Matonyok Nomads Development Organization - MANDO
NHIF Building Upper Hill Ragati Road
Nairobi, KY
(+254) 733-94 - 8648
www.mandomaasai.org

Nkuyan school computer center

The MANDO and Ministry of Education through Nkuyan management commiteee have expressed interest to support development of computer lab at Nkuyan school in Kajiado, Kenya. With a strong presence and support base in the county, MANDO facilitated the establishment of the several projects in the school and will provide ongoing support to the proposed computer lab.

Together with the Nkuyan school, MANDO wishes to explore opportunities for the establishment and support of a stand-alone computer resource center at the school. This proposal addresses this and includes the cost of establishing it as well as ongoing support.

Overview of MANDO and Nkuyan school

Founded in 2007, Matonyok Nomads Development Organization (MANDO) is a rapidly growing national NGO. Based in Kenya, MANDO works to improve the lives of the marginalized residents of southern Rift Valley through economic empowerment, education, water and sanitation, advocacy and training a new generation of entrepreneurial, ethical leaders. We do this with educational projects, water harvesting initiatives and skills-training programs; by providing need- and merit-based sponsorships to ambitious girls willing to give back to their communities; by creating awareness of the plight of pastoral nomadic communities; by mobilizing human, financial and technical resources so that residents may lead healthy, productive lives.

We focus on giving young people the opportunity to understand technology increasingly surrounding us and touching almost everything we do. Nkuyan village is in the Kajiado county in Kenya's Rift valley. Children who attend the local primary school come from surrounding Maasai villages. The school started in 2013 with 80 students and now has 357. The youngest are 4-5-year-olds in nursery school, the oldest are in their final year of primary school, Standard 8. Many students walk more than three miles in each direction to attend school each day, often on an empty stomach. Many suffer skeletal fluorosis bone disease because of high fluoride levels in the local water supply.

MANDO has constructed a 50,000 litres water, umndetaken classroom repairs and recent a fully furnished school kitchen with an energy saving cookstoves at the school. With the proposed computer lab; computer lessons will be given on a weekly or bi weekly basis, giving kids aged 7 to 17 the opportunity to learn how to use computers, programs, games and digital media, i.e., generally explore technology in a broad sense.

In addition to technology skills, participants, both the young and adults who accompany them, will enjoy a fun, collaborative, high-energy learning environment. This will result in complementary skills – creativity, innovation, communication, collaboration, teamwork and leadership.

Assessment

The school teachers and MANDO team has been determined that for a more meaningful and impactful program a dedicated building/computer resource center is needed, along with a greater level of support from the core MANDO team.

The objective of this computer resource center would be to:

1) Provide a safe place for children to study computer skills, be mentored and tutored and given the opportunity to practice English
2) Serve long-term computer volunteers and provide office space for our local MANDO volunteers at the community.

Partners

This would entail scaling up an existing partnership with Mando water women group to manufacture Interlocking Stabilized Soil Blocks (ISSB) to construct the computer center.

Mando water women group is a social enterprise led by Maasai women who make ISSBs to build rain harvesting tanks, classroom/buildings construction and pit latrines for half of what competitors charge.

Building with compressed earth is an old concept that has received renewed interest the last 50 years. Innovations in both production and stabilization have made this building method more accessible to communities without extensive training in masonry and much more cost effective than any alternative available on the market.

ISSBs are produced using a press manufactured in Kenya. This press is manual and highly portable and can be used on site without electricity. Once the site for a water tank has been selected, soil is dug from the foundation in the area. The sieved, murram soil is then mixed with a small amount of cement and manually pressed into a block. Upon removal from the press, each block is checked for texture and quality before being stacked to dry. After 14 days, the blocks are fully cured (with no need for firewood). ISSB is an environmentally friendly alternative to traditional, fired bricks, which contribute to deforestation causing mud-slides.

Curved ISSBs can be used to construct water tanks and pit latrines. The “interlocking” aspect means that the blocks connect to others tightly without mortar. This reduces the amount of masonry training required. For an above-ground tank, a foundation of cement and rock is laid. Once cured, ISSBs are used to build the walls of the tank/building. A sealant is applied to the inside of the tank/building to complete the waterproofing process.

The curved bricks are specifically good for water tanks, as the double interlock ensures a tighter fit and protects against leakage. Straight blocks are more for latrines and buildings/classrooms. The density and compressive strength of these blocks are comparable to concrete blocks and weigh approximately half as much, making them versatile and easy to use.

The Mando water women group initiative provides water access, employment, buildings and tanks as well as helps the environment. With MANDO they have constructed eight water tanks and currently have three ongoing latrine projects.

Proposed responsibilities for each partner

Mando water women group – 3500 ISSB bricks, preferably at the site to reduce transportation costs

Nkuyan school – safe custody of materials and bricks, daily records of materials and bricks produced in collaboration with Mando water women group and MANDO. Identification of the site for the computer center. Until this is up and running, day to day computer classes and broadband.

Friends of Nkuyan (USA team) – fund all costs associated with the project as well as introductions to organisations they currently work with that can offer either financial support for construction of the computer center or access to potential volunteer mentors who can visit Kenya and support teachers at the school.

MANDO – responsible for overall project management of the program, coordinating various partners and distributing funds, identifying locations, identifying volunteer sources to complement current school teachers and conduct remote induction sessions, provide reports including individual stories and examples of work. These will be published on our website and can be reissued by all partners.

Location – Nkuyan school in Nkuyan village in Kajiado county, Kajiado west constituency in Ewuaso Kendong ward. Nkuyan school currently has 357 students enrolled.

Cost estimate

Items	Cost (KSH)	Cost (USD)
Foundation/ISSB blocks manufacture		
Foundation labor (5 days, 10 women per day)	32,600	258.62
ISSB manufacture (10 days, 10 women per day)	54,200	429.98
Painting labor for the latrines (3 days, 5 women per day)	12,000	95.17
Location visits	8,000	63.45
MANDO will work with its partners to find suitable location		
Other		
Window bars and steel doors to secure the room, electrical, transport installation as well as chairs and desks (2 doors, 6 windows plus chairs and desks)	40,800	323.59
Nails (kgs)	5,000	39.65
Construction timbers	30,600	242.68
Iron sheets/mabati	40,000	317.22
Cement construction and foundation	34,000	269.62
Water & sand for construction	30,000	237.90

Brick construction and ballast	100,282	795.36
Paint, brushes and other materials	35,000	277.55
Network installation		
Dell Laptops 10 pcs @ KES 25,000	250,000	1,982.71
3.5kva Micro grid Solar Light System for Nkuyan school computer lab (attached quotation from suppliers)	593, 850	4,709.73
MANDO Project management	20,000	158.61
Make sure all elements are running on time and within budget. Reporting and evaluation		
Total	**1,286,332**	**10,202.25**

Expectation – Each computer session will accommodate 20 kids on average (two per laptop @ nine laptops two sessions per week impacting 40 kids. We project running six-week blocks, five per year with a summer break bringing yearly impact to 200 kids.

Those who have completed a term will be encouraged to help as mentors the next term. This will grow exponentially, i.e, after three years and 15 terms graduates will be identified who can take over as mentors with an aim of making the program self-sustaining.

IMPLEMENTATION CALENDAR (Gantt chart)								
	2023							
Act. #	Person responsible	June	July	August	September	October	November	December
1.1 Recruit the women to participate in the brick manufucture	Mando team; Elizabeth							
1.2 Hire the professionals to construct computer lab	Mando team; Project Implentation Unit							
2.1 Get the permit for the computer lab at public school	Nkuyan school; Project Implentation Unit							
2.2 Make 3500 bricks	Mando water women group; Elizabeth Ntukai							
2.3 Buy materials for computer' lab construction	Mando team; Procurement team							
2.4 Hire the mason for the computer lab	Mando team; Project Implentation Unit							
2.5 Construct of the computer lab	Mando team; Project Implentation Unit							
2.6 Solar sytem installation	Mando team; Procurement team							
3.1 Design computer lab and solar system maintenance plan	Mando team; Project Implentation Unit							
3.2 Organize transport for computer lab follow up visit	Mando team; Project Implentation Unit							

Next steps

This proposal has been submitted to Friends of Nkuyan (USA – led by Michelle) school and the next steps will be determined once it has been reviewed.