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## Ghana's rural community water management

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GHANA HAS BEEN undergoing major changes in socio-economic structures and approach. One of such changes in recent years is in the rural water sub sector.

Since 1990, there has been a proposal under a strategic investment programme (SIP) to transfer management responsibilities of rural water supplies to the beneficiary communities. By this proposal, government role becomes that of creating supportive climate and promoting rural water supply rather than providing services.

The new national rural water strategy is at an advanced stage for implementation. Some regions have taken the lead as vanguard regions in implementing the proposals under some Donor Group Support.

The concern here is whether the noble idea of community self management will work in the mist of the many challenges ahead, including socio-economic and cultural barriers, institutional and organizational difficulties among others. Some of these challenges must be resolved to make way for a successful community self management of water supply/sanitation facilities.

### Background

Since Ghana's independence in 1957, provision of water supply services has been the exclusive responsibility of the Government, represented by the Ghana Water and Sewerage Corporation, the sole water organization responsible for water production and distribution in the country.

The desire to meet the glorious aspirations of independence and the positive economic circumstances of the time led to accelerated growth of water supply systems for urban towns. By 1960, 33.7% of the urban population was covered while only 10.8% of the rural population had access to potable water. Sanitation coverage was insignificant. From 1966 the rural water supply Division formerly under the Public Works Department was incor-

porated into GWSC under an Act of Parliament of 1965 (Act 310). This further slowed down attention given to rural water supply. At the same time government financial input to the water sector started diminishing. External assistance from External Support Agencies (ESAs) also reduced considerably resulting in a gradual erosion of the potential in increased coverage. This further weakened the operation and maintenance system.

The first major attempts at bridging the imbalance between urban and rural coverage was in the 1970s with the implementation of two major rural water supply projects - the Upper Regions Water Supply Project (URWSP) supported by Canadian International Development Agency (CIDA) and the 3000 Wells Project in southern Ghana supported by Germany.

Today, there are over 30 NGOs active in the sector all over the country, the combined effect being about 40% rural water coverage as against 93% urban. Sanitation coverage is about 50% in rural areas, mostly communal trench latrines in southern Ghana. (table 1)

Most of the water for urban areas come from rivers and surface dams whereas in rural areas, groundwater is the best option as it is usually available, reliable throughout the year and within the community. There are therefore about 10,500 drilled wells and over 40,000 handdug wells throughout the country.

### New rural water sanitation strategy

It is estimated that during the period (1973 - 1993) about 7,000 drilled wells and 40,000 handdug wells have been provided to over 4 million rural population. It is also a bare fact that many of the systems installed during the period mentioned above, especially handpumps are either malfunctioning or not working at all. For instance in the Upper East Region, about 42% of the handpumps are not functioning for various reasons such as non payment of tariff, lack of spare parts, poor yields, etc. (Table 2).

Table 1. Water and sanitation coverage in Ghana.

Community Type	Population (million)	% of Total Population	% Served with Water	% Served Sanitation
Urban	5.3	35	93	-
Rural	9.7	65	40	50
Total	15	100	-	-

Lessons learnt during this period highlights numerous challenges that need concerted national effort. While technology choice had been an obvious weakness, it is also an undeniable fact that rural water supply systems failed for no combination of the technology with the social organization including variety of factors like wrong site location, social unacceptance, lack of incorporation of community resources, lack of sense of ownership, hence the unsustainability of the facilities provided.

Under the circumstances and the fact that the Government of Ghana (GOG) had since 1983 launched an Economic Recovery Programme (ERP) aimed at re-dressing inappropriate economic policies, coupled with the realization that centralized provision of water supply and sanitation services as a public good is an ineffective approach to meeting the needs of the unserved millions of rural inhabitants.

Government of Ghana (GOG) since 1991 therefore adopted a sector strategy recommendations arising from a national conference with the following principles:

- A demand driven programme, with self-selection from a number of technology options demonstrated by a clear commitment by communities to enhance sustainability.
- Community management of services with ownership and control as key elements of the strategy.
- The role of Government in promoting service provision.
- The role of District Assemblies becomes one of regulator, training contracting and coordination.
- Vigorous private sector involvement in providing goods and services required by communities.
- A high level of women involvement as both water users as well as planners, operators and managers of community level systems. It was further realized that in order to implement the strategy, fundamental changes in policy was necessary. Instead of the "supply driven" provision of water supply and sanitation facilities by Government, a "demand driven" approach driven by communities was required. A new national strategic planning process called the strategic investment programme, was therefore evolved as part of the process of moving towards a national strategy for community water supply and sanitation, and to establish the context for the national strategic investment plan (SIP) in the community water/sanitation sector. The SIP is intended to address the following:
  - Guide community water/sanitation activities, especially in the area of finance planning.
  - Form basis for consultation and coordination of ESAs.
  - Form basis for long term planning/budgeting by CWSD and the Ministry of Finance and Economic Planning.

The plan is flexible and takes into consideration what patterns of demand may arise and arrangements to meet demand as and when they arise.

## New policy

### Policy

Based on economic as well as social justification, the new sector policy would be based on "demand driven" to ensure that limited government funds are directed to communities willing to operate and maintain new or improved water supply and sanitation systems.

### Management

Management functions would be performed by the CWSD of GWSC. Consultancy services would be on as needed basis for management, training and related technical jobs

### Financing

GOG will fund capital cost of systems based on demand, however, applications for grants would be subject to availability of funds.

Beneficiaries of a new system will be required to contribute 5 - 10% of the capital cost of the basic water supply and public sanitation facility as follows:

1. Handdug well with bucket - c 60,000 (US\$60)
2. Handdug well with handpump - c 100,000 (US\$100)
3. Boreholes with handpump - c 250,000 (US\$250)
4. Pipe systems - c 10%

In addition Communities are responsible for all recurrent cost of the system. Cost for rehabilitation of more expensive interventions would however, be shared between government and communities.

### Technology

Communities are free to choose from a variety of technology options that will give them the highest service level that they can afford to maintain. The information on different priced options, showing the different designs for water and latrines would usually be made available to communities well ahead of time before contracts are awarded through competitive bidding.

### Operation and Maintenance

Normal operation and maintenance of point sources of water systems would be the responsibility of the individual communities with day to day management by their water/sanitation committee (WATSAN Committee) some of the WATSAN committees, comprising women would be trained to perform normal repairs on VLOM handpumps; with assistance from private area mechanics. Maintenance of small piped water/sanitation systems would be the responsibility of the local municipality or water board which would normally contract out maintenance and repair functions to the private sector or GWSC.

### **Implementation Strategy**

The new national community water supply and sanitation is designed in line with government's decentralization policy and local government Act 462 which aims at making District Assemblies autonomous and responsive to community needs. Communities are to make decisions on the level of service they are willing to own and manage.

The new strategy is 'demand driven' as resources will only be channelled to individual districts and communities based on their demand for improved services. Districts are required first and foremost to establish District Water and Sanitation Teams (DWSTs) and bear the recurrent cost of the teams.

- The private sector including NGOs are to provide goods and services to communities.
- The public sector (water agency) would take on a facilitating role and provide technical assistance to districts and the private sector.
- The strategy is also based on the premises that GWSC would be separated into urban and community water and sanitation divisions (CWSD) where the CWSD would manage the new national community water and sanitation Division. Community Water Supply would include rural communities with population less than 5,000 and small towns perhaps with population up to 15,000. Community Water systems would be operated on non-commercial basis and would require government subvention for the foreseeable future

### **The Vision of the New Strategy**

Based on the assumption that the policies and strategies outlined here will create the enabling environment for accelerated development of sustainable water and sanitation services to communities, it is expected that the investment programme will be implemented over the next fifteen years by first promoting public and private sector institutions through restructuring and training to consolidate existing facilities and increase coverage to 60% by the year 1999. The strategic investment programme also envisages a total investment of about 200 million United States dollars requiring an annual investment of 13 million dollars for planning, design and construction of new water supply facilities. This will result in 80% coverage by the year 2009; providing basic service level to about 10 million rural people at a cost of US\$20/capita.

The breakdown of these services will be as follows:

- Construction of 27,000 handdug wells with either bucket or handpump
- Construction of 7,500 boreholes fitted with handpumps
- Construction of 600 piped systems
- Rehabilitation of about 15,000 existing handpump systems
- Rehabilitation of 1,000 other technical options like dams, and spring catchments

- Installation of about 54,000 household latrines thereby increasing sanitation coverage by about 10% of the rural population.

### **Critical Assumptions**

The vision of increased coverage and sustainable maintenance management system is based on the following critical assumptions which themselves are influenced by many and varied factors:

- Communities are willing and able to operate, maintain and manage their own water/sanitation systems.
- Sustainable rural water supply and sanitation remain a high political priority with GOG contribution readily available.
- Public and private sector organizations are able to provide support and the goods and services.
- Donor group support to the rural water sector in Ghana is sustained over the period.
- VLOM pumps and their spare parts are available, reliable and effective.

### **Challenges ahead**

The new water strategy of community ownership and management has repercussions for each of the principal actors i.e. the communities themselves, government and private sector.

### **Community Repercussions**

In some rural areas, people still believe that all water can quench thirst, therefore there is no pure or dirty water. To such people they must drink from the traditional sources that their great grand parents drank from. In most cases these sources are usually heavily polluted, yet it is difficult to change the belief to accept and use an improved water source over night. Water-health education in such communities is an uphill task especially when financial contributions are required. The people see water as a gift of nature and should have no financial cost.

In many rural communities, institutional structures are weak, while in some instances settlements are dispersed contributing to difficulties in resource mobilization. Generally, willingness to pay for water is high where there are no alternative sources followed by perceived convenience, reliability and quality. Willingness to pay depends on the knowledge of the risks associated with using polluted water. Unfortunately the illiteracy level is still high and awareness to the risks of using polluted sources low.

At the community level, there is widespread poverty. It is a more or less given feature of the socio-economic environment of some parts of Ghana, especially the savanna zone where economy is agrarian-based and relies largely on hoe technology. The average annual income of a family of six is estimated at c40,000 c100,000 which hardly meets the minimum requirement of food, clothing

and shelter, let alone paying for other discretionary expenditure like health, education and water.

The ability of communities to mobilize funds in bank savings for pump repairs over a five or six year period without misapplying it will be a major test against the value communities attach to potable water as against other needs and priorities (children education's, health needs, funerals, marriages, etc)

**Government**

Government represented by GWSC seeks to divest itself of maintenance responsibilities under the new rural water strategy, however, substantial initial capital cost is involved in rehabilitation of existing systems and provision of new sources.

Technical and financial dependency on ESAs in new service provision is a bottleneck. Currently most, if not all rural water/sanitation programmes are funded by external support agencies and NGOs notably CIDA in the three northern regions, DANIDA in Volta region, CAISSE Centrale (French) in Central region, and others like UNDP (Eastern Region). NGOs like WaterAid, World Vision, Catholic Church, Adventist Relief Agency (ADRA) are also in various regions of the country. These programmes are donor-propelled and tend to be project specific in many respects. These projects and programmes need institutionalization, but existing institutions are weak to provide the needed coordination, organization and monitoring roles until strengthened.

**Private Sector**

Perhaps the greatest potential weakness of the new strategy is a viability of a commercial net-work for spare parts distribution. In a report on a 1600 pumps maintenance

programme in Southern Niger, an evaluation mission concluded that "the distribution network of spare parts is the veritable bottleneck of the system."

Given the relative absence of suitable outlets in the rural areas and perhaps the probable low yearly sales turn out, spare parts sales on its own may not be economically viable. If prices of spares are controlled, it may be even more unattractive, and if prices are liberalized communities might be exploited by distributors.

The investment required for equipment, tools and working capital constrain the feasibility of local manufacture. The small scale and cottage industries would financially and managerially not be able to undertake successful production. Handpumps imported duty-free for instance from India will be more competitive. Realistically therefore, local manufacture is not feasible now, except for one manufacturer for direct action pumps.

**References**

1. Water Sector Activities in Ghana CIDA-PSU (1993)
2. Ghana National Community Water Supply and Sanitation Strategic Investment Programme Cowater International Inc., Ministry of Works and Housing and the World Bank (1993)
3. Graig J., (February, 1992) Interventions and Responses: Handpumps, Water Tariffs and Resistance to Payment within Rural Communities in the Upper East Region of Ghana.
4. Quashie E. F., (1987) Rural Water Supply Development in Ghana. Presentation on all Africa Seminar on Low Cost Rural and Urban- Fringe Water Supply Systems in Abidjan

**Table 2. Wells/handpumps malfunctioning or not working in the upper east region.**

District	Total handpumps per District	Lack of spare Parts			Poor * Yield	Dried * Up	Filled up with stones (abandoned)	Total Faulty	% of Total Faulty
		Broken Mal-functioning	Broken Down	due to tariff					
Bawku East	580	22	43	33	25	9	13	145	25
Bolga	407	93	43	34	29	11	7	217	53
Navrongo	186	4	20	28	2	3	11	68	37
Sandema	162	15	1	45	5	1	2	69	43
Bawku West	176	24	24	47	5	1	-	101	57
Bongo	161	32	27	27	6	4	6	102	63
Region Total	1672	190	158	214	72	29	39	702	42

NOTE: \* May be considered natural

Source: Rural Water Supply Unit Quarterly report, March 1994