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E K Y Doviio

Ghana: mid-Decade review



Ghana Water and Sewerage Corporation (GWSC)

The GWSC is responsible for the development, operation and maintenance of water supply and sewerage systems for domestic and industrial purposes throughout the country. It is a national autonomous organisation created by an Act of Parliament in 1965. The Corporation is administered from its Head Office in Accra and ten Regional Offices. It is decentralised to the district level.

WATER SUPPLY SUB-SECTOR

Pre-1980 Situation

In 1980 the water supply coverage was 93% for the urban population and close to 30% for the rural population. During the last two decades, in a bid to promote rapid national development after independence in 1957, the government created the Ghana Water and Sewerage Corporation and launched a crash programme for rapid urban water supply expansion and accelerated rural water development. Thus from a low figure of 35 water supply systems in 1957, 1980 saw 194 pipe-borne water supply systems, comprising 3 high capacity (10-40 mgd) systems, 13 medium capacity (1-10 mgd) systems and 178 small capacity (40,000 - 1,000,000 gpd) systems. In addition, 2,500 shallow boreholes fitted with handpumps were provided under a Canadian Government Aid Programme in Upper East and West Regions of Ghana. Due to inadequate operating revenues as a result of uneconomic tariff charged, the pumping equipment and treatment plant in the systems were poorly maintained for lack of funds to procure replacement parts. This situation, coupled with the old age of some of the plant and equipment, has brought most of the systems to a state of disrepair.

Action Plan for the Decade

In response to the challenges posed by the UN Declaration "Clean Water and Adequate Sanitation for all by the year 1990", the Government of Ghana set out to initiate various planning processes to ensure the achievement of the goals of the Decade. A rapid assessment of the current and projected sector development was made in 1978. A National Action Committee was set up in 1980 under the chairmanship of the Ministry of Finance and Economic Planning. Its membership included repre-

sentatives from Ghana Water and Sewerage Corporation, Ministry of Health, the Ministry of Rural Development and Co-operatives, the Water Resources Research Institute, the Environmental Protection Council, and the University of Science and Technology. As a result of its work, a National Action Plan was drawn up and accepted by Government in 1982.

The Decade Plan called for the following activities:

1. Rehabilitation of existing pipe-borne water supply systems, the plant and equipment of most of which had over-run their useful lives.
2. Capacity expansion of water supply systems in five regional capitals where the demands had exceeded the plant capacities.
3. Provision of shallow boreholes fitted with handpumps for communities of population between 500 and 2,000.
4. Providing hand-dug wells through community participation for communities of population below 500.
5. Training of managerial, operational and maintenance personnel and community-based group facilitators.
6. Institution building through the re-organization of the GWSC.

Progress made During the First Half of the Decade

The major activities during the decade focussed on stabilization of the existing pipe-borne water supply systems and development of rural water supply by the drilling of 3000 boreholes fitted with handpumps in six regions of Southern Ghana.

Some of the major projects undertaken during 1980-1985 were:

1. Rehabilitation of the Kpeng-Tema-Accra Transmission Pipeline feeding the capital city and Tema with World Bank assistance.
2. Rehabilitation of 17 existing pipe-borne water supply systems in the Northern and Upper Regions with the assistance of the Canadian Government.

3. Rehabilitation of 24 existing pipe-borne water supply systems in the Eastern Region with the support of the Federal Republic of Germany (FRG).
4. Rehabilitation of 17 existing pipe-borne water supply systems in the Volta and Central Regions with the support of UNDP.
5. Expansion of Cape Coast and Sekendi/Takeradi water supply systems with assistance of the FRG.
6. Expansion of Ho Urban Water Supply with the provision of a new treatment plant entirely funded by the Government.
7. Drilling of 3000 boreholes fitted with hand-pumps in six regions of Southern Ghana with the assistance of FRG.
8. Rehabilitation of 250 handpumps on boreholes in four regions and other small scale drilling programmes by UNICEF and Church groups in the country.

The foreign aid for the above projects averaged about \$8-9 million per year with a local currency component of about \$300-400 million per year (\$1.0 = C70 Cedis)

During the period, various seminars and workshops were organised. One successful and significant event was National Workshop on Hand-dug Well Construction organised to launch a National Hand-dug Well Programme.

As a result of these activities, the water supply coverage for the urban population was maintained at 93% with the rural coverage increasing from 29.8 to 39.3%, resulting in an increase of 8.3% in total water supply coverage. The comparative coverage table is given below:

Table 1 Population served with safe drinking water

	1980		1985		Target 1990	
	Pop	Coverage	Pop	Coverage	Pop	Coverage
(a) Urban population served through house connections and standtaps	3,088,000	93.0%	3,679,000	93.0%	4,621,000	100%
(b) Rural population served through public standtaps and shallow boreholes with hand-pumps	2,439,000	29.8%	3,314,000	39.3%	7,481,000	78%
(c) Total	5,527,000	48.1%	6,993,000	56.4%	12,102,000	85%

A breakdown of the above figures show the following:-

- (i) 93% of the people in the urban communities have access to pipe-borne water supply.

(ii)(a) 70% of the people residing in rural communities of population between 500 and 5000 have access to pipe-borne water supply and shallow boreholes fitted with handpumps.

(ii)(b) Only 15% of the people in rural communities of population below 500 have potable water. The people in this population group constitute 30% of the country's population and contribute significantly to the national wealth.

Another significant event which occurred was the restructuring of the organisation and management of the GWSC, the major sector institution, with the assistance of the World Bank. The reorganization process is still going on and it is hoped that an effective delivery system will be fashioned to take us through a successful decade.

SANITATION SUB-SECTOR

Pre-1980 Situation

As at 1980 there were three urban water-borne sewerage systems in existence - two in the fairly new townships of Tema and Akosombe and the third in the national capital, Accra. The latter is particularly under-utilized and covers only a limited area of the older part of the city. There were also some 33 water-borne institutional sewerage systems throughout the country, most of them reportedly non-functional.

Excreta disposal systems generally used in the urban towns are septic tanks, aqua privies, pan latrines and pit latrines. There are private as well as public systems. Records are not readily available for the total coverage situation but Table 3 shows indicative figures for six regional capitals, Tema and Accra.

Solid waste disposal poses serious problems in most urban areas. In the city of Accra, for example, where the bulk of the refuse is

TABLE 2
DATA ON EXISTING EXCRETA DISPOSAL FACILITIES IN SEVEN URBAN
TOWNS (BASED ON 1970 ESTIMATES)

	1970 Population	No. of Houses 1970	% with Private W.C.	% with Pan Latrines in Houses.	% Using Public Facility or Other means(1)	Source of Information
Accra	564,194	35,835	30	44	26	Consultant's Report, 1982
Toma	60,767	10,021	100	-	-	- do -
Kumasi	260,286	11,755	40	50	10	Consultant's Report, 1970
Sekondi/ Takoradi	91,874	4,469	20	27	53	House to House Survey, 1977
Capo Coast	51,653	3,037	20	40	40	Consultant's Report, 1976
Koforidua	46,235	2,332	12	58	30	House to House Survey, 1977
Sunyani	23,780	1,114	35	30	37	- do -
Ho	24,199	1,871	19	70	11	From District Council Office

Note(1): About 60% of the population shown in this column estimated to use public facilities, whilst 40% resort to derelict areas.

normally transported to sanitary landfill areas, the refuse heaps up in the collection centres due to frequent breakdown of haulage vehicles.

Data on rural sanitation is scanty, given the very uncertain institutional support for this area. However estimates for 1980 put it at about 10-15% of the rural populations with adequate disposal facilities in the form of pan and pit latrines.

Coordination for both urban and rural sanitation was very poor due to the unavailability of central coordinating and supervisory mechanism. The night-soil collection system had virtually broken down. Difficulty in recruiting conservancy labourers became a reality adding to the general problems of maintenance and operation of equipment and transport vehicles that have bedevilled the local councils for some years.

The Challenge of the Decade

Given the very disturbing picture above, the tasks for the Decade were outlined as follows:

1. Improvement of public toilet facilities in the low income and urban fringe areas by the construction of improved latrines, and rehabilitation of those in existence.
2. Improvement of sanitary services by the provision of vacuum trucks, transport vehicles and other needed spare parts for the rehabilitation of existing fleet. This is to ensure

efficient excreta disposal and effective refuse management.

3. Provision of improved pit latrines in all rural villages not served by the district councils.
4. Reorganization of the institutional support system within both the Rural Development and Local Government Ministries for effective delivery and management of sanitary services.

It was very clear at the beginning of the decade that waterless systems for excreta disposal will be practised for many years to come. This argument is strongly supported by the low average figure of 5-20 gallons per capita per day of water available for consumption in most of the urban centres.

Progress made During the First-Half of the Decade

Against the background of concerns expressed by various studies and national discussions around the issue of sanitation, the need for a coordinated action in the sub-sector was picked up by the Government. This culminated in a national workshop in 1982 attended by officials from all Ministries and Agencies involved with the sub-sector.

Even though the very far-reaching resolutions of this workshop were not carried out structurally, it marked a turning point in sanitation delivery in the country. The improved waterless pit latrine, named the Kumasi

Ventilated Indirect Pit (KVIP) latrine, developed through the research efforts of the University of Science and Technology in Ghana was accepted for adoption countrywide.

Massive training and promotional programmes were mounted through the Rural Development Ministry and to-date about 100 communal KVIP latrines have been commissioned with quite a substantial number at various stages of construction. Its acceptability is phenomenal given its effective odour and fly control characteristics. It also has the advantage of allowing the conversion of pan latrines into pit latrines.

Under the guidance of the Government's Primary Health Care Programme launched in 1983, the rehabilitation of existing public latrines in the urban areas and pit latrines in the rural areas is in progress. Even in the capital, Accra, another dimension of community management of public latrines has been introduced and this is being encouraged and replicated in other urban towns.

In the northern parts of the country, the Mozambique slab-type latrines have also been tested with some measure of success but had to be discontinued due to poor institutional support.

The comparative figures for the first-half of the decade are given below. These depict a stabilization situation given the fact that there was very little expansion vis-a-vis population increase.

Table 3 Population served with excreta disposal facilities

	1980		1985		Target 1990	
	<u>Pop</u>	<u>Coverage</u>	<u>Pop</u>	<u>Coverage</u>	<u>Pop</u>	<u>Coverage</u>
(a) Urban population served with adequate disposal facilities	1,940,00	58.4%	2,304,000	58.2%	3,235,000	70.0%
(b) Rural population served with acceptable disposal systems	1,227,000	15.0%	1,363,000	16.2%	2,882,000	30.0%
(c) Total	<u>3,167,000</u>	<u>27.5%</u>	<u>3,667,000</u>	<u>29.6%</u>	<u>6,117,000</u>	<u>43.0%</u>

The figures speak for themselves. There is still much to be done compared to water supply and thus the second-half of the decade should see more strides being made in this sub-sector. The low target coverage for the decade represents a realistic forecast given the inadequate institutional support for the sub-sector.

PERSPECTIVE FOR THE SECOND-HALF OF THE DECADE

The Challenge

How then do we in the next five years provide safe drinking water to the remaining 4.3 million people, i.e. the 43.6% of the population with 70% of them in the population group below 500 and at the same time stabilize the present modest coverage? How do we provide the complement for excreta disposal given the poor performance recorded in this sub-sector? These are questions, very fundamental questions, that have plagued the offices of planners and policy makers in Ghana.

The economy is yet to come out of the doldrums after a decade of stagnation. The effects of drought and environmental destruction have left their trails on the economy. Thus any attempt to accelerate the process of meeting the glorious objectives of the decade should reflect a philosophy of realism. The plight of our rural people is still deplorable but the attempts to put things right should not put undue stress on the economic recovery programme currently being pursued by the government. Social justice should therefore seek a compromise with reality.

The Approach

For Ghana then, the approach for the next half of the decade will be taken on three fronts namely technology, organization and mobilization, and improved resource planning. The following strategies will be adopted:

- (1) Increased innovation through the choice of least-cost appropriate technologies with corresponding low operational and maintenance cost and effort, coupled with the stabilization and effective preventive maintenance of the existing systems.
- (2) Institution building for improved

coordination of the delivery mechanisms, particularly in the sanitation sub-sector.

(3) Increased community involvement at all the stages of the programmes.

(4) Improved operation and maintenance practices supported by adequate tariff levels.

Options and Proposals

It is estimated that in Ghana today, the average cost of water supply projects using various options is as follows:

- (i) Hand-dug well of average depth of 35 feet with community participation - US \$2 per capita and US \$3 if provided with a hand-pump
- (ii) Shallow boreholes fitted with handpump - US \$35 per capita.
- (iii) Pipe-borne water from mechanized boreholes - US \$100 per capita.
- (iv) Pipe-borne water using conventional treatment plant to process surface water - US \$150 per capita.

There might be other implications other than cost, but within the limited experience that we have gained in the recent past with shallow boreholes and hand-dug wells, social reality demands the choice of such least-cost technologies. The two large scale shallow borehole programmes by CIDA in Northern and KfW in Southern Ghana (2500 and 3000 boreholes respectively), the water utilization project employing hand-dug well technology in the Upper regions, the Ghana Government/UNDP project in Volta and Central regions, and other numerous people-centred projects, have clearly demonstrated what could be done with community participation and appropriate technology.

Thus a programme of 4000 shallow boreholes fitted with hand pumps utilising for a start the newly commissioned four Indian Drilling Rigs, and the National Hand-dug Well programme that will involve the sinking of 10,000 hand-dug wells throughout the country, particularly in small rural communities with a focus on community involvement and a complementary health education programme, are being vigorously pursued. In addition to the above development programmes to increase the water supply coverage, the decade proposals will include rehabilitation of the existing pipe-borne water supply systems and completion of on-going development projects. These programmes are estimated at US \$41 million as local cost and US \$30 million as off-shore cost. It is estimated the above programmes will increase the water supply coverage by about 28.6%, bringing the total coverage by the end of the Decade to 85%.

A parallel programme of sanitation and community and health education will also be given momentum through the construction of VIP latrines country-wide with a fixation towards increased use of locally available construction materials. UNICEF and UNDP have already mounted pilot programmes in various parts of the country.

For the above task, a vigorous institutional arrangement will be needed. An attempt will be made to build a strong, self-supporting water and sanitation sector, through appropriate policy support at coordination, adjustment policies and effective harnessing of both local and external assistance. This restructuring of the delivery systems will ensure structural support lines from the Rural Development, Local Government and Health Ministries. There will be a thrust to institutionalize the rural water supply and sanitation extension services that reflect full community participation. For this reason the following notions will be given urgent attention in 1986:

- (a) The revitalizing of the National Action Committee on the Decade to facilitate improved coordination. An attempt will be made to bring all the scattered sector development programmes into a national framework.
- (b) A rural water and sanitation study to define concretely the institutional framework for accelerated and self-supporting growth.
- (c) Water conservation campaigns involving leakage detection and improved utilization of water.

Conclusion

The Government of Ghana attaches great importance to the provision of good drinking water and basic sanitation. In pursuance of this objective, the sector institutions are being reorganised and strengthened. With the government's policy of decentralisation, self-reliance and mobilisation of local resources, there is active community participation in development. This is a key in future development as it will reduce the financial burden on the central government budget. Finally with the continued support of both bilateral and multilateral donors, we hope to achieve the goals we have set for the Decade.