



ONEHEARTSOURCE

A Proposal Concerning Education in Musa Ward

Arusha, Tanzania

Prepared by One Heart Source



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I. One Heart Source and Musa Ward

One Heart Source is an international NGO which delivers high-quality education in rural areas of Tanzania, specifically in regards to serious health issues such as HIV/AIDS and other illnesses. We also teach English and other subjects critical to students' educational success and thus future opportunities in life. The locations of the areas we work in present serious barriers to both the Tanzanian government and large NGOs being able to provide any long-term, consistent help.

The Arusha Department of Education assigned our organization to the Musa Ward in July 2010, in response to our request to be sent to the area most lacking in our area of assistance. Musa is a rural ward in the Arusha District of the Arusha Region of Tanzania. It is known for its relatively low level of development compared to other wards in the district, and is populated almost entirely by members of the Maasai ethnic group who farm and herd livestock in a traditional manner.



The local water source and village center of Musa. (May 2011)

We began working in the Musa community in July 2010, and OHS now has a permanent (year-round) staff presence in the village. At this early stage, our major involvement in the development of Musa Ward has been through our work at the local Secondary School, Musa Secondary School, which is discussed in Section II of this proposal.

In 2011, OHS expanded within the community and began teaching English, General Science, and HIV/AIDS Education at the two nearest primary schools – Musa Primary and Olchorovus Primary – reaching a total of nearly 1,200 students. OHS volunteers also live throughout the community in villagers' homes, running a grassroots community health initiative. We are currently working with village leadership to establish a local *chekechea* class (equivalent to Kindergarten), which has never before existed in such a rural and underdeveloped area. Finally, OHS is cultivating a vision for future larger development projects within the ward, such as a private boarding school and modern medical clinic.



OHS volunteers teaching English to a Form I class at Musa Secondary School. (June 2011)

In short, any funding received towards education in the Musa community will be of great utility and effectiveness in this village, as it is the current home to our projects most in need of financial support.

II. One Heart Source and Musa Secondary School

The overall objective of One Heart Source in Musa is to work towards the sustainable development of the community from a grassroots level. In this effort, the most fundamental step is to improve the existing educational system, and as a result our major involvement in the area thusfar has occurred at Musa Secondary School. OHS volunteers have been teaching HIV/AIDS Education and English to Forms I through IV since August 2010, and in May 2011 began teaching a variety of subjects including Physics, Chemistry, Mathematics, History, Biology, and Geography.

Though our effort has mainly consisted of teaching inside the classroom, it has also expanded to encompass the structural development of the school, as it is increasingly clear that the efficiency of students' learning is dependent on their environment. Working with the headmaster of the school, we have been able to improve the school environment in the following ways:

- April 2011: Installed three-spigot water line for school, the first water source at any school in the ward.
- May 2011: Installed solar panel system on teachers' housing to allow for cell phones to be charged and light at night for preparing the next day's lessons (only power source at any school in ward).
- May – July 2011: Planted over 400 trees on the school campus.
- June 2011: Installed all piping for teacher's bathroom (teachers were previously sharing one bathroom with the 350 students).
- August 2011: Installed 5,000-litre water tank for water reserve during the dry season.

Musa Secondary School is a public school, which means it depends on funding from the Tanzanian government. There are a number of development projects underway at the school, but all are stalled in partial stages of completion due to the inability of the government to effectively allocate resources. The government is often able to initiate public projects in communities like Musa, however, in most cases the work is left unfinished due to a lack of funding.

The most important project which is stagnant at this point is **the completion of two new classrooms in time for the 2012 school year**. The new classrooms are needed to help balance out the over-crowdedness of the existing classes, while at the same time providing space for incoming new students.

III. The Construction of Two Classrooms at Musa Secondary

Goal: To complete the construction (Phases II through IV) of the two classrooms by January 2012, the beginning of the new school year.

Motivation:

1. Reduction of class size.

Despite the significant socioeconomic barriers to their education, the students of Musa are extremely motivated to attend school, many walking well over ten kilometers each way to school (about 3 hours one-way). With so much dedication from the students themselves, the greatest shame is that their educational environment is one in which it is near-impossible to actually learn anything or receive the individual attention needed to thrive. Classrooms are over-populated, and many students do not even have a desk to sit in. For instance, the Form III students (equivalent to Junior year of high school in America) are 89 students in one classroom. As one can imagine, classrooms are so crowded and chaotic that it is difficult for students to learn.

Therefore, one of the central goals of the new classrooms is **to reduce the class sizes of the school**. When we reduce class size, we expect to see a corresponding increase in the individual attention received by each student, thus improving the learning environment for all.

2. Creating enough space to accommodate all Form I candidates in 2012.

Musa Secondary is the only Secondary School for the entire ward of Musa. However, the ward contains *four* primary schools, each of which instructs between 600 and 800 students. These schools are all expected to funnel into the one secondary school, which only has space for about 300-350 students. The math speaks for itself – every year hundreds of students set to enter Form I at Musa Secondary are re-assigned by the government to a new school due to a lack of space. They are then expected to walk to the next nearest school (Einoti or Monduli), which are both 8-12 kilometers away from Musa.

Unsurprisingly, it is extremely unlikely that students will continue their education if they are unable to obtain a space in their first year at Musa. This is especially true for female students, who face unique cultural stigma which limits their access to educational resources. Many parents disregard the importance of education for their children, particularly girls, compared to the opportunity cost of their help with work at home. Also, many female students are taken out of school at an early age in order to be married off to another family in exchange for a lucrative dowry.

As a result, the number of girls in school is heavily disproportionate to that of boys. For example, the number of students per class in 2010 were as follows:

- Form I: 126 students (33 girls and 93 boys)
- Form II: 88 students (20 girls and 68 boys)
- Form III: 57 students (20 girls, 37 boys)
- Form IV: 42 students (11 girls, 31 boys)

If a student is re-assigned away from Musa due to a lack of space, there is little chance that the student, especially if female, will ever continue his or her education. The new classrooms at Musa Secondary would open up approximately 100 new spaces for the 2012 year.



Form III students at Musa Secondary study for their national exams. (June 2011)

In the following section, the projected construction costs of the classrooms are divided into four construction phases, along with a detailed budget for each phase.

III. Costs of Classroom Construction

Phase I: Basic Construction (Foundation and Walls)

Serial #	Type of Tool	Units Required	Price per Unit (TSh)	Total Price
1	Cement (50 kg bag)	100 bags	14,000 / bag	1,400,000 TSh
2	Transportation of Cement	1 truckload	120,000 / truck	120,000 TSh
3	Rocks (Truckload)	6 truckloads	75,000 / load	450,000 TSh
4	Steel Re-Bar (12 mm width)	40 pieces	17,500 / piece	700,000 TSh
5	Steel Re-Bar (6 mm width)	16 pieces	5,000 / piece	80,000 TSh
6	Binding Wire (1 kg bag)	10 bags (10 kg)	2,500 / bag	25,000 TSh
7	Nails (3/4 inch, 1 kg bag)	10 bags (10 kg)	2,500 / bag	25,000 TSh
8	Nylon Fabric (1 m ²)	20 pieces (20 m ²)	1,000 / m ²	20,000 TSh
9	Wood, 6x1 (5m / piece)	26 pieces (130 m)	8,800 / piece	264,000 TSh
10	Wood, 4x1 (5m / piece)	6 pieces (30 m)	7,000 / piece	42,000 TSh
11	Concrete Aggregate (7 tons/truck)	7 truckloads (49 tons)	146,000 / load	1,022,000 TSh
12	Transportation of Aggregate	7 trips	45,000 / trip	315,000 TSh
13	Cinder Blocks	2200 blocks	1,200 / block	2,640,000 TSh
14	Loading/Unloading of Blocks	2200 blocks	50 TSh / block	110,000 TSh
15	Transportation of Cinder Blocks	2 trips	150,000 / trip	300,000 TSh
16	Sand	2 truckloads (42 tons)	300,000 / load	600,000 TSh
17	Payment of Head Fundi	1 unit	1,500,000	1,500,000 TSh
-	Total Cost of Phase 1	-	-	9,618,000 TSh

NOTE: This phase has already been completed by the District Council of Arusha, at the end of the year 2010. However, construction is stalled with no resources available to complete. See pictures on following page to view the current state of the classrooms.

THE CURRENT STATUS OF THE TWO CLASSROOMS AT MUSA SECONDARY AS OF SEPTEMBER 2011
(Phase I only Complete)



From a Distance, with current Form IV classroom (in use) to the Left.



A Side View of the Southern walls



The Current Interior of the Classrooms (no floor)



A view from the Eastern End



View from the East



Interior Views from Both Sides

Phase II: Remainder of Basic Construction (Flooring & Roofing)

Flooring

Serial #	Type of Tool	Units Required	Price per Unit (TSh)	Total Price
18	Rocks (Truckload)	6 truckloads	75,000 / load	450,000 TSh
19	Cement (50 kg bag)	40 bags	14,000 / bag	560,000 TSh
20	Sand	1 truckload (21 tons)	300,000 / load	300,000 TSh
21	Concrete Aggregate (7 tons/truck)	3 truckloads (21 tons)	146,000 / load	438,000 TSh
22	Transportation of Aggregate	3 trips	45,000 / trip	135,000 TSh
23	Labor Charge	1 unit	1,000,000	1,000,000 TSh
-	<i>Total Cost of Flooring</i>	-	-	<i>2,883,000 TSh</i>

Roofing

Serial #	Type of Tool	Units Required	Price per Unit (TSh)	Total Price
24	Iron Roofing Sheets	50 sheets	25,000 / load	1,250,000 TSh
25	Wood, 4x2 (5m piece)	70 pieces (350 m)	8,000 / piece	560,000 TSh
26	Wood, 3x2 (5m piece)	50 pieces (250 m)	7,500 / TSh	375,000 TSh
27	Ridge Flashing (Iron Sheet)	13 pieces (2.5 m each)	6,500 / piece	84,500 TSh
28	Roofing Nails	10 kg	4,000 / kg	40,000 TSh
29	Mixed Nails	10 kg	4,000 / kg	40,000 TSh
30	Fissure Board, 9x1 (5m piece)	17 pieces (85 m)	4,000 / m	340,000 TSh
31	Transportation of All Materials	-	-	500,000 TSh
32	Labor Charge	1 unit	2,000,000	2,000,000 TSh
-	<i>Total Cost of Roofing</i>	-	-	<i>5,189,500 TSh</i>

Total Cost of Phase II: 2,883,000 + 5,189,500 = **8,072,500 TSh**

Phase III: Finishing

Serial #	Type of Tool	Units Required	Price per Unit (TSh)	Total Price
33	Doors (Finished Hardwood)	3	110,000 / door	330,000 TSh
34	Door Frames	3	30,000 / frame	90,000 TSh
35	Door Handles	3	30,000 / handle	90,000 TSh
36	Window Grills	11	100,000 / grill	1,100,000 TSh
37	Window Panes (4mm thickness)	11	40,000 / pane	440,000 TSh
38	Window Putty	60 kg	1,500 / kg	90,000 TSh
39	Window Handles	44	3,000 / handle	132,000 TSh
40	Ceiling Board, 4'x8' pieces	74	12,000 / piece	888,000 TSh
41	Wood, 3x2 (5m / piece)	108	7,500 / piece	810,000 TSh
42	Wood, 2x2 (5m / piece)	15	6,000 / piece	90,000 TSh
43	Nails for Ceiling Board	10 kg	2,500 / kg	25,000 TSh
44	Cement for Plastering (50 kg bag)	35 bags	14,000 / bag	490,000 TSh
45	Lime	10 bags (25 kg/bag)	10,000 / bag	100,000 TSh
46	Labor Charge/Room for Plastering	2.5 rooms	250,000/room	625,000 TSh
47	Water-Based Paint (20L bucket)	10 buckets	30,000 / bucket	300,000 TSh
48	Oil-Based Paint (20L bucket)	4 buckets	40,000 / bucket	160,000 TSh
49	Iron Ferrous Red Paint	40 kg	5,000 / kg	200,000 TSh
50	Labor Charge for Painting	-	-	400,000 TSh
-	Total Cost of Phase III	-	-	6,360,000 TSh

Phase IV: Furnishing

Serial #	Type of Tool	Units Required	Price per Unit (TSh)	Total Price
51	Desks (Table-Chair Combo)	100	75,000 / unit	7,500,000 TSh
52	White Boards	5	100,000 / board	500,000 TSh
-	<i>Total Furnishing</i>	-	-	8,000,000 TSh

NOTE: These numbers represent the most basic required furnishings in order for the classrooms to become operational. Future goals for Furnishing include the installation of a basic electrical system (solar or wind) which would enable a computer and microscope to be added to the classroom. Books, bookshelves, and all school supplies are in desperate need.

TOTALS:

Phase of Construction	Total Cost in Tanzanian Shillings	Total Cost in USD (\$1 USD = 1550 TSh)	Status
I: Basic Construction	9,618,000 TSh	\$6,205.16	Complete
II: Flooring and Roofing	8,072,500 TSh	\$5,208.06	Awaiting Funding
III: Finishing	6,360,000 TSh	\$4,103.23	Awaiting Funding
IV: Furnishing	8,000,000 TSh	\$5,161.29	Awaiting Funding
TOTAL:	32,050,500 TSh	\$20,677.74	-

With Phase I complete, the total remaining cost needed to finish the two classrooms is 22,432,500 TSh, approx. **\$14,472.58 USD**

V. Conclusion

If the classrooms are able to be constructed in time for the 2012 school year, the new space created at Musa Secondary will prevent incoming first-year students from being transferred to distant schools. This would be especially beneficial to at-risk female students. The two classrooms will benefit every student at the school, as all class sizes would be reduced by the new capacity. These two changes in the school system will have positive effects for the youth of Musa today and thus the community of tomorrow. Since the most expensive and difficult part of the classroom construction (Phase I) has already been completed, this is a golden opportunity for a relatively small amount of funding to go a long way in helping hundreds of students.



We prepared this proposal because we feel that it is our responsibility to provide a complete picture of the situation and offer our advice as to how funding can be most effectively applied in Musa. As an organization, we work closely with our donors to ensure that donations are allocated to the most pertinent needs of a community and that donors can be actively involved in the decision-making process. We look forward to discussing the next steps so that we can move forward together.

Thank you,

One Heart Source

www.oneheartsource.org