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## COMMUNITY PARTICIPATION IN RURAL WATER SUPPLIES IN KENYA

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The Kenyan Government embarked on a programme to supply potable water to every household 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 has been enhanced by the launching of the desirous and ambitious: "International Drinking Water Supply and Sanitation Decade" by the United Nations.

Kenya has a population of 16 million people distributed in both the rural areas and urban centres. Due to the location of industries in Urban Centres, emigration from rural to urban areas has been higher with a growth rate in population of 6% - 14% p.a. in many centres. This contrasts sharply with the national average rural population growth rate of just under 4% per annum. This tremendous population growth, as shown by statistics, is among the world's highest. This has made it necessary to constantly upgrade the development plans for urban centres as well as set new guidelines for both short and long term development for individual towns.

Due to the obvious unhealthy conditions and nuisance prevailing in densely populated urban areas devoid of water and sanitation facilities, the need for these services has been recognised and funds allocated to remedy the situation.

The cost implication per capita for the urban dwellers for provision of these services are minimal and the revenue collection has been fairly simple and effective compared to the rural areas. This makes it easier for municipalities to have ready and adequate funds or show viability in terms of cost to benefit ratios for both national and international aid agencies and therefore making it easier to procure development capital. This paper does not dwell on provision of the said services to urban population which are well served but instead dwells on rural areas where the price per capita is high and sometimes is not economically feasible.

Kenya being economically agriculturally based, the rural areas have been classified in terms of their agricultural potentials either as high, medium or low. For those who are not aware, the desertification process is a reality in the over-grazed northern semi-arid and arid parts of Kenya. The country has only 25% of its land mass available for agriculture, and the rest being the great wastelands of northern frontier which have massive irrigation potential but are presently unproductive in terms of crop production.

In the rural areas the government has initiated national projects funded locally through the Ministry of Water Development and the Ministry of Local Government. There are also projects funded through International Aid Agencies such as The World Bank, African Development Bank, Kreditanstalt Fur Wiederaufbau, Overseas Development Administration to name but a few and other Bilateral aid agencies.

These projects are mainly designed by engineers in the government ministries or by Local or Foreign Engineering Consultants. They have boosted the number of people supplied with piped potable water to their homes. The concentration has mainly been in the high potential agricultural areas where the demand for this service was desired and the population density higher - exceeding about 150 persons per square kilometre. This brings the cost of supply per capita to about £Stg 150 - £Stg 400 per person in capital expenditure compared to £Stg 50 - £Stg 100 in urban areas.

The per capita cost increases tremendously in the arid areas with a density of less than 10 persons per square kilometre and the cost is in excess of £Stg 600, per person making it necessary to review the target of supplying the country by the year 2000. In such semi-arid areas the population is basically pastoral and nomadic in nature. It would be poor economics to use borrowed prime capital investment to this extent to achieve supply of such costly waters. In such cases, only communal water points along trade and pastoral routes should be established. The sources should include: shallow wells, boreholes, etc. as good alternatives as these may 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 per day compared to urbanite counterparts who demand 150 litres per capita per day. It is therefore clear that in rural areas local conditions best dictate the demand and therefore the appropriate level of services and technology. Due to hardships of nomadic lifestyles, some of these pastoralists are settling and changing to mixed farming due to community services and other advantages accrued when they settle.

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 of the 20th century in Kenya embarked on their own water supply for domestic consumption and where warranted irrigation, this being with the assistance of government subsidies. It is therefore obvious that organized piped water supply was started by the white settlers. They had awareness of potable water as day to day essential commodity. There was no community participation at all. There were only individual settlers with their own water and the local people depended on natural, surface sources.

The early settlers as compared to the locals had an awareness of hygiene and had the economic means to supply their domestic water of 250 - 400 litres per person per day.

In contrast to menial workers, who although had a piped supply in labourlines did not have the financial means had therefore a basic demand of 25 - 100 litres per capital day dependent on status i.e. labourer to foreman. It is that awareness of the relationship between potable water and the knowledge of water borne diseases that increased the demand of this service as a preventive measure.

The community participation can therefore be viewed simply as an individual entrepreneur, a group of farmers, a local water supply with communal facility, or an abandoned system which requires maintenance and upgrading etc. On the other hand, the development aspect of modern rural water supply requires high capital investment which almost always the rural communities cannot afford.

It therefore becomes imperative to look into ways and means of reducing the capital and recurrent costs of such water schemes. To this end the workability, and environmental,

and long-term effects of the schemes, its economies and social factors should be assessed.

In order to achieve this, the design criteria 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 say 30 l/p/d and which brings the cost level to an acceptable level or more appropriately "affordable level". It would serve no purpose to have a water scheme which the population served cannot afford to pay for.

The community may also 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. Effective savings up to 30% of project costs have been made this way in some rural water supply projects.

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 however, occurred in areas where the administration, political and local elders are agreeable on the necessity of the project and project definition. In such cases the government has created an incentive scheme by instituting a self help subsidy section where such projects are designed to save the additional funds required for completion of the project. This section also caters for up to 80% of recurrent expenditure. The section is also entrusted with the mammoth tasks of feasibility, survey and conceptualisation of the design. 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 aspirants' ambitions by ensuring that the systems are constructed as designed.

When the populace is made aware of the benefits of the projects, the contributions in terms of labour can save 10-20% of project costs. However, such saving exposes the project to abuse if the project schedule should lag behind the peoples' expectation; malicious damage and vandalism become rampant and in some cases 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 it is doubtless, such saving would be effected. In real terms a contractor keeps the works safe by watching and taking steps against vandals as is required by the conditions of contract at an early stage. This instills a sense of discipline and responsibility in the locals as third parties.

Thus it can be seen that the value consciousness of the water supply as a service must be fully appreciated by the community before they accept it wholesomely, and an effort by authorities to this end is essential. Each household is required to pay £Stg 1.00 for a connection.

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 such that the recipients are informed of the importance and necessity for this service.

The rural women's awareness of lessened work where there is a piped water supply makes them more willing than men to contribute both financially and to provide free labour.

At this juncture, it is necessary to evaluate the performance of such projects whereby the intended beneficiaries are not fully aware of the potential and have no demand for the service provided. In some cases the lack of such awareness is so endemic 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 benefits to accrue only to a small portion of the community, sometimes as low as 10% of the total population in the scheme area.

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. Community participation can also be used to great advantage to reduce capital cost and recurrent cost of water schemes and subsequent sanitation by creating public awareness and participation. Other advantages include extending use of existing facilities with subsequent

reduction in the incidence of waterborne diseases. The water supply must however, ideally be coupled with proper sanitary disposal to avoid nuisance.

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