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**DELIVERING WATER, SANITATION AND HYGIENE SERVICES  
IN AN UNCERTAIN ENVIRONMENT**

**WASH in schools: KINNAPA's experience with pastoralist  
communities in Kiteto District, Manyara Region, Tanzania**

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*Water is a human right that is fundamental for various livelihoods and a basic natural resource for socio-economic development. Access to good water, sanitation facilities and hygiene education promotes good health and enhances national development. This paper describes how the intervention of water, sanitation and hygiene (WASH) projects in 11 rural primary schools, by KINNAPA organization in collaboration with WaterCan, improved school performance and created better learning environments for students from pastoralist families in Kiteto, Tanzania. This paper also highlights the specific challenges of working with pastoralist, nomadic societies, and how focusing on school WASH activities can have a positive impact on hygiene behaviour change in these pastoralist, transient communities.*

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**Background**

Kiteto District is located in the southern part of Manyara Region, Tanzania and covers an area of 16,685 Km<sup>2</sup>. Kiteto District lies 800 – 1500 meters above sea level and has a population of 231,490 (URT, Regional District Projections Volume XII, 2006). Communities can be categorized into three main groups: pastoralists, agriculturalists and hunter gatherers. Pastoralists represent approximately 50% of the district population and their common livelihood pattern is transhumance, which is the practice of migrating to other areas for grazing during certain periods of the year. A growing number of pastoralists also have adapted agro-pastoralism, but a significant percentage of their income comes from rearing livestock (District Environmental Profile, 2004). Open defecation is commonly practiced by pastoralists and it is customary to share facilities with animals and to use cattle sheds as latrines. Only 12 % of pastoralists have access to improved sanitation facilities. There is a lack of knowledge around improved hygiene and sanitation within these communities and this carries into the school environment. In Kiteto, only 8 % of schools have access to safe water sources and only 36 % have access to improved sanitation facilities (Kiteto Environmental Health Report, 2011). The lack of improved WASH facilities, combined with poor hygiene and sanitation practices at schools results in low enrollment rates, high absenteeism, and poor classroom performance. In a report published by the District Education Officer in the district profile document, a lack of adequate water and sanitation services in primary schools is one of the noted as the primary barriers for provision of quality education.

In order to improve education and address these challenges KINNAPA initiated a WASH in Schools project in 2007, with a focus on providing students, teachers and staff with improved access to clean water, sanitation facilities, and hygiene education. The idea was to focus on educating students and empowering them to be agents of change at home and within their communities. KINNAPA's experience shows that the pupils who learnt good hygiene practices in school are now important health promoters at home. This was a critical observation to note in this project as it highlighted a successful way to reach out to transient communities.

## **Context and gender inequality**

WASH in Schools has a significant positive impact both on child health and on education outcomes. Studies show that safe, adequate water and sanitation facilities in schools coupled with hygiene education reduces the incidence of diarrhoea and other hygiene related diseases (WaterAid, 2000; Narayan, 1997; MoWLD, 2002). At the same time, evidence shows that WASH in Schools can have a significant impact on school enrolment for boys and girls, absenteeism, and school performance. In Maasai and other pastoralist societies who traditionally live in remote areas due to livestock keeping practices, the study has found that some of the members do not value education as a tool to liberate them from poverty while others completely do not have financial capabilities to support their children to access studies. In addition, women do not own resources but have a right of enjoyment against the profit or benefit from property. Certain cultural practices are against inheritance of property, and women's participation in decision-making. This has led to socio-economic marginalization of women and pastoralist societies.

Findings from the three villages (Mwanya, Olpopong'i and Partimbo) show that majority of women encountered domestic violence at various scales. Women admitted that domestic violence is seasonal meaning that it becomes worse when men get money from sales of crops and livestock. Some would come home drunk and using abusive language to their wives and children, others would opt to marry another woman or spend money with concubines. To avoid such confrontations women keep silent. In response to that, for some years cultural practices and customary laws have remained the primary influence on daily life and responsible for the subordination of women in social, political and economic life. In relation to gender equality, cultural norms are still the primary influence on daily life, despite the fact that Tanzania has adopted many conventions and passed gender positive legislation. Women's access to land and productive resources are restricted by custom and implementation of women's rights under the land laws is often difficult at local level. This inequality extends to young girls and their role in society. Thus one of the key objectives of the WASH in Schools program was to address gender inequality particularly as it relates to women and girls in pastoralist communities.

## **Mobilization process on implementation of WASH Project**

Mobilization exercise aimed to bring together members of the communities (primary beneficiaries) for the purpose of creating awareness and empowering them to address their concerns and voice up their aspiration to ensure success of the proposed project once started. Participatory approach on intervention of WASH projects in pastoralist communities was effective upon observation and consideration of the following steps; initial involvement of elders as the key informants in the meetings with village leaders (officials), conducting public meetings (general assembly) for project approval, formation of project committees to take role in coordinating all activities related to the proposed project on behalf of the schools and communities (members of the committee were appointed in the public meetings). Effective mobilization process resulted to; participatory planning and discussions for project implementation, involvement of the community members including gender and environmental issues from the beginning, development of elements of accountability and sense of ownership.

## **Project innovation**

Since 2007 KINNAPA has developed key factors that enable successfully implementation of WASH in School activities in Kiteto District. The overarching theme for achieving the desired impact is to use a participatory approach that aligns well with the existing community approach applied in pastoralist communities. KINNAPA works with the local District authorities and community leaders to outline a clear action plan and to assign roles and responsibilities. An MOU is signed by the key stakeholders and community members agree to in-kind contributions. Students, teachers and staff are part of the initial mobilization activities and both women and men and boys and girls are encouraged to actively participate in the decision making processes. This is the entry point for KINNAPA to start to address issue of gender equality at both the school and community level. Over the past six years KINNAPA has focused on appropriate selection of technology, participatory school and community hygiene education and use of school health clubs.

## **Rain water harvesting system with first flush device**

According to the National Water Policy (2002), rain water harvesting is a good source of water supply especially in arid and semi-arid areas where it may prove to be the only reliable source of water during

the dry period of the year. The policy also states that the rain water harvesting technology will be promoted in rural areas. KINNAPA looks at the needs and demands of both the school and the community and how the suggested technologies fit with the national level guidelines. Looking at needs of both the community and the school is critical as the community members make agreements to use the water and facilities at the school. This needs to be done with great care in order to mitigate inappropriate use of the facilities and vandalism by the community members. The tanks adapted for this area are above ground circular Ferro-cement tanks of 30m<sup>3</sup> capacity. The advantages of this type of tank are that the water can be extracted from the tanks by gravity using a tap, operation and maintenance (O &M) is convenient and leaks can be detected and easily repaired. Simple and easy O&M is critical to sustain the facilities and community members that sit on the Water and Sanitation Committee (WatSan) are responsible for this.

### **Ventilated improved pit latrine (VIP)**

VIP latrine option is considered as an appropriate technology in Kiteto specifically for primary schools for the following reasons:

- User friendly to pupils and requires only a small amount of water for personal hygiene;
- Environmentally friendly and easy to clean;
- Operation and maintenance cost is inexpensive;
- Construction cost is affordable and parts are easily available; and
- The pit can be emptied once it is full using local labour.

### ***Construction Processes***

Construction work of rain water harvest tanks (RWHT) with first flush devices and Ventilated Improved Pit Latrines (VIP) with hand washing facilities have been completed at all 11 schools. During construction of these facilities the following activities were carried out; community mobilization, Environmental Impact Assessments, Gender Analysis, purchase and transportation of construction materials from town to site, supporting community on transportation of local materials, hiring of local contractors and managing the contracts, physical construction work and site supervision and monitoring.

### **School sanitation and hygiene education**

The hygiene education conducted involved WATSAN committees, school health clubs, teachers, students and community members. KINNAPA has found that the most effective approaches to improve health and hygiene behavior in pastoralist communities are:

- Community Led Total Sanitation - CLTS (the aim was to provide the community opportunities to think, to do and to address issues in its own way and to make their own decisions to change behavior change; methods and tools included transect walks, mapping of defecation areas, shit calculations and flow diagrams); and
- Participatory Hygiene and Sanitation Transformation – PHAST (used to engender community on ownership of the proposed project and to promote improved hygiene and sanitation).

### **Formation of school health clubs**

School health clubs were formed and trained to encourage positive health and hygiene practices and have been in; stimulating safe hygiene behaviour among children, helping to organise the children for proper use of the facilities, maintaining WATSAN facilities and reaching out into the community.

### **Main results and lessons learnt**

The intervention of water, sanitation and hygiene (WASH) projects in 11 rural primary schools, by KINNAPA organization in collaboration with WaterCan have improved the schools performance and created better learning environments for students from pastoralist families in Kiteto, Tanzania. The implementation was guided with the specific community action plan, clear set of roles and responsibilities among the key stakeholders including; KINNAPA as the implementing agent, KDC as the government which play a role in protection, facilitation and guarantees the implementer as per project requirements and Community as the project owner and direct beneficiary. The ventilated improved pit latrines (VIP) constructed at schools has acted as the demo facilities for the community to change and adapt the technology at households' level resulted to increase in latrine coverage at villages' level. Through rain water harvesting

technology at schools, community has increased knowledge on accessing water from roof catchments including construction of better house roofed with iron sheet. The WASH intervention has improved the performance at schools and 52% of the pupils reported to pass the final exams and joined with secondary education in 2011 compared to other intervention schools which their performance is below 25% (NECTA, 2011). The pupils' attendance record has improved from 10% of absenteeism to 4% per week.

With regards to WASH implementation experience it was found that; water and sanitation facilities should enable, stimulate, and promote appropriate hygiene practices among children and catering specifically to their physical needs. Also, hygiene education through well supported School Health clubs with clear roles and responsibilities could ensure hygiene sustainability behaviour change among the pupils and thereafter at home. Teachers have the same needs as students thus when providing WASH facilities teacher's needs must be considered; this also helps to retain teachers at very remote schools such as pastoralists' schools.

### Conclusions

Provision of water services to primary schools and rural communities is very important as could facilitate improvement of other social and economical services. Also, the availability of water for the school communities ensures efficient utilization of class hours and help to improve school performance. In village communities, reliable sources of water help to reduce longer hours spent for water, and that time is devoted for other development projects. We invite various WASH actors such as investors, donors, companies and other institutions to put more efforts on supporting water and sanitation projects.

### Recommendations

Rainwater harvesting (RWH) projects should be incorporated with other water supply projects particularly to pastoralist society (like gravity schemes, spring protection, shallow/dug wells and boreholes/deep wells) in order to ensure a sense of global benefits as well as encouraging community participation during project implementation.

<b>Boys</b>	<b>Girls</b>	<b>Teachers</b>
2,947	2,641	103



**Figure 1. Poor latrine in use at Mwanya before intervention**



**Figure 2. Improved VIP latrine at Mwanya after intervention**



**Figure 3. Pupil fetching water (Rain water tank DP with locking chamber)**



**Figure 4. Pupils enjoying the completed rain water harvesting system with FFD**

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### Notes

<sup>1</sup> WATSAN committees were formed at each village where respective school is found to supervise the day to day project activities.

<sup>2</sup> KINNAPA Development Programme is community based, non-profit making, Non-Government Organization. It was officially registered on 31<sup>st</sup> January 1992.

<sup>3</sup> Operating environments of villages where the Project is being implemented have been remained stable as far as KINNAPA is able to develop managerial and/or technical capacity to implement projects; beneficiary communities and local authorities actively participated in the project, barriers to girls'/women's participation were then overcome; project activities did not cause/exacerbate environmental problems; on completion of the project beneficiary communities were capable of sustaining the project..

<sup>4</sup> All projects implemented by KINNAPA in collaboration with WaterCan used the Results-Based Management (RBM) methodology. E.g. (a) identified specific, measurable changes that a project will accomplish during its time-frame (b) defined monitoring and adjusting project inputs and activities as needed to ensure that the desired results are achieved, and (c) reported on what was achieved and the lessons learnt.

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