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**Community participation in rural water supply**  
**in Kenya**

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The Government in my country together in concert with non-governmental organizations, private firms and individuals alike, embarked on a programme to supply potable water to every citizen by the end of this century. To this end, in the last decade the Ministry of Water Development was created to realize this goal. This target was enhanced by launching the desirable and ambitious : "International Drinking Water Supply and Sanitation Decade" by the United Nations.

The population was divided into rural and urban centres. Due to commercial activity and the location of Industries in Urban Centres, emigration from rural to urban areas was faster (with urban growth rate in population of between 6% & 14% p.a.) in many centres. This contrasted sharply with the national average population growth rate of over 3% per annum. This tremendous population growth (among the world's highest) required constant upgrading of the urban centres and guidelines were set for development plans for individual towns in the immediate future. This has meant that resource allocation has taken township water requirement seriously due to the obvious unhealthy condition and nuisance occurring in densely populated areas without water and sanitation facilities.

The cost implication per capita for urbanites for development and provision of these services has been minimal compared with the revenue collection which is fairly simple and effective. This made it easier for municipalities to have ready and adequate funds or show the viability at national and international aid agencies level for procurement of development capital. For this reason this paper did not dwell on this well served compact population in urban centres, but dwells on the Rural Areas where the cost per capita was always not feasible or economically exorbitant and un-warranted.

Kenya being basically in an agricultural economic region, the rural areas were classified in accordance with their potentials as being high, medium or low. The latter for those not aware, the continuous desertification process was a reality in the overgrazed northern semi-arid parts of East Africa Region. The country being a semi-arid has

only 25% of the land mass available for agriculture. The great wastelands of northern frontier have massive irrigation potential, but remain barren of any flora for the time being.

In the rural areas national water supply was initiated and projects funded locally through the Ministry of Water Development and other development oriented organizations. There were also projects funded through International Aid Agencies such as the World Bank, African Development Bank, Arab Development Bank, Kreditanstalt Fur Wiederaufbau, Overseas Development Aid, etc to name but a few.

These projects were mainly designed by the engineers in the government or reputable Consulting Engineering practitioners. The implementation of these projects boosted the total number of people supplied with the piped potable water to their homes. The concentration of these projects has mainly been in the high yield agricultural potential areas where the demand for this service was desired and justified by the higher population density. This brings the per capita cost of water supply to some £Stg 150 - £Stg 400 in capital expenditure.

This cost increases tremendously in the arid areas where it is in excess of £Stg 600 per capita. This makes it necessary to reevaluate the target and find alternative methods water supply. In such semi-arid areas the population is basically pastoral and nomadic in nature. It would be sham to use borrowed prime capital investments to this extent and end. In such cases only communal water points along trade and pastoral routes should be established. The sources should include: shallow wells, boreholes, etc. as the best alternative as they can be left idle during the period of migration. The water demand of such pastoralists who live in more or less similar conditions as their forefathers before them, does not exceed 1 - 4 litres per capita day compared to urbanite counterparts who demand 150 litres per capita day. It is therefore clear that in rural areas local conditions best dictate the demand and therefore the appropriate level of service.

Prior to embarking on community participation in rural water supply, it is fitting to

give a brief history of water supply in Kenya.

The early settlers in Kenya heavily embarked on their own water supply for domestic and, where cash crops warranted, for irrigation. This was done with the assistance of government subsidy. It is therefore obvious the community participation in organized pipe water supply was dictated by the settlers. These white settlers had awareness of potable water as a day to day essential commodity.

Due to the fact of the settlers' awareness of hygiene the demand of water use of 250 - 400 litres was realized per capita day. Comparing this to a menial worker, who although he has piped supply in his quarters does not have the financial means and has therefore a basic demand of 25 - 100 litres per capita day dependent on status i.e. labourer to foreman. It is that awareness of the relationship between potable water, health and the knowledge of water borne diseases that demands this service as a preventive measure.

The community participation can therefore be viewed simply as an individual entrepreneur, a group of farmers, a local supply with communal facility, or an abandoned system which requires maintenance and upgrading etc. On the other hand, development aspect is more taxing due to the high investment level required which almost always the rural communities cannot afford. It therefore becomes imperative to look into ways and means of reducing the capital/recurrent costs of such water schemes. To this end the workability and environment/long-term effects of the scheme, its economies and social should be assessed.

In order to achieve this, the design criterion should commensurate with the communities income, affordability i.e. lower the design criteria such that instead of a design based on 150 l/p/d to have 15 - 30 l/p/d and this brings the cost level to an acceptable level. It would serve no purpose to have a scheme which the population served cannot afford.

The community may assist on a heave-ho "Harambee" basis as it is known in Kenya where only funds for materials are sought from donor agencies and labour provided free to the project by the beneficiaries inexcept for the necessary skilled artisans, i.e. masons, carpenters, pipefitters, welders, etc who are tradesmen and seek payment.

In rural communities collection of funds through mass meetings has met with success. In some cases the funds are misappropriated but we shall not dwell on this. This has

enabled the collection of 40 - 60% of the project funding in some of the best case histories. This has occurred however in areas where the administration, political and local elders are agreeable on the necessity of the project definition. In such cases the government has created an incentive scheme by instituting a self help subsidy section where such projects are designed and to bolster the additional funds required for completion of the project. This would cater for a treatment plant and for recurrent expenditure. This section is also entrusted with the mammoth task of feasibility, survey and conceptualisation of the design. However, such projects require careful monitoring to ensure that the implementation is according to the design; especially the distribution system which may be used for political ends to boost potential votes. The administration in this case acts as the corrective arm to calm the political ambitions.

When the populace is made aware of the benefits of the projects, the contributions in terms of labour can save 10 - 20% of projects costs. However, such saving exposes the project to abuse if the project schedule should lag behind the people's expectation; malicious damage and vandalism become rampant and in some case render the entire project useless. This is usual as the locals become too familiar with the installations.

The need for community participation as a means of saving must then be viewed with the caution it deserves, though doubtless, such saving would be effected. In real terms a contractor keeps the works safe by watching and taking steps against vandals at an early stage and thus instilling a sense of discipline and responsibility for the scheme to the locals, having been executed by a third party.

Thus it can be seen that the value consciousness of service must be fully appreciated by the community before they accept it wholesomely.

Some non-profit making Organizations such as CARE have assisted local projects with technology and funds for development, others such as the National Christian Council are committed to financial assistance and making sure that the recipients are informed of the importance and necessity for this service.

At this juncture, it is necessary to evaluate the performance of such projects whereby the beneficiaries are not fully aware of the potential and they have no demand for the

service provided. In some cases the lack of such awareness is so much that they would prefer to go to nearby water courses or neighbouring homes for water as they cannot afford or do not see the need to pay for having a connection installed.

This attitude makes the project benefit to accrue only to a small portion of the community.

In conclusion it can be summarised that community needs and awareness have always contributed to water supply in Kenya and indeed all parts of the World. This community participation can also be used to great advantage to reduce capital cost and recurrent cost of water schemes and subsequent sanitation by creating the awareness. Other advantages include extending use of existing facilities with subsequent reduction in the incidence of waterborne diseases.

It is however, imperative that the knowledge of this awareness be disseminated at all levels of education and social media.