1500 | 500 |
| Apac | 2000 | 1300 |

The other information that came out of the household survey was about WTP for operation and maintenance costs for an existing service. Here again majority of the people interviewed reported that they were contributing some money towards the operation and maintenance of water sources. Table 11.5 shows the average cash amounts households are prepared to contribute each month towards the operation and maintenance of a spring or borehole.

Table 11.5 Monthly WTP for O&M Costs for a Borehole and Spring

| Districts | Average for Borehole (Ush) | Average for Spring (Ush) |
|-----------|----------------------------|--------------------------|
| Katakwi | 200 | 100 |
| Kumi | 320 | 255 |
| Lira | 430 | 360 |
| Apac | 550 | 325 |

The willingness and ability to pay for services is quite high. This is evidenced from the fact that on top of the cash contributions on capital costs, the communities are ready to contribute building materials, unskilled labour and in some instances land where the facilities will be constructed. The District Development Programmes in Katakwi, Kumi and Lira also supported this fact because they are implementing programmes in education, health, roads and water and sanitation sectors and have been asking the communities to contribute.

There is also a high level of willingness to contribute towards routine maintenance of a source: all the communities visited are clear that maintenance is their responsibility and even the poorest are prepared to contribute towards this. It is understandable that there is a lower WTP for maintenance of springs which people understand to have lower maintenance costs.

11.5.3 Average Walking Distance to Sources

During the data collection exercise, the team visited a number of water points across the four districts of study including Katakwi, Kumi, Lira and Apac. We interviewed some of the people collecting water asking them questions on how far they had been walking to the water source as well as how much time they had spent waiting at the source. This was

intended to get first hand information from the community whether walking distances to and from the water points was a major problem. At the water points where we found long queues we wanted to find out how much average time is normally spent waiting at the water points.

The problem water points, where found long queues were found were:

- Shared facility between the Community and neighbouring Institutions mostly primary schools and hospitals/clinics.
- Low yielding facilities, with unreliable, limited supply and intermittently drying up while people were drawing water.
- Deep boreholes (>80m), as it was very hard to pump any water from them.

It is quite clear that rural communities collect water at specific times probably in the morning and in the evening. Depending on what time we got at the water points, sometimes we did not find any person collecting water. This was not to say that there was no queuing or that the supply was adequate but we actually got there when people were not collecting water. We also realised that the way rural people estimate their distances was quite misleading. This was further proved in the structured quantitative survey conducted by the Team.

It should be mentioned here that we did not restrict ourselves on the safe water points but covered quite extensively the unprotected and traditional wells and springs. Even for these ones, walking distances was quite long. Needless to mention is the fact we found some of these water points in die-need of improvement.

To be able to come up with a clear estimate on walking distances and waiting time, we carried out a quantitative survey using a structured questionnaire. From this survey estimates on average walking distances during the dry and wet seasons were obtained and these are presented per district in Table 11.6.

Table 11.6 Average Walking Distance One Way to Water Source

| District | Av. Walking Distance - Wet Season (km) | Av. Walking Distance - Dry Season (km) |
|-----------------|---|---|
| Katakwi | n/a | n/a |
| Kumi | 1.5 | 1.9 |
| Lira | 1.3 | 1.4 |
| Apac | 1.3 | 1.3 |

11.5.4 Macro-economic Context

According to the Background to the Budget, June 1999, the GoU has been spending a sizeable amount of the National Budget on poverty reduction activities including water and sanitation through the Poverty Action Programme (PAP). GoU is prepared to continue implementing this policy and is committed from this year to continue increasing spending more on Poverty Eradication Programmes. GoU is also committed to spend all the additional resources made available from the multilateral debt relief initiative for Highly

Indebted Poor Countries (HIPC) on poverty alleviation programmes through the Poverty Action Fund that has already been established.

Under decentralisation, the districts and sub-counties have been assigned more responsibilities for the delivery of services in this respect water and sanitation. Unfortunately, at the district level, whereas Water and Sanitation activities are top on the priority list, the means to implement these programmes is still lacking. The biggest problem is to do with a narrow local revenue base to generate adequate funds to implement development programmes. Central GoU unconditional grants to the districts are basically used to pay district staff salaries and sometimes we were told that these funds are not even enough. We were told that central government grants are just enough to pay salaries and wages and that if any saving was made on this money, the amount left after deducting the salaries and wages is very small for any development programmes.

11.5.5 Subsidies and Affordability

Communities should contribute towards the capital costs for services be it the provision of a completely new facility or rehabilitation of an existing facility. They should also be responsible for the operation and maintenance costs of the facilities and ensuring that the facilities put in place by the programme are well looked after and managed. This is the only way community empowerment and ownership can be developed.

However, subsidies for the poorest of the poor can be in form of GoU assistance for repairs and maintenance of facilities for breakdowns beyond the capacity of the communities to manage. The programme should avoid handouts, as they are very difficult to sustain. We understand GoU has this year allocated a good amount of money towards rehabilitation of water facilities across the country, and this policy should continue.

One of the problems we identified was that WUC were experiencing great difficulties in getting parts and spares for deep wells and hand pumps. Along with this, the pipes used in the deep wells were of different sizes. In one Sub-County it is possible to find boreholes with different pipe sizes. For Water User Committees managing more than borehole with different pipe sizes, procurement of parts and spares was a major problem.

The programme should assist to establish selling outlets for spares and parts in major towns within the 4 districts forming the project area.

12. Draft Project Submission

12.1 Summary And Recommendations

The Uganda 4 Districts Water, Hygiene and Sanitation Programme has been designed with the purpose of improving the delivery and use of water and sanitation services in four districts in Uganda: Katakwi, Apac, Lira and Kumi. This will be achieved through strengthening local government capacity to perform their functions under decentralisation and through simultaneously strengthening community management capacity and enhancing the role of the private sector. This will contribute to the overall goal of the Programme, which is:

Communities (especially the rural poor) are empowered to make sustainable improvements to their well-being, by :

- effecting time savings in safe water collection which women can use for income-generating purposes;
- establishing functional and effective community-based management systems;
- reducing the incidence of water and sanitation related diseases;
- facilitating school attendance for girls through improved school sanitation and reduction of the domestic burden;
- establishing sustainable partnerships between local government and communities and the private sector

The expected outputs of the Programme are:

1. Improved capacity of District Administrations (LCV) in the 4 districts to perform their functions in line with decentralisation of service delivery;
2. Improved capacity of District Administrations (LCV) in the 4 districts to plan, facilitate and monitor integrated, community-based water, hygiene and sanitation activities;
3. Improved capacity of Sub-county Administrations (LCIII) in the 4 districts to perform their functions in line with decentralisation of service delivery
4. Improved capacity of sub-county LCIII administrations to plan, prioritise and implement integrated, community-based water, hygiene and sanitation programme;
5. Community capacity strengthened to prioritise needs, express demand and manage and maintain community-based water, hygiene and sanitation services;
6. Private sector and NGOs strengthened to assist in implementation and maintenance of water and sanitation services;
7. Potable water supply coverage increased to 75% in four districts by 2006;
8. Demand for sanitation created such that coverage can be increased to 75% of households and 75% of schools in four districts by 2006;
9. Crucial hygiene behaviours performed by 80% of population in four districts by 2006;
10. Lessons learnt for replication between the four districts and for advocacy at national level.

The primary beneficiaries of the Programme will be the rural poor, and in particular women, in the four districts who currently lack access to safe water or acceptable sanitation facilities. The Local Government District and Sub-county Administrations are also considered to be primary beneficiaries under the Programme as they will receive extensive capacity building and additional resources in order to perform their decentralised functions more effectively.

This Programme is to a certain extent leading the way in the Ugandan rural water and sanitation sector since the proposal is to channel DFID funds to the districts from central government by way of conditional grants. The districts should therefore feel strong ownership of the Programme. The design also places a firm emphasis on the hygiene and sanitation components to ensure that a truly integrated and balanced approach is adopted.

Assuming that existing grant aid donors continue to support Programme activities to the tune of £ 2.9 million, the total cost of the Programme to DFID at 1999 prices will be £15.6 million over six years from 2000 to 2006. The GoU contribution over this period is estimated at £1.3 million, supplemented by £ 0.6 million from the beneficiary communities and £ 0.2 million from NGOs/ CBOs and the private sector. The lead agency at central level with whom DFID will work is the Ministry of Finance, Planning and Economic Development. The Directorate of Water Development (DWD) in the Ministry of Lands, Water and the Environment, the Department of Environmental Health (EHD) located at the Ministry of Health, and the Ministry of Local Government are all key partners and will be represented on the proposed Programme Steering Committee, under the co-ordination of DWD as main line-Ministry

This Submission is a formal recommendation that DFID should provide the sum of £ 15.55 million to fund the six year Uganda 4 Districts Water, Hygiene and Sanitation Programme.

12.2 Programme Rationale

12.2.1 Background

In 1998 DFIDEA identified the potential to increase bilateral funding to the Ugandan water and sanitation sector. A two-phase scoping study was carried out by consultants between April and June 1998 and the four districts of Katakwi, Apac, Kumi and Lira were prioritised for a possible DFID-funded water, hygiene and sanitation programme. A Project Concept Note (PCN) outlining the conceptual design of a 4 Districts Programme was prepared in collaboration with DWD; the PCN was approved by DFID Senior Management in January 1999.

This Project Submission has been prepared as a result of a two month consultancy to carry out the detailed design for the programme approach. The design phase has involved extensive stakeholder discussions and consultations both at central level and in the four districts. The objectives of the design phase were:

1. To collect quantitative and qualitative information in the four districts to enable DFID to make informed decisions on contributing to poverty eradication through support to the water and sanitation sector; and
2. To recommend a sound programme approach in line with national policy and other on-going programmes in the sector.

This Project Submission summarises the programme design which has been developed. It is recommended that prior to implementation a stakeholder meeting is held to share the proposed programme approach, outputs and activities with all the key stakeholders at national and district level. This is essential to forge the partnership between DFID and GoU and to engender a sense of ownership at district level. The findings of the workshop should be used to refine and improve the design of the programme to meet the needs of the intended beneficiaries.

12.2.2 Policies

12.2.2.1 GoU Policies

The GoU has demonstrated a strong commitment to increasing national coverage of water and sanitation services and also to poverty eradication. This commitment is embodied in a number of ministerial policy documents as outlined below:

Uganda National Plan of Action for Children (UNPAC) 1992 - Policy document from the Ministry of Planning which includes the goal of achieving 75% access to safe water and excreta disposal by 2001.

Poverty Eradication Action Plan (PEAP) 1997

This Action Plan establishes the policy framework for the eradication of poverty for the next 20 years. It was prepared through a National Task Force and covers all sectors.

The target is to reduce the percentage of the population currently living in absolute poverty from 66.3% to below 10%, and to reduce the percentage in relative poverty from 86.2% to 30% by 2017.

Among measures proposed to improve the quality of life of the poor is included increasing water coverage, to which a high priority is given. Also included are measures to improve delivery of health services, increase resources for primary education.

The PEAP coverage target for the water sector is:

- to provide safe drinking water supply to 100% of the population by 2015, and adequate water for livestock

Draft National Sanitation Policy 1997 - This policy paper from the Ministry of Health underlines the GoU's commitment to an accelerated national sanitation programme. This policy defines sanitation as:

- Safely disposing of human excreta by any appropriate means;
- Developing and maintaining safe water chain;
- Attaining and maintaining personal, domestic and food hygiene;
- Safely disposing of solid and liquid wastes; and
- Controlling disease vectors and vermin in and around the home and working environment.

National Water Policy (finalised 1999) - This has been designed to promote a new integrated approach to water resource management, whereby Uganda's water resources are managed in a sustainable manner that is of most benefit to the people. Whilst recognition of the social value of water continues in the Policy, the economic value of water is also emphasised.

The six guiding principles for the Ugandan water sector, derived from the New Delhi Statement are:

- Integrated management of water resources and waste to protect the environment and safeguard health.
- An integrated approach with full participation of women.
- Community management of services.
- Financial viability of public utilities.
- Provision of services through demand driven approaches, where users are fully involved and contribute to costs so as to promote ownership.
- Allocation of funds to give priority to those who are inadequately served and who are willing to participate.

In July 1999 a Rural Water Sector Reform Study was commissioned by DWD. The findings of this study have not yet been transformed into a plan of action for sector reform. However, it is clear that the GoU is committed to improving performance and results in the rural water and sanitation sector under the guiding principles set out in the Draft Policies.

12.2.2.2 DFID Policy

The DFID 1997 White Paper on Eliminating World Poverty highlights the role that water and sanitation has to play in tackling poverty. It also emphasise the importance of working in partnerships with governments who are committed to achieving international targets. The GoU and DFID objectives and policies in the sector can therefore be considered to be mutually acceptable.

12.2.2.3 Other Donors' Policies and Plans

There are a number of other bilateral and multi-lateral donors who are actively working in the rural water and sanitation sector. Of most significance to this Programme are:

- UNICEF Water and Environmental Sanitation Programme (WES) working in 34 districts (which include all four districts in this Programme);
- RUWASA funded by Danida which is operating in 10 districts (which include none of the four districts in this Programme);
- Netherlands District Development Programmes in Katakwi and Lira Districts;
- Irish Aid District Development Programme in Kumi District.

It is important that this Programme draws from the lessons already learnt by other donors in the sector. In the districts where other donor programmes are already in place it will be essential to establish a close working relationship and good co-ordination of activities.

12.2.3 Programme Approach

12.2.3.1 Present Situation, Issues and Needs

The four districts to be covered under the Programme were originally selected because they are particularly needy in terms of water and sanitation coverage. The estimated coverage data for the districts is summarised in Table 12.1 below:

Table 12.1 Safe Water and Sanitation Coverage in the Four Districts

| District | Estimated Safe Water Coverage (1999) | Estimated Safe Sanitation Coverage (1999) |
|----------|--------------------------------------|---|
| Katakwi | 32% | 18% |
| Apac | 46% | 45% |
| Lira | 46% | 27% |
| Kumi | 23% | 39% |

In the "without project" case the water and sanitation coverage will deteriorate as the population increases and people will continue to spend much time fetching water and suffering from water and sanitation related diseases to the detriment of their livelihoods and productivity.

Field surveys carried out as part of this design found that the average time to collect water in the four districts is between one to two hours per day; some people were found to spend more than four hours per day fetching water in the dry season. Many people have to rely on unprotected sources which are heavily contaminated with faecal matter.

The hygiene and sanitation situation across the four districts is also extremely poor: in Katakwi District up to 80% of people practise open defecation.

The Programme will address these problems through an integrated approach to implementation of water, hygiene and sanitation activities in the four districts.

12.2.3.2 Programme Design Philosophy

The Programme has been designed to be implemented through the existing Local Government structures which have responsibility for delivering water and sanitation services. Initially there will be a strong emphasis on building capacity at district and sub-county levels so that government staff can take responsibility for planning, co-ordinating, supervising and monitoring all activities under the Programme. Capacity will also be built within the NGO and Private Sectors so that a range of partners can assist in implementation.

The linkage of hygiene, sanitation and water related activities will be assured by developing close working relationship between the key staff at district level, and also between the Health Assistants and Community Development Assistants at Sub-county level. NGOs with a particular focus on hardware or software approaches will not be required to broaden the scope of their work ; rather partnerships and collaboration will be promoted under the Programme.

The Programme will be demand-responsive and planning and prioritisation of activities will be carried out by starting with identification of the needs and demands which exist at community level. There is already some considerable experience of this bottom-up approach in three of the four districts since the Netherlands and Irish Aid Programmes have been adopting a similar process for the past two or three years.

12.2.3.3 Benefits

The primary expected benefits of the Programme can be summarised as:

- Improved capacity of Local Government to perform their functions under decentralisation;
- Improved capacity of Local Government to plan, implement and monitor a participatory and integrated approach to water, hygiene and sanitation services;
- Wider access to safe water points;
- Improved community management of water points;
- Improved hygiene behaviour and sanitation leading to health benefits in the long term;
- Time savings in safe water collection for the rural poor.

These benefits will be sustained after project completion through on-going monitoring and support at the appropriate levels; the institutional framework and capacity for these long-term roles will be developed under the Programme.

12.2.3.4 Key Stakeholders

The key stakeholders are detailed in the stakeholder analysis presented in Section 12.2. All key stakeholders have been consulted during the design process. Stakeholder workshops were held in Kumi, Apac and Lira districts on completion of field work activities. These workshops were well-attended by district and sub-county technical staff and politicians. Individual meetings were also held with key stakeholders at central level.

As stated in Section 12.3.1 it is strongly recommended that a stakeholder meeting is held at central level to review and refine the proposed Programme approach prior to the inception phase.

12.2.3.5 Programme Flexibility and Review

The Programme design, in the spirit of a process approach, needs to be flexible to allow for a continuing process of lesson-learning and review. This is particularly important to ensure that the differing needs and priorities of each of the four districts can be met. In order to test this approach it is proposed that the first year of the Programme in Apac District is considered as a pilot phase. Lessons learnt from the first year review will be used to refine and adapt the approach for replication in the other districts.

A mid-Programme Review is proposed at the end of Year 3. This will provide an opportunity to assess the appropriateness of the approach in the context of the changing sector and to adjust strategies as necessary. It will also be used as an opportunity to advocate lessons learnt at National level.

12.2.4 Appraisal Issues

12.2.4.1 Institutional

The proposed implementation of the Programme through existing government structures is in line with the GoU policy of decentralisation and management at the lowest appropriate level. Capacity building at all levels is therefore a significant component of the project. There are a number of risks associated with this partnership approach which need to be managed:

- Key staff are sometimes not in place at district level. It will be necessary to ensure that conditions are built into the Programme to ensure that districts have in place the required personnel (e.g. District Water Officer, District Health Educator) before commencement of the Programme;

- Lack of extension staff at sub-county level is a major constraint to implementation since they provide the key link between communities and districts. Extension staff are usually missing due to lack of funds; It is therefore proposed that, in sub-counties which lack HAs and CDAs, DFID will underwrite these government posts for a specified period within the Programme. These extension staff will then be used to work directly with communities to prioritise needs, provide relevant training and assist with implementation and monitoring. NGOs and the private sector will also assist in this process;
- The political wing at district and sub-county level can have strong influence over the success of the Programme and will therefore be fully consulted and trained together with technical staff. Other district bodies such as the District Tender Board and Sectoral Committees will also be strengthened to ensure they can perform their functions effectively.

Institutional and capacity building issues are appraised in detail in Annexe I to this Submission.

12.2.4.2 Social

A number of social challenges and potential conflicts have been identified during Programme design. These are discussed in detail in Annexe II to this Submission. Key issues include:

- Potential conflict between settled populations in areas of Lira, Kumi and Katakwi and the pastoralist Karamajong tribe. It is proposed that a detailed study be carried out during Inception. Recommendations from this study may need to be implemented under another project;
- The proposed community contributions to ensure ownership of water points may prove difficult for some of the poorest sections of communities. However, there is evidence that informal, internal cross-subsidy of vulnerable groups is common within communities. This will be encouraged to ensure that marginal groups do not get excluded;
- The vast majority of existing extension staff are male which leads to gender imbalances when working with communities. It is proposed that female staff should be identified for recruitment under the Programme wherever possible.

12.2.4.3 Technical

Technology choice for water and sanitation services will be driven by the informed demand of communities. This is in line with GoU policy. Communities will however be encouraged to select low-cost, low-maintenance options such as springs wherever feasible.

One of the key risks which has been identified is the high failure rate of deep boreholes in the certain hydrogeologically difficult areas in the four districts. In order to minimise the risks of failure and in addition to build capacity with the Ugandan drilling sector a rigorous and comprehensive approach to groundwater planning has been proposed under this Programme.

12.2.4.4 Operational

The overall approach to implementation has been designed around a decentralised process executed through the districts, building specifically on the framework developed for rural water supply and sanitation development through the GoU/UNICEF WES programme, with DWD as co-ordinating GoU agency.

The districts lack capacity to implement the programme in their present state, and they need strong and effective institutional development support. In designing this support we propose to take a new step in the decentralisation process. This entails moving from a strong project management team which drives the process to a certain extent, to a smaller Programme Support Unit (PSU) with increased emphasis on enabling the districts (via various support services) to perform their duties.

The proposed PSU will be staffed for at least three years by international qualified specialists based at Lira qualified in:

- programme co-ordination and management;
- rural water and sanitation development (technical aspects);
- rural water and sanitation development (community development aspects);
- financial management.

These specialists will be supported by locally recruited administrative and secretarial staff and drivers. In addition, qualified District Co-ordinators will be posted directly to each district for at least the first two years of the implementation process, along with their supporting staff.

Technical assistance to the Programme will total 330 and 340 person months (pm) of foreign and Ugandan consultants respectively, 116 pm of District co-ordinators, and 894 pm of supporting staff.

12.2.4.5 Benefit-Cost Analysis

The benefit – cost analysis has been undertaken in 1999 prices and consists of a cost analysis in financial terms feeding into an economic analysis which takes account of quantifiable programme benefits. Economic costs are based on the estimated financial costs of the programme.

These costs have been adjusted by removing the tax element of financial costs (cost transfers within the economy). On the advice of the World Bank Resident Economist in Kampala, no market adjustments (shadow pricing factors) have been used to convert financial to economic costs. This is because the general view is that prices that matter are determined on the free market and therefore reflect their true economic value. The analysis includes an indication of the average incremental cost (AIC) of the programme.

The major assumptions included in the analysis are as follows:

- No attempt has been made to quantify potential health benefits resulting from the programme.

- Protected springs will serve 250 persons and all other sources 400 persons per source.
- Average household size is taken as seven persons.
- Average household daily water consumption is 160 litres.
- The average number of persons collecting water per household daily is two.
- A conservative figure of half an hour per person collecting water daily has been used to estimate the value of the time saved as a result of the project during water collection activities. The survey work undertaken indicates that actual average time saved could be nearer one hour.
- The value of the time saved has been calculated using the current unskilled labour rate of US\$ 2,500 per day for an 8 hour working day.
- The willingness to pay for capital developments expressed by those interviewed during the surveys has not been included as a benefit in the analysis.
- An average tax adjustment factor of 26.5% has been used to convert financial to economic prices for vehicles, equipment and infrastructure developments. No other price adjustments were made.
- The total population served by the end of the programme will be around 740,000 (amounting to a 75% coverage rate).

The economic internal rate of return (EIRR) for the programme (calculated over 30 years) is 30.5%. The AIC (financial) of the programme (using volume of water collected) is US\$ 0.85/m³, whilst the AIC (economic) is US\$ 0.75/m³. A simple sensitivity analysis indicates that the economic outcome of the programme is most sensitive to changes in benefits. Sensitivity has been measured by determining the switching value (the percentage change in the variable being tested, at a given discount rate that results in the NPV of the programme becoming equal to zero). The results of the analysis are summarised in Table 12.2 below.

Table 12.2 Summary of the Results of the Benefit-Cost Analysis

| | |
|---------------|--------------------------|
| AIC Financial | US\$ 0.85/m ³ |
| AIC Economic | US\$ 0.75/m ³ |
| EIRR | 30.5% |

12.2.4.6 Environmental

In general, the environmental impacts of the various works to be implemented through the Programme are positive. Care will have to be taken to promote more careful community management of surplus drainage water at new sources to limit mosquito breeding, and to manage land use – particularly the zoning of potable water, livestock and agricultural water uses. These are items for progressive improvement through community-based environmental sanitation support.

An area of primary environmental and wider concern to the Programme is:

- Competition for water between human and livestock use and associated land use; particularly the issue of the Karamojong and other pastoralists.

Secondary issues which should be considered are:

- Protection of shallow groundwater (where it occurs) from pollution via pit latrines;
- Protection of water sources from pollution via seepage or vandalism from the surface;

As the new water source proposals do not require motorised pumping (which might have a serious impact on wetlands biodiversity) we do not recommend that a formal EIA is required for the Programme. However, assessment of the pastoralist and pit latrine pollution issues should be carried out in more detail at the start of Programme implementation (to run concurrently with the proposed pastoralist water use study).

12.2.5 Evaluation

This Programme design has been informed by the experience from DFID work in the water and sanitation as presented in the Evaluation Synthesis of Rural Water and Sanitation Projects (*DFID Report EV 596, May 1997*) and the DFID Guidance Manual for Water and Sanitation Programmes (1998). Lessons learnt from other donor programmes in Uganda have been drawn from evaluation reports from RUWASA, UNICEF and the Netherlands.

Some DFID-funded research work has also been considered in the development of the Programme including:

- Study of water rights being undertaken by Judy-Obitre Gama at Makerere University;
- Research on Private Sector Participation in Low Cost Water Well Drilling being carried out by Silsoe College;
- Research into demand assessment techniques and design of demand-responsive water and sanitation programmes being undertaken by WELL.

An ex-post evaluation is strongly recommended for this programme since it is leading the way in terms of partnership with local government and stronger emphasis on integration of water, hygiene and sanitation. An evaluation could provide much useful guidance for future projects of this nature and will also contribute to the advocacy component of this Programme.

12.3 Implementation

12.3.1 Management Arrangements

12.3.1.1 Key Stakeholders

The key higher-level stakeholders include DWD (MWLE), EHD (MoH), MLG, the CAOs, MoF, and DFID

12.3.1.2 Management Principles and Structure

Programme management and co-ordination at national level will be effected through a Programme Steering Committee (PSC) which will be set up with representatives from the key higher-level stakeholders, and possibly other key donors/ NGOs. NEMA will also be represented, serving to build on its district-level role of enhancing DWD: EHD co-ordination.

In keeping with the current WES procedures, DWD will act as main line-agency and the Programme Implementation Advisor (PIA) leading the PSU will act as Secretary. Water Aid will also be represented on the PSC through the PSU (assuming that arrangements for Water Aid to implement the Programme in Katakwi are concluded.)

The PSC will meet at three monthly intervals to coincide with the review and approval of MoF's next releases of Conditional Grants.

Programme management at district level will be effected through the CAOs, with facilitation from the PSU.

12.3.2 Key Monitoring Personnel

Key monitoring personnel will include nominated DFID advisors at the Kampala Resident Mission, the nominated WES/DWD Co-ordinator, a nominated representative from EHD, a nominated representative member of the Poverty Action Fund. and the Inspector General (MoF),

12.3.3 Longer-Term Operation and Management

The Programme's support to the districts has been designed to provide a sustainable framework through which the longer-term Programme operation and maintenance activities will be carried out. This will involve strong O&M support through the beneficiary communities backed up by viable private sector repair and supply services.

12.4 Timing

The Programme will start in April 2000, at the beginning of the 2000/2001 financial year. The broad phasing of activities is summarised as follows:

| Year (by quarter) | 2000/2001 | | | | 2001/2002 | | | | 2002/2003 | | | | 2003/2004 | | | | 2004/2005 | | | | 2005/2006 | | | |
|-----------------------------|-----------|---|---|---|-----------|---|---|---|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|-----------|----|----|----|
| District/ Activity | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Programme milestones | | | | | | | | | | | | | | | | | | | | | | | | |
| Inception Report | ↓ | | | | | | | | | | | | | | | | | | | | | | | |
| Mid-Term Report | | | | | | | | | | | | | | | | | | | | | | | | |
| Completion Report | | | | | | | | | | | | | | | | | | | | | | | | |
| Apac | | | | | | | | | | | | | | | | | | | | | | | | |
| Inception phase | █ | █ | | | | | | | | | | | | | | | | | | | | | | |
| First Sub-Counties | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | |
| Implementation | | | | | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | |
| Monitoring and ops. support | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Katakwi | | | | | | | | | | | | | | | | | | | | | | | | |
| Preparation | | █ | █ | █ | | | | | | | | | | | | | | | | | | | | |
| Implementation | | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | |
| Monitoring and ops. Support | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Lira | | | | | | | | | | | | | | | | | | | | | | | | |
| Preparation | | | | | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | |
| Implementation | | | | | | | | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | |
| Monitoring and ops. Support | | | | | | | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Kumi | | | | | | | | | | | | | | | | | | | | | | | | |
| Preparation | | | | | | | | | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | █ | |
| Implementation | | | | | | | | | | | | | | | | | | | | | | | | |
| Monitoring and ops. Support | | | | | | | | | | | | | | | | | | | | | | | | |

12.5 Inputs

12.5.1 Project Costs

The costs estimated for each of the five Programme components at 1999 prices are summarised in Table 12.3.

Table 12.3 Summary of Programme Costs Estimates (at 1999 Prices)

| Component | Foreign cost (M USh) | Local cost (M USh) | Total (M USh) | Total (£ equiv.) |
|------------------------------|-------------------------|-----------------------|------------------|---------------------|
| 1 Hygiene and Sanitation | 132 | 2 321 | 2 453 | 1.030 |
| 2 Community Development | 645 | 2 803 | 3 448 | 1.448 |
| 3 Capacity Development | 777 | 9 208 | 9 985 | 4.195 |
| 4 Infrastructure Development | 2 292 | 19 728 | 22 020 | 9.252 |
| 5 Programme Support Unit | <u>5 000</u> | <u>6 067</u> | <u>11 067</u> | <u>4.650</u> |
| TOTAL | 8 846 | 40 127 | 48 973 | 21.576 |

12.5.2 Financing plan

The overall financing plan for the programme is summarised as follows, showing the requirements from:

- Grant funds;
- Contributions from DWD (mainly through the supply of hand pumps);
- Contributions from the districts;
- Contributions from NGOs/ CBOs and the private sector;
- Contributions from the communities towards implementation and operation and maintenance costs.

These aggregate by source and Programme Year as follows in Table 4, assuming too a continued flow of grant funds from other donors (UNICEF, Netherlands Aid, Irish Aid etc.) of the order of about 70% of the pledged levels for 1999:

Table 12.4 Programme Financing Plan

| Component | DFID - local | DFID - Foreign | GoU | District | NGO/CBO | Private sector | Community |
|--|-------------------------|----------------|----------|----------|------------|----------------|--------------|
| Year 1 (M Ush) | 3 969 | 2 042 | 92 | 128 | 40 | 40 | 1 |
| Year 2 | 5 567 | 2 223 | 230 | 176 | 40 | 40 | 80 |
| Year 3 | 8 286 | 1 809 | 529 | 221 | 40 | 40 | 257 |
| Year 4 | 7 199 | 1 18 | 502 | 201 | 40 | 40 | 312 |
| Year 5 | 5 729 | 806 | 441 | 175 | 40 | 40 | 342 |
| Year 6 | 4 414 | 788 | 323 | 145 | 40 | 40 | 327 |
| TOTAL | 35 164 | 8 846 | 2 | 1 | 240 | 240 | 1 319 |
| Distribution (%) | 71.8% | 18.1 | 117 | 047 | 0.5% | 0.5% | 2.7% |
| Deduct anticipated contributions ¹³ | (7 000) | % | 4.3% | 2.1% | | | |
| | M USh 28 164 | (0) 8 846 | | | | | |
| Net requirement for DFID funds | £ million 11.834 | 3.717 | | | | | |

12.5.3 Programme Costs Sensitivities

The budget estimate is highly sensitive to two main items of expenditure. These are:

- The costs of borehole sources, which assume that significant savings in well costs can be made by enabling improvements through the proposed groundwater development action programme (GDAP). The costs of not rationalising borehole technology are estimated at £5.4 million compared with the £ 1.85 million estimated for the GDAP (See Annex VII).
- The underlying implementation philosophy is that the districts can be facilitated to carry out the required planning, implementation and monitoring functions. The assumption – albeit bold - is that this can be achieved with a relatively low level of PSU support compared, say, with the establishment at the RUWASA Project Office.

This decision to focus directly on the district has been made deliberately, with the firm intention that no attempt or gesture be made that would threaten the CAOs' ownership of the Programme implementation process. The decision to pilot the Programme in Apac partly reflects the strength of political will in the district, and perhaps the enthusiasm of a team administering a district which is young (when compared with the long time in which the Lira and Kumi administrations have existed).

Both of these identified cost-sensitive items will require careful monitoring, and will be particular targets for appraisal at the Mid-Term Review.

¹³ From other donors and NGOs, taken crudely at 60% of the funds allocated to water and sanitation activities in the 4 Districts through the WES programme in 1999 (totals of M USh 764, 810, 138 and 158 respectively in Apac, Lira, Katakwi and Kumi); this makes no allowance for expected UNCDF funds for district-level capacity building at Apac, expected to start in 2000 as one of the first five 'trial' districts in UNCDF's programme.

12.6 Contracting and Procurement

12.6.1 Procurement Policy

In keeping with the overall policy of implementation through the districts, procurement of goods and services required for the Programme will also be centred as far as possible on the district administrations. DFID and the PSU will also have specific procurement responsibilities.

12.6.2 Procurement by Districts

Procurement within the districts will take place at two levels:

- Procurement of district-level goods and services such as borehole siting and supervision, borehole drilling, consultants and facilities for out-sourced capacity building support (by the districts);
- Procurement of sub county-level goods and services (by the sub-counties).

It is readily recognised that the expertise in procurement at LCV and LCIII level is generally limited, and that the process is often very slow. Rigorous and timely procurement activities, backed with effective administration, inspection, monitoring and stores control are crucial to the successful implementation of the Programme, and the PSU will play a key role in developing capacity in this area.

12.6.3 Procurement by the PSU

The PSU will be responsible for procurement of certain Programme-wide (rather than district-specific) goods and services such as any bulk materials, equipment for the Groundwater Development Action Programme, local consultants.

12.6.4 Procurement by DFID and GoU

DFID will recruit the PSU and supporting specialists through open competitive tender of prequalified consortia. In addition DFID/ the PSU will recruit non-technical support staff and the proposed district co-ordinators in Uganda.

Some materials and equipment (for example hand pumps) will be procured and supplied directly by DWD.

12.7 Accounting and Audit Arrangement

The programme will be implemented by each of the four districts. In accordance with established practice, the flow of funds will be as follows:

- DFID and GoU counterpart funds are paid into a Ministry of Finance (MoF) bank account; this should be a Consolidated Fund Bank Account specifically for the 4 Districts;
- MoF releases funds directly to the CAOs in the form of Conditional Grants disaggregated into separate grants for water and hygiene/ sanitation);
- The CAOs release Conditional Grants to the Sub-County chiefs, who in turn account for these back to the CAO;

- The CAOs account for expenditure and report to the line ministries (MWLE for water, and MoH for sanitation);
- MoF continues to release funds to the CAOs subject to quarterly approval by the line ministries.

At present the CAOs account separately and directly to UNICEF regarding WES administered funds. UNICEF has its own accounting procedures which, differing from the GoU rules, adds to the CAOs' reporting burden.

The Local Government Regulations, the 1992 Finance Act, the 1995 Local Government Act and other statutes govern GoU accounting and financial management procedures.

DFID will decide on the level of financial reporting which it requires, and will commission an external auditor once a year to report on the use of DFID funds.

In this respect, it is recommended that DFID discusses financial reporting needs with UNICEF and other donors associated with the programme, with the aim of accepting a single audit and removing the burden of parallel financial reporting.

Strong guidance and capacity building support to the CAOs through the PSU will be required to maintain both accounting standards and timely disbursement of funds.

One of the early tasks for the PSU will be to help the districts to develop accounting and financial monitoring procedures **at all levels** including promoting transparency at community level, and then to prepare an Accounts Manual tailored to the Programme's needs.

12.8 Monitoring

12.8.1 Collection of Monitoring Data

The DFID funds and GoU counterpart funds will be administered within the framework of the Poverty Action Fund (PAF).

Five percent of the PAF funds are reserved for financial monitoring, accountability and associated reporting, seeking to improve the effectiveness of spending. This has enhanced the culture of accountability.

So far the indications are that the financial reporting is in place, but that physical reporting (relating expenditure to progress on the ground) is poor. This has led to a drive towards Output-orientated reporting, which is currently being piloted by MoF, supported by GoU and the donor community.

12.8.2 Proactive Review and Remedial Actions

The Local Government Regulations, the 1992 Finance Act, the 1995 Local Government Act and other statutes govern GoU accounting and financial management procedures.

It is incumbent on the line ministries to follow up any perceived reporting or accounting anomalies or shortfalls with the CAOs as part of the quarterly approval process and to take whatever action is appropriate, including advising MoF to withhold the next Conditional

Grant release. In parallel, the MoF's Treasury Inspectorate carries out cross-sectoral reviews, and a growing culture of accountability is now starting to produce earlier action in the case of perceived irregularities which can be investigated through the government's Inspector General.

DFID and GoU will field a joint monitoring mission at least once a year to review progress. There will be two specific planning and approval milestones: an Inception Report after three months (basis for formal endorsement of the a detailed Work plan for the first two years); and a Mid-Term Review (basis for formal agreement to continue with the Programme, and confirmation of any variations to the Work Plan and/ or budget, including a verification of Kumi's interest in participation.

12.8.3 Progress Reporting

Progress Reporting will be focused around the quarterly Conditional Grants review and release cycle. The PSU will assist the districts with the reporting process, and will itself produce quarterly reports related to the Programme implementation process and associated issues, together with an annual progress report for all higher-level stakeholders.

12.9 Risks And Undertakings

The principal risk which has been identified in the Logical Framework is the lack of key staff in their positions at both district and sub-county level. In order to manage this risk it is proposed that conditions are built into the programme requiring each district undertake to;

- Ensure that key district staff are in place and that resources are available to retain these staff for the duration of the Programme;
- Recruit a CDA and HA for each sub-county which is presently lacking these two extension staff. These additional posts will be underwritten by DFID for a specified period under the Programme. The district should however undertake to retain these staff on completion of the Programme to ensure sustainability.
-

The observance of these undertakings will be monitored by the PSU through Quarterly Programme Reports.

One other important risk identified is the seasonal influx of the Karamajong pastoralists into the Programme area from the north-east. A study has been proposed at inception phase and on the basis of these findings it may be necessary to request the appropriate GoU Ministry to directly address this problem.

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