

MAKERERE INSTITUTE OF
SOCIAL RESEARCH
(Right to safe water)



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Situation Analysis of Women, Adolescents and Children in Uganda 1994-2000

The Right to Safe Water

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MISR/UNICEF

CHAPTER EIGHT

THE RIGHT TO SAFE WATER

THE RIGHT

The State shall endeavor to fulfill the fundamental rights of all Ugandans to social justice and economic development and shall in particular ensure that:

All Ugandans enjoy rights and opportunities and access to education, health services, and clean and safe water... (Constitution of Uganda, XIV) and to a clean and healthy environment (Constitution of Uganda, Article 39).

State Parties recognize the right of the child to the enjoyment of the highest attainable standard of health (Article 24: 1). State Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures:

To combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the applications of readily available technology and through the provision of adequate nutritious food and clean drinking-water, taking into consideration the dangers and risks of environmental pollution (Convention of the Rights of Children, Article 24:2(c)).

INTRODUCTION

Access to safe water for consumption is a major priority for communities as it is essential to life and the sustenance of good health that is in turn critical to productive activities and development of the country. Water related diseases account for significant proportion of morbidity and mortality worldwide including Uganda. Studies have shown that improvement of water quality produced limited reduction in childhood diarrhea of up to 15-20 % and a significant reduction in guinea worm of 78%. Although studies of the impact of water and sanitation improvements on health have shown that sanitation and hygiene promotion are more significant than the provision of safe water in the reduction of diarrhoeal diseases, intestinal worm infestations, skin diseases and eye infections, (Ministry of Health, 1997a) water is critical in the maintenance of good sanitation and hygiene

It is clear therefore that water is essential to every human being including children who because are still growing are vulnerable to water related diseases. In addition access to safe water by women is critical not only because women are human beings who need water in their own right, but because they are responsible for collection of water, child and domestic care. It is because of this understanding of link between water and health development that the Government has since 1995 formulated enabling policies and enacted laws to improve the provision of safe water. While the Constitution of Uganda stipulates water as right to all, water related policies such as Water Policy, and legislation such as the Water Act and Local Government Act while providing the legal basis for water management structures gives guidelines on responsibilities and mechanisms for sustainable provision of safe water. In addition, some of the policies such as the national Gender Policy underscore the central role that women have to play in the provision of water especially including decision-making. In addition, Poverty Eradication Action Plan (PEAP) while laying emphasis on the relationship between poverty and environmental related diseases lays down strategies for the improvement of the access of the poor to sources of safe drinking water.

Milestones

Significant milestones in water provision that have been achieved since 1995 include policy and legislation.

The 1995 Constitution: The State shall endeavor to fulfill the fundamental rights of all Ugandans to social justice and economic development and shall in particular ensure that: all Ugandans enjoy rights and opportunities and access to education, health services, clean and safe water and to a clean and healthy environment.

The 1997 Local Government Act: has defined roles of different levels of Governance, including the decentralization of key functions related to water supply, to district and lower councils.

The 1964 Public Health Act: in principle is critical in ensuring safe water provision. It is through this Act that local councils have been ascribed the responsibility for ensuring safe water practices in their district communities.

The 1995 Water Statute: has established the legal basis for the water resources management structures. In addition, it has provisions on declaration of water supply and sewerage areas, appointment of authorities, water user groups and associations, water supplies and sewerage works. At the outset the Statute stipulates that all water in Uganda is vested in the State and that rights to use water, to construct or operate any works, or to pollute water, can only be conferred under the provision of the Statute.

The 1997 Water Policy: The first principle of the Water Policy is the protection of the environment and safeguarding health through the integrated management of water resources and liquid and solid waste. It emphasizes the importance of this approach for environmental sustainability, better human health and integrated water resources management. It also stresses the need for women to play influential roles in both water and hygiene education.

The 1997 Poverty Eradication Action Plan: emphasizes the relationship between poverty and environmental related diseases. The Plan lays down strategies for the improvement of the access of the poor to sources of safe drinking water.

The National Gender Policy: states that women and children are the main carriers and users of water. It commits DWD among others to ensure that women and children participate in community decision making on water matters; and to ensure that projects developed and managed are gender responsive in planning, implementation and monitoring.

The 1998 Land Act: shows the important linkage between land tenure, ownership and maintenance of water.

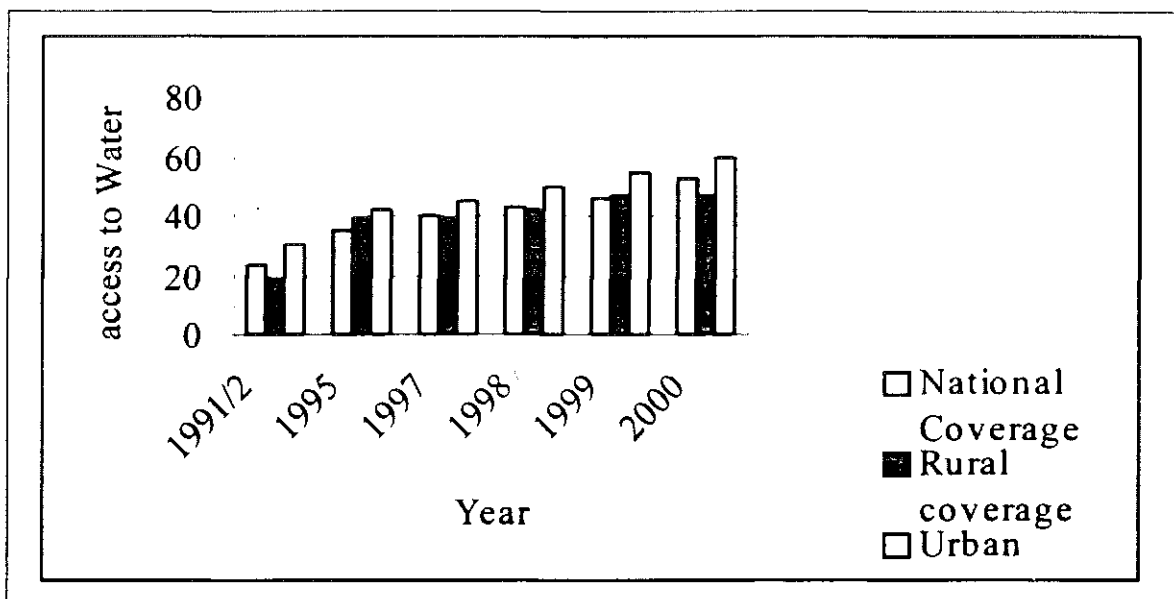
Privatization and Public service Reform Policies: provide a facilitative framework for the management of the water programme.

TRENDS IN SAFE WATER COVERAGE

Safe Water Coverage

There is an upward trend in the provision of safe water in Uganda from 1994 to present as shown in the table below.

Figure 1: Water Coverage



Sources: Background to the Budget 1998/99
Background to the Budget 1999/2000PAC Update 1998/99

Trend of water facilities show the number of water facilities in the rural areas have increased resulting in the increase in the number of the population served from 1994 to 1999. The people served increased from 1.4% in 1994 to 46.6% in 1999 as shown in the table 1 below.

Table 1: Rural Safe Water Supply - Existing Facilities (1994- 1999)

Year	Total Population	Rural Population (90%)	B/holes	S/wel ls	Springs	GS	Total Point Sources	People Served	%Age served
1994	17,856,643	15,892,412	10,695	953	12,179	48	23,827	4,985,125	31.4
1995	18,421,938	16,395,525	12,432	1,045	14,111	61	27,588	5,776,150	35.5
1996	18,993,393	16,904,120	12,982	1,364	15,081	67	29,427	6,871,045	40.6
1997	19,571,909	17,418,999	13,512	1,586	15,791	73	30,889	7,201,190	41.3
1998	20,150,425	17,933,878	14,474	2,525	16,662	75	35,550	7,619,014	42.5
1999	20,728,941	18,448,757	15,399	2,826	17,594	82	38,690	8,596,825	46.6

Source: DWD Working Papers, 1999 (Population figures exclude Kampala)

A number of factors have brought about this positive trend and these include increased allocation of financial resources, supportive policies and laws, multi-sectoral approach to water provision and community based water management system.

Having realized the importance of water in poverty eradication, Government has categorized water as a priority and has included water in Poverty Eradication Action Plan. This means that water sector is one of the sectors, which benefit from priority allocation of resources, and it has already received substantial allocation of funds from the Poverty Action Fund. This has contributed to the increase in protected water sources. Another important aspect of policy is demand driven approach with the rationale of laying a firm foundation for sustained provision of water.

In addition, the demand driven approach means that the community must show effective demand by fulfilling their obligations in form of contributions before they get the appropriate support. These policies have been the impetus for the increased coverage of safe water.

Furthermore, the multi-sectoral nature of water requires that the relevant ministries and departments be involved in the development of water policy and legislation at the national and district level respectively. The ministries of Lands, Water and Environments; Health, Gender, Labour and Social Development; Local Government and Finance, Planning and Economic Development are coordinated at two levels: Through the Inter-Ministerial Steering Committee (IMSC) and Program Management Team (WES) or Project Administration Committee (RUWASA) to provide the enabling environment in aspects of policy development and enforcement, guidelines and performance standards, resource mobilization, technical assistance, quality assurance, monitoring and evaluation. These

frameworks have greatly assisted and promoted the multi-sectoral collaboration and lobbying for the much needed policy reforms.

The respective sectoral committees of LCV councils and the district management teams are assigned water supply and sanitation responsibilities specifically for planning, prioritization, budgeting/financing, supervision, monitoring and evaluation of actual implementation. At the implementation level, the health, community and water development staff have undergone training in PRA, communications skills, participatory training technologies, appropriate technologies, planning, community organization and sensitization, sanitation promotion (Ministry of Health, 1997a).

Community based water facility maintenance system has developed since its implementation of the concept in the late 1980s. Projects such as WES and RUWASA as well as most other donor-funded projects have ensured that communities have been organized into some form of water committees for all new bore holes constructed. Hand pump mechanics have been trained at sub-county level. In addition caretakers have been trained. Initial attempts of district based revolving spare parts supplies have generally been Abandoned in favour of attracting the private sector to take over mainly because the districts converted the proceeds from the sale of spare parts to their accounts as an income thereby not effectively replenishing the revolving fund (Ministry of Lands, Water and Environment, 1999).

Notes:

- Functionality rate for hand-pumps ranges between 70% - 85%
- Ratio in the use of service coverage is 300 persons per hand-pump 200 hundred people per spring and 150 people per Gravity Fed Schemes (GFS).
- Most GFS have 30 – 40 public taps.

The Policy and Legal Trend

Existing policies and acts represent a comprehensive regulatory framework for the management of water sector (Ministry of Water Lands and Environment, 1999). The Water Action Plan (WAP), 1995) details the process and actions that ensure sustainable management of water resources. The WAP identified the water resources management functions to be necessary in the future, taking into account both water resources issues, the decentralization process and the existing community management structures, as well as the requirement for overall environmental management through the NEMA. Considering the existing management capacity, it prioritized functions for immediate and later considerations, and placed some of these at the national level, while others are to be decentralized to the district level (NEMA, 1998).

The first principle of the Water Policy is the protection of the environment and safeguarding health through the integrated management of water resources and liquid and solid waste. It emphasizes the importance of this approach for environmental sustainability, better human health and integrated water resources management. It also stresses the need for women to play influential roles in both water and hygiene education. The water policy

emphasizes the provision of SOME WATER FOR ALL AND NOT ALL WATER FOR SOME and has the following objectives:

- Development and management water resources in an integrated and sustainable manner in order to provide water of adequate quantity and quality for all social and economic needs for the present and future generations.
- Provision of water within easy reach and hygiene sanitation facilities, based on management responsibility and ownership by the users, to 75% of the rural population and 100% of the urban population by the year 2000 with an 80-90% effective use and functionality of facilities and 100% of the rural population by the year 2015.

Another important aspect of policy is demand driven approach with the rationale of laying a firm foundation for sustained provision of water. The demand driven approach means that the community must show effective demand by fulfilling their obligations in form of contributions before they get the appropriate support. These policies have been the impetus for the increased coverage of safe water.

On the legal front, the Public Health Act of 1964 in principle is critical in ensuring safe water provision. It is through this Act that local councils have been ascribed the responsibility for ensuring safe water practices in their district communities. More recently the water statute came into force. Act was the Water Statute. Based on the work of the Water Legislation Study and the Water Action Plan, the Water Statute was formulated and enacted in 1995, incorporating legislation for both water resources and for water supply.

The Water Statute is a modern water law that is flexible. It relates technical detail to regulations that can be more easily changed as conditions change; allows for delegation of powers and broad exemptions from regulations; and does not provide for irreversible water rights. The water statute has established the legal basis for the water resources management structures. In addition, it has provisions on declaration of water supply and sewerage areas, appointment of authorities, water user groups and associations, water supplies and sewerage works. At the outset the Statute stipulates that all water in Uganda is vested in the State and that rights to use water, to construct or operate any works, or to pollute water, can only be conferred under the provision of the Statute. At the national level, the Water Statute established a Water Policy Committee (WPC) under the chairmanship of the Permanent Secretary Ministry of Water, Land and Environment. This committee while in principle being advisory to the Minister, is expected to take overall responsibility for setting national policies, standards and priorities, including coordinating revision to legislation and regulations, coordinating sector ministry plans and projects affecting water resources. It addition, it coordinates the formulation of an international water resources policy.

Although the water policies and laws represent a comprehensive regulatory framework for the management of rural water sector, there is some need for elaboration or clarification especially regarding the links between the Local Government Act and the Sector specific legislation. For example, while it is evident that the Water Statute is silent on the roles to

be played by the various local governments, these roles could be best elaborated in the form of planning guidelines and service standards from the Ministry to the districts- rather than amendments to or revision of the Statute. In addition, the existing policies and legislation are in need of clarification and harmonization especially in regard to the issue of ownership of facilities. For example, the Water Policy establishes that "all protected water sources including gravity flow schemes in the rural areas belong to the users". For rural water supplies this principle is neither supported by any legislation (the Water Statute is silent on this point), nor strictly formalized through project practice. For urban water supplies there appears to be a contradiction between the Water Policy (that states that "For urban water and sewerage systems... the system ownership is entrusted to the Central Government) and the Local Government Act (Schedule II establishes that urban local authorities are "responsible for water supplies outside the jurisdiction of National Water and Sewerage Corporation (NWSC)). (Ministry of Water Lands and Environment, 1999).

Trends in Investments

The sources of resources invested in water include the Government, Donors and NGOs and the local communities, the latter's contribution mainly consisting in labour and material resources. There have been substantial resources coming from these sources to water and sanitation during the period, 1995 to 2001 as shown in the table below. The community contribution is not included in table 2.

Table 2: Rural Water and Sanitation Programmes

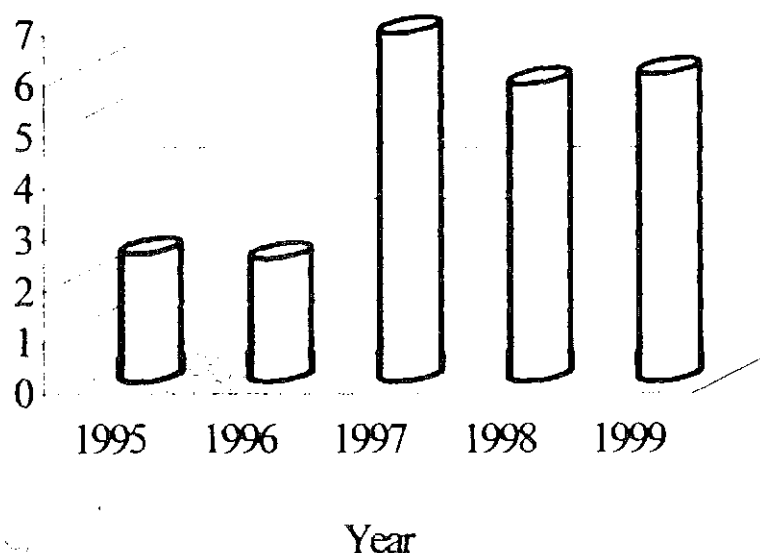
Project	Period	Area of Operation	Budgets	Sources of Funds	Activities
WES	1995-2000	34 districts in Northern, Central and Western Uganda	US\$7 m annually	UNICEF, SIDA & GOU	Drilling of boreholes shallow wells, spring protection and sanitation
RUWASA	1996-2001	10 districts in Eastern Uganda	US \$ 36 m annually	DANIDA & GOU	Drilling of boreholes shallow wells, spring protection and sanitation
Bore-hole Drilling project	1993-2001	Country-wide	US \$1 m annually	NGOs :IICD, ACAV, Plan, WVI, CARE, AVSI; GOU	Borehole Drilling and Repairs
Mubende, Kiboga and Mpigi districts	1998-2001	Mubende, Kiboga and Mpigi districts	US \$13 m (4.3 m annually)	JICA & GOU	Borehole drilling and construction of Kiboga Town water supply
Gravity Flow Scheme	1997-2000	9 districts	US\$ 15 (3.75m annually)	EU/SNV	Construction of 50 gravity fed water schemes

Source: DWD, 1999

It should be noted that government contribution is 10% as counterpart funding. It should further be noted that these programmes concentrate on water provision so that most of the resources are allocated to water and a mere average of 3.3% are allocated to sanitation improvement activities.

Although it is difficult to establish the trends in resources from all sources invested in water sector, records on resources spent on WES, a major programme in Uganda show an upward trend in the resources allocated to the sector from 2.4 million US \$ in 1995 to 6 million US \$ in 1999 as shown in the table below.

Figure 2: WES Programme Budget (in millions of US \$)



Source: GOU/UNICEF, 1999

The amounts of resources allocated annually are used to support several components of the programme. In 1999 for instance, a breakdown of funds by component indicates that US\$ 915,000 (15%) was allocated to community capacity building; US\$ 3,449,700 (57%) to service delivery and external facilitation; US\$ 789,700 (13%) to resources mobilization and management and US\$ 426,500 (7%) to policy development and quality assurance. The remaining US \$ 472,700 (7.8%) was assigned to programme support. While in 1998, WES spent US \$ 5,939,000 or 89% of its budget, in 1999; WES spent an estimated amount of US \$ 5,428,719, which represents 90% of its budget. It should be noted that out of the total budget allocated to WES programme, only 3.8% is spent on sanitation and the rest is spent on water.

There have also been several notable government contributions to equip communities in accessing safe water. Water testing kits were distributed in all the districts for monitoring water quality at source and in the homes as an indicator of sanitation. Extension staff (Health Inspectorate Staff plus Community Development Staff) was provided with motorcycles and bicycles to assist in the supervision and follow up of communities and committees responsible for the implementation of water supply and sanitation activities

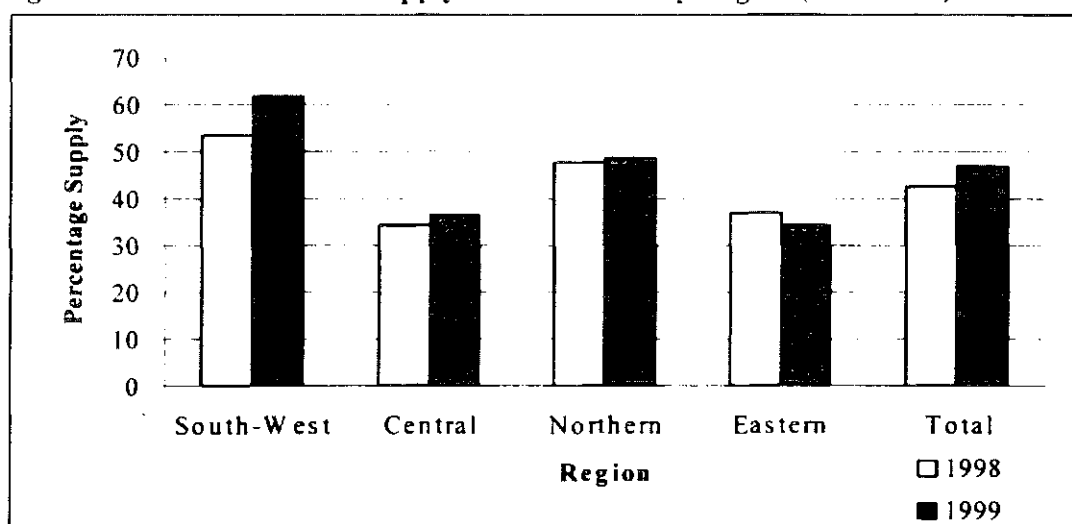
(Ministry of Health, 1997a). This support has to a large extent contributed to the development of water sources and increase in coverage.

Private sector funding in the water sector is not yet well exploited. It has been limited mainly to investment for limited users such as individuals (contractors and consultants), institutions and organizations. In most cases it is very difficult to quantify in aggregate terms how much of such investments takes place on an annual basis. (MWLE, 1999).

Funding from communities for provision of water is limited to the community contribution to the construction and maintenance of point sources in most instances and gravity schemes. The contribution can be in kind (material and labour) or cash. Similar to private funding it is difficult to estimate community financing in aggregate terms nationally (MWLE, 1999). In the Local Government Development Programmes micro-project phase, community contribution to protection of springs amounted to an average of US \$ 250 each and for a standpipe US \$300. (MWLE, 1999).

Despite the current national water coverage being higher than the situation in 1994, nearly half of the Uganda's population has no access to safe water. In addition the water situation in rural areas is comparatively worse than that in urban areas. While nearly 55% of rural dwellers have no access to safe water, a lower percentage of 40% of urban dwellers have no access to clean safe water. Figures on regional service levels for 1998 and 1999 show regional disparity in the percentage of the population served. While the Southwestern region had the highest service levels, Eastern region had the lowest service levels as shown in the figure 3

Figure 3: Rural Safe Water Supply Service Levels by Region (1998-1999)



Source: District Reports, 1998 and 1999
Compiled by DWD

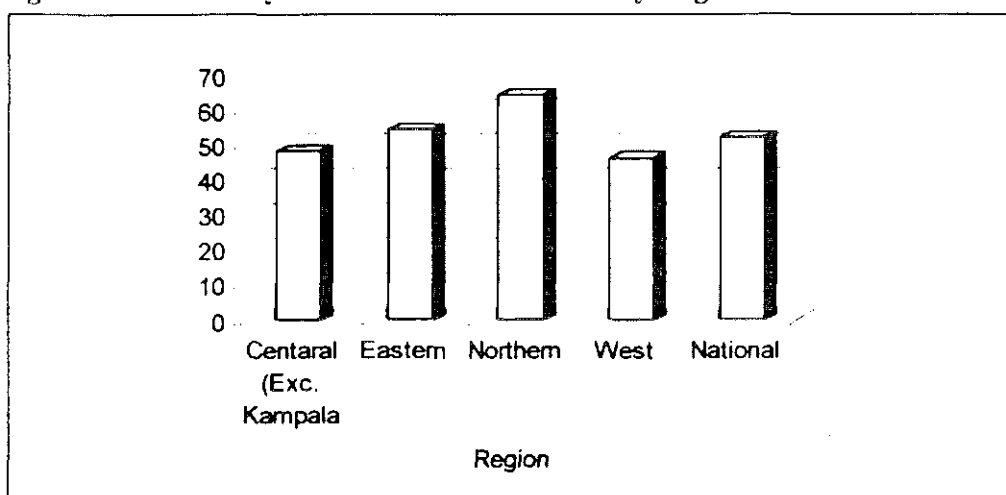
Furthermore, there are also disparities in water coverage within regions. In Southwestern region, while Rukungiri District has the highest service level (92% on the average), Kisoro district has the lowest service level (29%). Furthermore, in Central region, Hoima has the

highest service level (66%) compared to Sembabule with the least water service (16%). In addition in Northern Uganda, Moyo District has the highest service coverage (69.2%) in contrast to Kumi, which has the least service level (25%). Finally in Eastern region, Mukono has the highest service level (51%), while Pallisa (22%) and Kapchorwa (23%) are the least served.

Therefore despite some improvement in water coverage over the years from 1994 to present, there is still a large disparity between urban and rural areas and between regions and districts. Even where there is safe water, access to it remains limited as only 50% of the urban and 16% of the rural population is within 15 minutes walking distance from safe water.

Although no statistics are available to indicate the trend in water coverage in schools in Uganda from 1994 to the present, available statistics for one year show that with the exception of Northern region with a coverage of 64%, the current coverage level does not significantly vary from the national coverage of 52% as shown in the figure 4.

Figure 4: Availability of Safe Water in Schools by Region



Source: Uganda Bureau of Statistics 1997.

The major factors that have influenced the existence of a large gap (48%) in water coverage according to the consensus of Situation Analysis Workshop at Jinja, include limited appropriate technology choice, high non functional sources, low community absorption capacity, unsafe water chain, cultural practices, conflicting policies and insecurity in some districts.

Limited appropriate technology is also critical in reducing the rate of growth of water coverage. Although protected springs and shallow wells are cheaper to construct than boreholes and gravity schemes, their construction depend on the hydro-geological conditions of the location. If these conditions are not obtaining, then the only options may be boreholes or gravity schemes both of which are expensive to construct. The lack of appropriate and cheap technology has reduced the potential for expanding water coverage.

Related to the limited appropriate technology, there is the problem of high non-functional sources, which is estimated to be 20%. This specifically means sources with very poor yields or dry sources or which contain mineral salts beyond acceptable levels. This is common mainly in boreholes and springs. The effect of all these is that although money has been injected into protecting these sources, they are not usable and therefore do not increase access of water to the communities especially women and children who are a majority in the population.

The inabilities of communities to promptly respond to initiatives to provide safe water have also contributed to the water coverage gap. This is reflected in the reluctance by some members of the communities to contribute financial, material and labour to the construction and maintenance of water harvesting facilities. The low absorption is also attributable to the existence of many projects and programmes or initiatives by government and NGOs requiring community contribution resulting in fatigue. In addition, major repairs of boreholes may not be affordable to the communities lengthening the breakdown to repair time of boreholes reducing access of safe water to the communities, a majority of whom are women who are to a considerable extent responsible for the collection of water and most of whose household activities require water.

The periodical elections of councilors have also contributed to the water coverage gap. The local councilors who are the decision makers are elected after every five years. So after every five years there is a possibility of getting 50% or more new councilors who must learn how to practically make decisions and this tend to slow down decision making process because the decision makers take time before they learn the rules of the game. But by the time they master the art of decision making in regard to service delivery, they may be voted out of office and a new set of councilors are elected and the cycle is repeated all over again.

Many policy reforms coming in rapid succession tend to confuse or overburden decision makers at the district and sub-county levels. In addition, it may lead to conflict between the policies. For example before the idea and operation of the decentralization policy had been understood, UPE was introduced which required the attention of decision makers and local communities. This has tended to create fatigue and slow the process of service delivery. In addition, these policies sometimes conflict. For example, while decentralization has the objective of improving service delivery, which requires human resources to make it effective, retrenchment laid off many persons from the civil service who would have contributed to the realization of the objective of decentralization.

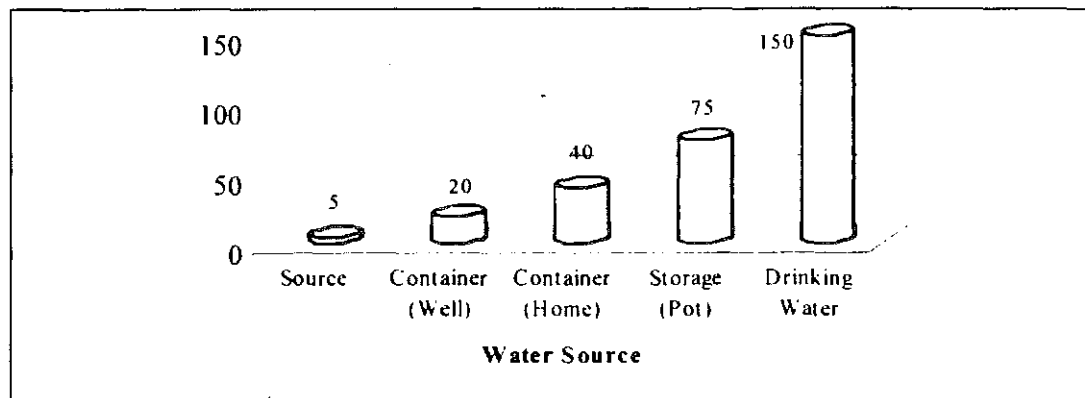
Finally insecurity in some parts of the country particularly in Northern and Western Uganda has prevented the utilization of existing protected water sources as well as the development of new water sources hence drastically reducing access to safe water coverage in the affected areas.

WATER QUALITY

Despite an upward trend in safe water as evidenced by increase in protected water, a number of factors still continue to make access to safe water even from protected water sources a big challenge. There is the problem of contamination of water at various points in the water chain namely contamination at sources, between collection, storage and consumption. Furthermore, although quality tests are carried out before consumption, deterioration in water quality occurs with time making it important to continuously monitor the sources of water as well as the water facilities.

RUWASA undertook a series of bacteriological water tests at 57 households in three districts at the water source, in the collection pot at the source and in the home, in the water storage pot and actual drinking water. The findings show that although the average faecal coliform count was acceptable at the source and in the collection pot (both at source and at home), during storage at home, the water becomes contaminated at 75FC/100ml which is above the WHO guideline of 10FC/100ml, as well as the National Rural guidelines of 50FC/100ml. The table below shows levels of contamination at different stages.

Figure 5: Approximate Average Faecal Coliform Counts in Domestic Water Samples



Source: RUWASA, 1996

The Figures shows that while at source the level of contamination is only 5 counts, the contamination increases dramatically until it reaches an unacceptably high level of 150 counts at the drinking stage. Only 9% of households surveyed were consuming water of acceptable quality. Reasons suggested for this were use of unclean water containers and occasionally the use of open containers with leaves added to stop spillage. This pattern of contamination is likely to be similar in urban areas, especially where consumers do not drink directly from piped water taps and where water is stored in dirty containers or without being covered (Ministry of Health, 1997b).

A report on water supply surveillance in ten selected urban areas found the quality of piped water supplied by NWSC is significantly better than that supplied through the municipal council operated supplies. Compliance rates are generally good, although much better in Kampala and Entebbe. It is likely that higher revenue base in Kampala is facilitating

improved O&M and this may be the same case in Entebbe. Significant problems with maintaining a supply of adequate quantity and quality appear to be present in many, although improvements are being seen. Overall the water supplied by NW&SC represents relatively limited risks to health in comparison with alternative supplies. The municipal supplies and community-managed supplies have significant water quality problems, most notably in Soroti. (Howard & Luyima, 1999).

The sources in urban areas show a marked difference according to source type. Boreholes appear to provide high quality water sustainably, with the exception of Mbale. Contamination has not been found in any borehole in Tororo, whilst in Soroti the small number of failures have all been below 10FC/100ml. Where contamination is found, it appears likely that latrine proximity and siting exert an important influence, particularly in Mbale where a possibly different hydro-geological make latrine-borehole siting more important. Protected springs show a much poorer quality and pronounced seasonal variation. (Howard & Luyima 1999).

Outside Kampala, the proximity of latrines appears to have little influence on microbiological quality of springs. In Mbale, where the impact of latrines on boreholes is noted, there is little evidence of a strong association with springs and it would appear that as with other towns, the strongest influence is exerted by the presence of pollution on the surface of the spring, lack of diversion ditches, eroded backfill area and the flooding of the collection area. (Howard & Luyima, 1999).

In the case of Kampala, it appears that there is an influence from the pit latrine at certain sites, although the strongest influence relates to the presence of uphill pollution such as solid waste with the development of direct pathways caused by lack of diversion ditches and eroded backfill. These risks all show increasing importance with the degree of contamination, as does faulty masonry and flooded collection areas. (Howard & Luyima, 1999).

The study concluded that household drinking water quality remains poor in many towns and this is an issue of serious concern particularly with regard to the potential for water borne transmission of cholera and other pathogens (Howard & Luyima, 1999).

SOCIO-ECONOMIC EFFECTS

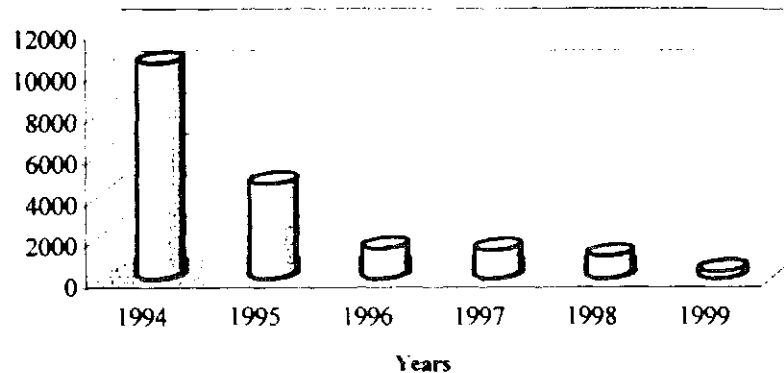
The effects of the trend in safe water coverage include both positive and negative effects. The positive effects include reduction in burden of collection of water for women and children and reduction in diarrhoeal and other water borne diseases.

Decrease in Morbidity

The positive effects of current water coverage include reduced morbidity and mortality. There has been a reduction in water borne diseases such as guinea worm, cholera and diarrhea. For example Uganda has been battling guinea worm disease since 1992 through the provision of safe water sources like boreholes, health education, and chemical treatment of contaminated water sources. These efforts especially in 16 districts in North and Northeast Uganda have resulted in a dramatic reduction of guinea worm cases form

126,369 cases in 1992 to 319 in 1999. The number of endemic districts fell from 19 in 1992 to 3 as shown in the Figure 6. (GOU/UNICEF, 1999).

Figure 6: Number of Reported Cases of Guinea Worm



Source: GOU/UNICEF, 1999

The dramatic disease can also be partly attributed to the village volunteer system. Under this system, a volunteer from each village is trained to identify, contain and prevent cases of guinea worm. Volunteer also distribute filter clothes to every household and attend all unprotected water sources with filter clothes to ensure that water filtered at its source. The sub-county supervisors then report to the center within one day. This reporting system allows for a rapid response. Another component of the ÚGWEP is the monthly application of abate in all open ponds during transmission season. In 1999 for instance district level teams were able to treat about 50% of targeted ponds.

Records also show a downward trend in cholera cases in all the regions of Uganda. In December 1997, about 3,000 cases were reported, in April 1998, it shot up to about 10,000 cases and in October of the same year it dramatically dropped to below 2,000 cases. This has been as a result of improvement of environmental sanitation, construction and use of pit latrines for excreta disposal, health education on drinking of boiled water. Other strategies included cholera reporting and strengthening in cholera case management (Ministry of Health, 1998).

A study in Jinja and Kasese districts found the effects of water and sanitation schemes as perceived by the local communities to include improved general health and reduced labour (Munene et. al., 1997).

A woman from Nyakaira village in Kasese district said:

Diarrhea is now reduced or absent in some parts of the village. Sickness doesn't now come to the village because of poor water. Before this water was brought to the village, the water situation was really bad. People were drinking from dirty wells and sharing water with animals.

Another example of perceived effects of provision of clean water came from a statement made during a focus group discussion in Nyabusagwa village in Jinja District:

The clean water has reduced diarrhoeal and malarial diseases as the water sources for people have been separated from the water for cows and frogs.

Commenting on the benefits of tap water a woman in Nyabusagwa village in Jinja district said:

The tap water has reduced the distance to the water sources. Before that we used to walk distances to a river to get water.

The negative effects of the current water coverage relates to the fact that 48% of Ugandans have no access to clean water. These are the segments of the population seriously affected. The most infectious diseases are attributed to poor sanitation and inadequate amounts of safe water. Diseases such as cholera and guinea worm, for example, are easily transmitted through shared water resources. Guinea worm though reducing, is still prevalent and data show that females were more affected and that most cases (over 60%) occurred in the younger age group. Although the report does not explain this gender disparity, it is probable that women are more affected because they are the ones more responsible for collection of water and so come more frequently in contact with water contaminated with guinea worm (Ministry of Health, 1998).

Another negative effect of unsafe water is the spread of cholera. Although cholera cases and deaths have drastically decreased, its impact on the population has been great. The cholera epidemic, which was first reported in October of 1997, subsequently affected 41 districts and caused illness in 52,356 persons. Well over 2,000 of these had died by 1999. Diarrhea has long been a leading cause of death in infants. It remains the second most prominent threat to infants, responsible for 9% of deaths. Poor hygiene and sanitation practices in addition to low rates of access to safe water contribute to 50% of childhood sicknesses and disease. For children attending school, there is a greater risk of insufficient or contaminated water supplies. (Ministry of Health, 1999).

Draining of resources from other sectors

More tragic than the occurrence of these diseases, in themselves, is the fact that they are all preventable. Not only do thousands of Ugandans suffer, needlessly, but also funding and other resources that might be alternatively directed are bound up and the rest of the population deprived.

Decreased Economic Participation

Individual households are affected by the loss of income when work hours are lost, due to sickness. In addition, children are frequently absent from classes in school due to their being engaged in water collection, walking long distances, and subsequently getting tired and dropping out of school. Businesses are also affected due to decreased human resources and lessened quality. The overall result is that participation in both the national and international economies are impaired, to the detriment of the country.

CHALLENGES TOWARDS THE REALIZATION OF THE RIGHT**Challenges**

A number of challenges face efforts towards the realization of the rights of women and children to water. These include challenges in coverage, quality, disparity, policy, investment, information, capacity building, participation and vulnerability.

Coverage

The major challenge in safe water provision is to provide water to the 48% of the population still using unsafe water. This challenge is worsened by the fact that the population continues to increase (2.8% per annum (MFEP, 1996)) making it necessary to increase the water coverage not only to close the gap but also to serve the increasing population.

Disparity

There are disparities in water coverage between rural and urban areas, between regions and between districts. While urban coverage is 60%, rural coverage is 46.6 %, a large gap of 13.4%. While water coverage in Southwestern region is nearly 62%, Northern, Eastern and Central regions are 48.9%, 34% and 36% respectively. There are even greater disparities in safe water coverage within districts in the regions. Whereas Hoima districts in the central region has safe water coverage of 66%, Sembabule also in the same region a mere 16% coverage. Similarly Moyo district in Northern region has safe water coverage as high as nearly 70% in contrast to Kumi with only 25% safe water coverage. Finally in Eastern region, Mukono district has the highest coverage (51%), and Pallisa with 22% coverage has the least. It is therefore not an easy task to reduce disparities at all these levels. Reduction of disparity also involves the task of providing the poorly endowed geographical areas with appropriate water sources by the design of appropriate and affordable technology for water abstraction. This is even a bigger challenge than providing safe water using the existing technology and applying the current demand approach to water provision.

Quality

Another challenge is to improve the quality of water for consumption from the current level of 150FC/100ml of water to the acceptable level of 10FC/1ml of water. This involves not only improving construction of water facilities but also sensitizing the communities on the need and how to keep water safe from the stage of collection to that of consumption. This is because human behaviour to a large extent contributes to water contamination between collection and consumption. Experience shows that change of attitude and behaviour is a daunting task and takes place only after a long time.

Policy

Although the water policies and laws represent a comprehensive regulatory framework for the management of rural water sector, the challenge is to provide clarification regarding the

links between the broad laws such as the Local Government Act and the Sector specific legislation to avoid contradictions. In addition, the existing policies and legislation are in need of clarification and harmonization especially in regard to the issue of ownership of facilities. For rural water supplies the principle that water source belong to the users is neither supported by any legislation. For urban water supplies there appears to be a contradiction between the Water Policy and Local Government Act on authority over water supplies outside the NWSC. (Ministry of Water Lands and Environment, 1999).

Another challenge relates to the implementation of demand driven policy in water provision. While this approach in principle may contribute to sustainable provision of water, the challenge is to deal with a situation where some local governments or communities may not demand water because of lack of resources.

Finally, the multi-sectoral approach in water provision requires effective coordination. Effective coordination of water provision activities is a challenge given the many actors in the water sector to avoid duplication of services and inefficient use of resources.

Investment

Although investments in water provision are increasing, the increase is slower than the increase in population and this is why there has been a slow increase in safe water coverage. Given the many pressing needs facing the country, it is difficult to make a significant increase in the amount of resources allocated to the sector. The greatest difficulty, however, lie in sustained resources allocation to the sector given the fact that investment in the sector heavily relies on donor funds.

Participation

As the key beneficiaries to any improvements in the water sector, communities through the demand driven approach to service provision are required to determine its water needs, the resources it can provide in the construction of water facilities and how it will maintain the facilities. Community participation in water provision has been through community based water maintenance system since 1984. Although some success has been achieved in terms making a big percentage of the facilities operational, the system has had substantial shortcoming. These include the lack of effective establishment of many user committees, the frustration of user committees and caretakers working on voluntary basis, low or lack of pay of pump mechanics, fatigue by communities in supporting many projects including water projects, lack of system for sustainable training of pump mechanics, the availability of hand pump spares through the private sector has been problematic, lack of private sector capacity for district level repair, lack of clear mechanism for demand driven approach to repair services and lack of follow up support to district level repairs undertaken by donor support. (MWLE, 1999). Stimulating and sustaining community participation within the framework of demand driven approach and community based maintenance system is no easy task given the many factors that constrain participation of local communities.

Capacity building

The capacity for effective and participatory implementation of water activities is very limited. The limitation is found at various levels. There is limited capacity at district level for technically competent and participatory planning. This is reflected in lack of qualified District Water Officers. The problem is however influenced by lack of technical staff at subcounty level; poor district planning units in many districts, poor procedures among councilors and to some extent technical staff at all levels. In addition, there is limited capacity at district level for proper financial management procurements, disbursements and accountability, limited private sector capacity for project implementation of many construction and repair services as well as limited consultant services in districts outside of Kampala and finally low levels of management skills at community level. Many of the weaknesses related to capacity for water provision may be attributed to the newness of the fundamental institutional reforms that have taken place particularly decentralization and privatization. To be effective capacity building has to be undertaken from central to the community levels. Given the changed roles of government under decentralization, the involvement of the private in water provision and the existence of very low technical and functional capacities at the district and subcounty levels and poor motivation of water committees leading to high rate of turnover.

Information

The provision of accurate information to all stakeholders in water provision is no easy task. Apart from the difficulty of choosing the most effective means of conveying the message, the challenge is to ensure continuous access of the stakeholders and communities to correct information on safe water. The principal constraint of the water sector is lack of accurate, timely information about water. A system for collecting information on water at all levels from the village to the district was developed in 1997 and field tested in three districts. In 1998, this system was expanded to all districts under the WES programme area. Although full-scale operationalization of this information management system will correct many inadequacies in information management, the implementation of this Information Management Systems, is a huge challenge. (GOU/UNICEF, 1998).

Vulnerability

Children are more vulnerable to water related diseases such as diarrhea, intestinal infection, skin infections because of this young age. Similarly, women are more vulnerable to water related diseases indicated above including guinea worm infection than men given that they are the main carriers and users of water. The challenge is therefore to drastically reduce the incidences of these diseases by significant increase in safe water coverage. In addition, Another big challenge in water provision is to reduce the distance women and older children have to travel to collect water. The load urden and time lost in collecting water affect for instance their productive activities which would increase food security, income and wellbeing to the households. Reducing the burden of collecting water and time lost may involve attaining the minimum target of one water source per village as suggested by

the Jinja Situation Analysis Workshop which is an enormous task given the limited resources and capacity.

TOWARDS ACHIEVEMENT OF THE RIGHT

In order to effectively deal with the challenges indicated in the preceding section, there is a need to assess the extent to which progress to the fulfillment of the right of women and children has been attained. The assessment will be made on the basis of policy, investment, coverage, quality, disparity, capacity, vulnerability, information and participation.

Water related policies have provided enabling environment for safe water provision. The demand driven policy should continue to operate, as this is an effective way of sustainable water provision. The policy, however need to support the reduction of disparity in water coverage between the urban and rural areas, between regions and districts access to safe water by supporting districts which are not able to effectively demand water because of their poor resources endowment as well as in areas which require new technology of water harvesting. In addition, contradictions between water related policies and legislations need to be addressed to avoid difficulties and conflicts that may arise in the process of implementing water provision activities.

In a related manner, the increase in resources allocated to the water sector has to some extent contributed to the upward trend in water coverage. The problem however, relate to the fact that a large proportion of funds allocated to the sector are donor funds which raises the question of sustainability of water provision should the funds from donor dwindle or be terminated.

Despite increased access of the population to water, nearly half of the population still does not have access to water. In order to address the right this population of the population to water, there is need to ensure that the coverage is increased to take care of this population, the bulk of whom are women and children without access to water. To increase access to water, the target should be provision of one protected water source per village council area as recommended by the resource persons at the Jinja Situation Analysis Workshop.

Because of the progressive contamination of water from source to the drinking glass, less than 52% of the population who have access to water actually utilizes safe water. While continuous efforts are being made to increase the quantity of protected water sources, there is need to pay close attention to ensure that water from protected sources actually reach the final consumer uncontaminated. This involves a lot of hygiene education and raising the awareness of women and children who are the main collectors and users of water to ensure that clean water not only reach the households but that water eventually consumed is safe. There is also need to ensure the latrines are located at the recommended distance from protected water source to avoid contamination from faecal material.

Despite an upward trend in water coverage, there are still a large disparity between the rural and urban coverage as well as between regions and districts. Efforts need to be directed toward reducing these disparities if the progress has to be made in the realization of the rights of women and children to water. This can be done through a number of

strategies notably increase in resources in areas with low coverage and strengthening the capacities of all stakeholders in water provision.

Attempts have been made by central government and NGOs to develop the capacities at all levels to develop and manage water resources. Capacity gaps, however remain and this require commitment by government and NGOs to continue to strengthen the capacities in water management at all levels. Capacity building measures should be targeted towards performance gaps and be guided by local governments rather purely supply driven by specific donor programmes. In addition, support for capacity building should focus on the entire institutional set up rather than on human resource development alone.

Closing the capacity gaps also requires provision of information to the stakeholders at all levels to be able to use the information to contribute to water provision. Information on the need for safe water and how that can be realized need to be disseminated to the whole population.

The demand driven approach has to some extent enhanced the participation of all stakeholders in water management. The participation of local communities however should be strengthened in order to create a sense of ownership of the water facilities developed. This is also need to make a plan to deal with the situation where some communities may not demand for water because of resource constraints.

Of the 48% of the population who do not use safe water, women and children are most affected because they are responsible for the collection of water and any disease arising from unsafe water affect them most. Even in a situation where there is safe water, because of the location of a water sources and the large number of households to a water sources, they have to walk long distances to the water sources and have to wait for long hours before they collect water. The increase in coverage albeit slow, denotes government's attempts to increase the use safe water and reduce water related diseases and improve health. In addition it is also shows efforts at reducing the distance from household to water source and time lost in travelling to a water source and waiting time. Despite these efforts however, with increase in population and breakdown in water facilities, women and children still have to walk long distances and wait for long hours before they can collect water. There is need to decrease the distance that women and children have to travel to collect water as well as the time lost in travelling to a water source and in waiting to collect water. This can be done by aiming to provide every village with a water source as suggested by the participants in Jinja Workshop on Water and Sanitation Situation.

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