INCREASING ACCESS TO WATER IN KENYA'S ARID AND SEMI-ARID LANDS (ASALs): THE CASE OF KITUI DISTRICT, KENYA

A Proposal Submitted to UNESCO Paris

By

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Background

At the global level, statistics show that 1.3 billion people do not have access to safe water, 800 million are malnourished and hunger is their constant companion (African Academy of Sciences et. al. 2002). Currently, over 26 African countries including Kenya have more people than their water supplies can adequately support.

Most governments in developing countries are shifting their development roles from "provision" to "facilitation". Contracting resource bases and failure of "top-down" approaches to development has necessitated this shift, which in turn has placed more emphasis on resource development and management at the lowest level possible. The latter calls for the empowerment of users, in addition to enhancing their interaction with such other institutions as government departments, non-governmental organizations (NGOs), private sector, universities and other stakeholders. Water resources have been a major concern within this paradigmatic shift.

Kenya is among a group of countries faced with the problem of inadequate resource base, especially in the arid and semi-arid areas (ASALs). A weak institutional development framework compounds this problem. Given that water often dictates the orientation of habitation, in addition to conditioning human existence, scarcity of water has a devastating impact on the environment, human life, food and livestock production. During drought, a common occurrence in ASALs, communities in these areas resort to charcoal burning as a survival mechanism, which results in serious environmental damage.

Only 45% of Kenyans have access to clean water. This clean water does not designate portable water. Households living in high and medium potential areas are considered to have safe water if they can get 20 litres of clean drinking water daily from sources within a kilometer away (Kimuyu, 1998). Studies show that communities living in ASALs have limitations in accessing sources of water. They use open water sources, which are more

prone to contamination. Closeness to a source of water, quality and quantity are important considerations in choosing technologies for providing and conserving water.

Conventional methods of water provision have largely been used in ASALs. The methods in question include: construction of earth dams, boreholes, rock-catchments, and piped water. These methods have mainly failed in providing sustainable water systems, due mainly to the inappropriate technologies envisaged in these efforts. The appropriateness of a water system includes such aspects as the climatic conditions, maintenance costs and the extent to which it is user-friendly. This description clearly describes the sand dam technology as has been applied in some ASALs in Kenya, particularly in Kitui, Mwingi, Machakos and Samburu. Construction of sand dams is economically and socially effective since the technology is simple, easy to maintain and lends itself to participatory development.

The major weaknesses and gaps preventing communities from benefiting from their water supply systems have been reported as insufficient capacity building, partial coverage of user population, lack of effective and equitable financing, absence of suitable management tools and environmental degradation of water sheds. The absence of proper gender balance in planning for, contributions to, and control over the established water service has been another crucial issue (IRC, 1995).

Problem Statement

Water is a common denominator and a major development input all over the world. In Kitui District, Kenya, it remains the most essential development priority and commodity. The search for water is indeed a significant pre-occupation of the people of Kitui District as there are only a few water sources, e.g. seasonal rivers and a few transient wells.

Kitui district is located in the Eastern province of Kenya. It is located between latitude 0˚10′ and 3˚0′ South and longitude 37˚50′ and 39˚0′ East. The district borders Machakos and Makueni to the West, Mwingi district to the north, Tana River to the east and Taita

Taveta to the South. It covers an area of approximately 20,555.74 km^2 including 6369.1 km^2 occupied by the uninhabited Tsavo National Park.

From Nairobi, Kitui is about 150 kilometers to the East. It is classified as one of the ASAL areas of the country (Woodhead, 1989). Different physical features dictate the distribution of rain in the district. The hilly parts of Central and Eastern Kitui receive 510-1015 mm of rainfall per annum. The rest of the district receives 225-510 mm per year. The problem of water shortage is, however, more acute in the Southern part of the district than elsewhere. In this area, the climate is hot and dry most of the year. There is a high rate of evaporation, which combines with unreliable rainfall to limit intensive and meaningful land use, in addition to other development endeavours.

The reliable water sources in South Kitui, particularly in Kalia Katune Sub-Location, Mutha Location in Mutha Division, are located outside the area and are as far as 45 kilometers from the nearest family. These sources are Thua River and *Ndia Ndasa* (Kikamba for "the deep pond"). In a sparsely populated region with 8 persons per square kilometer, people take three (3) days to walk to these sources. During prolonged droughts, they migrate to settle near Thua River because *Ndia Ndasa* is located within the Tsavo East National Park.

People in this area of Kalia Katune have no access to the only two earth dams in the division due to political and administrative reasons, e.g. the neighbouring communities have owned the dams and, with the support of the local administration, barred anybody else from using the water. Furthermore, the two dams are only filled with water during occasional heavy rainfall. To be sure, these dams can only retain water for only two months in a year.

Given the competition for water between human beings, livestock and wild animals, the quality of water in the foregoing sources is questionable. The only alternative water sources are the Mutha wells, located up in the Mutha Hills. The route uphill is both steep

and rocky, making it difficult to access the water. It takes a minimum of three hours from the foot of the hills to these wells, which often dry up during prolonged drought.

There are long queues of people in these wells and sometimes it takes three days for one to draw water. Some women spend nights in the cold with their infants waiting for their turn in the queue.

Proposal for Action

In order to alleviate this shortage of water and the concomitant human suffering and misery, especially for women and children, this document is a proposal for construction of two sand dams in Kalia Katune Sub-Location, Mutha Location, Mutha Division of Kitui District. Sand dams have been noted in the recent past as useful systems of re-hydrating the earth and creating a water storage structure, that assures local populations of water at close distance for both human and agricultural use. To date, over 400 sand dams have been constructed in Kitui Central and found to be successful avenues for availing water to communities. Kitui South is yet to be covered in the sand dam project.

Project Objectives

The overall aim of project is to increase the access to water through supporting the construction of two community-based sand dams in Kalia Katune area of Kitui District, Kenya.

Specifically, the objectives of the proposed project are as follows:

- To enhance water retention capacity in the area through construction of sand dams.
- To increase water availability in terms of quantity in the area.
- To shorten the distances to water sources and time taken in search of water.
- To increase the potential for food production in the area.

Project Justification

In Kalia Katune, out of every three seasons, one is a miserable failure. The area has been rocked by incessant droughts and famine since 1868 to date, (SASOL, 1999 and Muticon, 2002). During these droughts, available water points dry up forcing people of Kalia Katune to migrate as far as Thua River, which is 45 km away. This migration has an adverse impact on children's education and health. People who remain in the area get their water from neighboring Tsavo East National Park where they compete with wildlife and livestock. This water is highly contaminated. This scenario presents a threat to human life, survival and development.

Due to the acute scarcity of water in the area, people reuse water. This poses health risks since water for washing clothes is used to bathe children and watering animals. Cooking and bathing habits are adjusted. For example, people cook less meals per day and only foods that do not use a lot of water are prepared, utensils are not cleaned and children are encouraged to stay indoors to avoid getting thirsty too quickly.

This pathetic situation needs immediate intervention. The construction of sand dams will, therefore, significantly contribute to an effective solution.

Project Approach and Methodology

Participation has become one of the dominant ideologies in contemporary thinking regarding development. In a broad sense, it refers to the involvement of persons in situations, which enhance their well being e.g. Income, security, self-esteem and other basic needs including water.

Taken as an empowering process, the approach means enabling the local people to do their own analysis, take command, gain confidence and make their own decisions. In essence, 'we (the agency) participate in 'their' (community) project and not vice versa.

Construction of sand dams in Kalia Katune will therefore employ a participatory methodology involving the following steps.

1. Community mobilization and sensitization through meetings popularly known as community *barazas.*
2. Organizing of familiarization tours to areas where sand dams have been constructed, fully charged and operational.
3. Identification and surveying of sites by the community and technical team.
4. Community work involving mobilization of local resources such as gathering stones, sand and water.
5. Actual construction work by the community members under the guidance of trained masons from SASOL (Sahelian Solutions Foundation)
6. Organizing of training workshops to educate the community on dam management. water use, hygiene and sanitation.

Expected Outputs

At the end of the construction of the two sand dams in Kalia Katune, the following outputs will have been realized.

1. Two sand dams constructed in the area
2. Increased water availability leading to shortened distances to water sources and reduced time in search of water.
3. Enhanced water retention capacity, thereby increasing food production potential.
4. Improved hygiene and sanitation among the people of Kalia Katune.

TIME FRAME

ACTIVITY	**WEEK**									
	1	2	3	4	5	6	7	8	9	10
Stakeholders meeting										
Community mobilization and sensitization										
Familiarization tour to areas where sand dams have been constructed										
Identification and Technical survey of the sites										
Community work (gathering stones, sand, water, digging trenches)										
Actual construction (laying foundation, wall building)										
Training workshop on dam management, water use, hygiene and sanitation										

Reference

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