

# Repair of broken hand pumps in Kenya FF 0504-25

## **2020 Final Report**

For the Eagle Foundation November 2020

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## Summary

This report outlines the progress made by the Osiligi charity team in Kenya from January to September 2020 in the repair of broken hand-pumps. The year 2020 has been a challenging year for doing anything in Kenya. Despite floods, the worst plague of locusts in 70 years and the restrictions imposed by Covid the team were still able to repair 177 pumps at an average cost of  $\pounds 254$  (308 CHF) each. This provided access to water to around 65,000 people in 6,500 homesteads, schools and dispensaries. This was achieved through the donation of  $\pounds 45,000$  by the Eagle Foundation.

## Introduction

The BBC World Service in a broadcast on the 7th October (2020. 20:30) stated that climate change contributed and caused considerable stress in the need and demand to access a water supply. Covid has increased the demand for water for hand washing, WASH activities and by imposing restrictions on movement. This served only to amplify the demand for local water, and to increase the stress on the communities throughout Kenya.

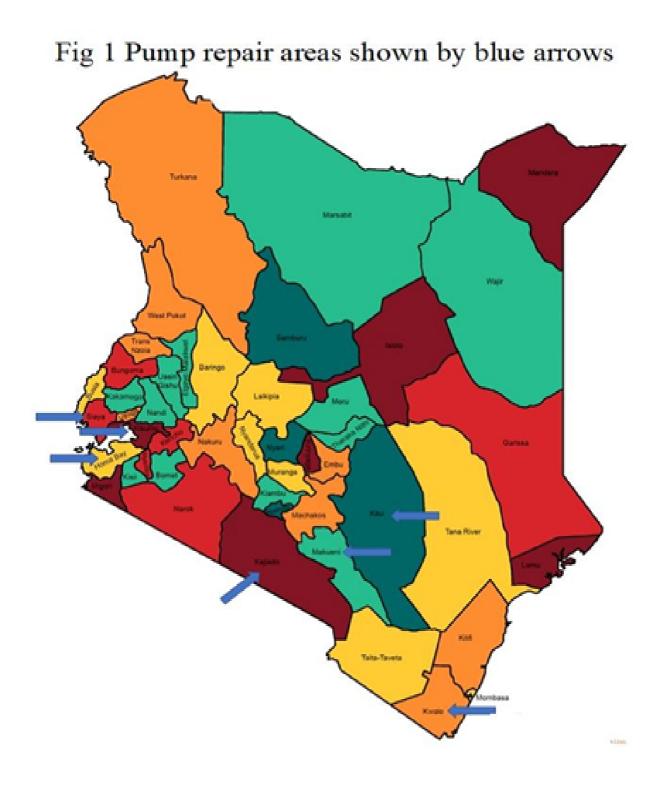
The RWSN study from 2009 concluded that from the installed base of 12,000 hand pumps in Kenya, 3600 hand-pumps (30%) are broken. Although the Osiligi charity has restored over 1000 hand-pumps, there are still many many more to repair.

The aim of the handpump project is to repair the non-functional hand-pumps therefore providing access to groundwater for the rural communities. The failure of a hand-pump means that a rural community, school or dispensary would have to find an alternative source, such as purchasing expensive bottled water or buying from a tanker delivery. Alternatively, walk to and pay a membership fee from a neighbouring community. This may not be affordable and becomes a difficult choice of priority.

Often, the only other choice is an open water source, a river, stream, pond, puddle, rainwater (if storage is available), or an open well. If people go to an alternative hand pump, they may have to travel distances up to 6km from their village. This journey may carry the risk of an attack from a wild animal, a crocodile or person. Young girls can be attacked carrying the threat of pregnancy and HIV infection, which is as much as 25% in some areas. Children run the risk of drowning when collecting water from a river. Water borne diseases can account for 10% of the deaths of the young in some regions from typhoid, cholera, dysentery. Children who have to collect water miss out on their opportunity for a primary and then secondary school education and therefore employment opportunities.

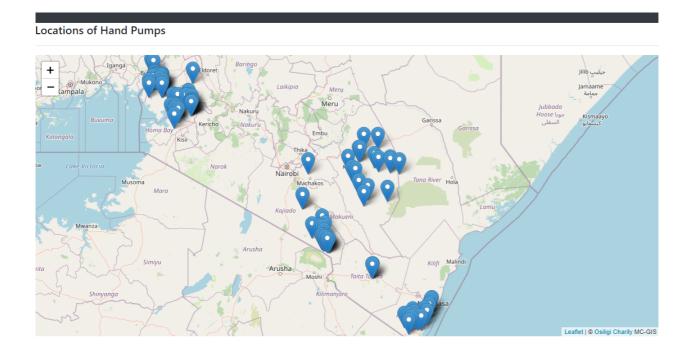
## Locating the pumps.

The map shows where the Osiligi charity is working in the East, Central and West of Kenya. In the regions of Siaya, Kisumu, Homa Bay, Kitui, Makueni, Kajiado and Kwale.



We now geo-map the location of the pumps as shown below.

The Geo-map <u>data is available here</u>. You can click on any pump to see more information such as its name, location, the number of users and the status. The map shows the location and status of 159 of the 177 pumps that have been repaired this year.



## Serving the communities.

Any hand pump that is repaired or a new one installed will need maintenance. So the team encourages the local community to become involved and contribute in the repairs, providing both training and helping them to carry out basic maintenance. Their regional contact team members will always support the community and enable them to access spares for the maintenance of their pump.

## How many people use the repaired pumps?

Our normal estimate is that each pump will serve an average of 250 people. Using 177 pumps repaired X 250 people = 44,250. However, many of the pumps repaired this year were new pumps put into schools, clinics and large villages where the actual number of users is much higher than 250 people. When we ask the communities of the repaired pumps how many will be using the pumps and add these numbers together, we estimate that these 177 pumps will serve 65,000 people.

## What is the cost of a repair?

The average cost of repair is £254 each. Many of the repairs were new pumps onto boreholes that needed extensive repairs.

Last year, with £45,000 we were able to repair 235 pumps that served around 56,000 people

This year, the £45,000 repaired 177 pumps that served around 65,000 people so although less pumps were repaired, they were more expensive repairs in locations that serve a larger number of users. The repair cost per person is around 70p (0.85 CHF).

#### Fancy a drink from a dirty pool?



Why not? This stagnant water is used by humans and animals. Both photos were taken in Kajiado county and emphasises the need to access clean water from a hand pump. The young girl in the 2nd photo is dragging a 20L/20Kg water container back home, until the Osiligi charity was able to repair the hand pump. The alternative source was over 6km away.



## **Coping with the Challenges.**

#### Covid

The restriction of movement and isolation meant that flights were cancelled from the UK to/from Kenya and isolation made travel impossible. Travel between regions for supplies, personnel and materials became dangerous and more expensive. All our costs increased. The Osiligi charity considered putting the project on hold but due to the demand for water and subsequent requests from the local authorities to continue, we had to reconsider our options. Once we received in writing reassurances for safe travel, access to site and appropriate covid sanitation measures the project was reinstated.

#### Flooding - 8th May 2020

It didn't get any easier.



Flooding makes it dangerous to even consider travelling to a rural location, adding to the delay in repair and increased costs. Another consequence of the flooding is pollution and contamination of the area around a borehole or well.

## **Repairing the pumps**

The details for the repair of the pumps between Jan - Sept 2020 <u>are shown in the following spreadsheet</u>. It provides information about the pump, location, type of repair, the team responsible for its repair, alternative sources and cost, how far to travel and the population it serves. Most villages do not know how many people live in the surrounding community, especially if you include children, so when a pump is repaired in a village we have to ask the question, how many people and households does the pump serve?

## **3R's for sustainability**

#### Reduce

Well can you reduce your need for water? You may have to if your demand is greater than the ability of the borehole to recharge itself. So good management in what can be a challenging environment is necessary. Therefore the community must play their part in this management, otherwise the constant pumping of a dry borehole will only damage seals, o-rings and bearings.

#### Reuse

Reuse if possible and necessary if you cannot get the spares to replace a worn out part. Africa doesn't manufacture pumps, they are imported by air or sea. Spare parts are therefore not available or can be expensive to buy.

#### Recycle

Kenyans are very innovative in the manner they can recycle old parts. This can lead to some disreputable practices of temporary replacements that quickly deteriorate. We have seen it many times with pump seals that work today but not tomorrow. This is a common cause of failure encountered by the team. The correct seals only cost a few dollars, if you can find a good source to buy them from. The quality of repairs by the team and the training of the community mean that they are rarely called back for any further maintenance.

## The cost of repairing a hand pump

We have analysed the direct cost to repair 157 pumps. The cost to repair a pump (excluding the delivery cost, time to repair, transport, accommodation, meals etc) is broken down into 5 categories:

A to E. A (24 pumps) is a simple repair where the parts cost less than 5,000Ksh (£35).

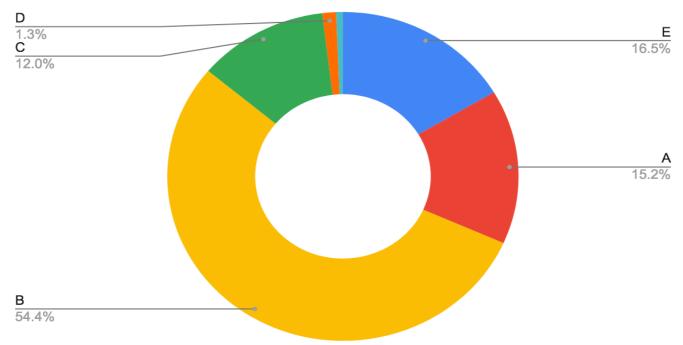
B (86 pumps) is a more extensive repair where more parts are needed at a cost of between 5000Ksh and 25,000Ksh (£35 - £180). A and B repairs can be be done by the community themselves if they have someone available after they have received training

C (19 pumps) is a more extensive repair where the pipes and rods had to be removed. These repairs cost between 25,000 - 50,000Ksh (£180 - £360) and are usually due to a broken pump being left unused for a long time, a pump that has been vandalised or a pump that has worn out due to heavy usage.

D (2 pumps) is the installation of a new pump as the old one was beyond economic repair. The cost is 50,000 Ksh upwards (>£360)

E (26 pumps) is the need for a new pump and extensive repairs, such as civils work or having to employ a contractor to fish out broken risers/rods/rubble from the borehole, and the need to flush the bore-hole because it was blocked. When a new pump is installed, if any of the old parts can be recovered they are either reused or recycled. These expensive repairs can cost up to £1000 each.

## Histogram of Count of Category



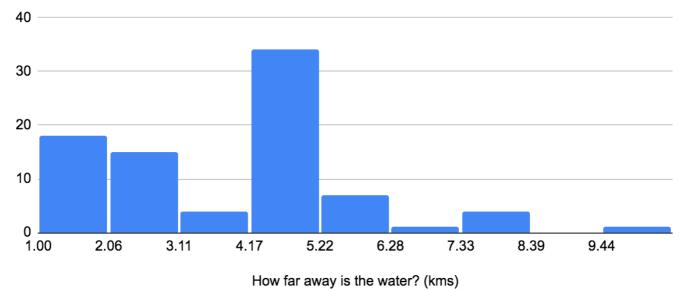
#### How are the costs broken down?

We have analysed how the £45,000 has been spent. About 75% was spent on materials and outside contractors with the rest spent on people and transport costs.

Item	Amount (Ksh)	Percentage
Materials	4,158,946	68%
Accommodation	7,500	0.1%
Outside Contractors	405,000	7%
Educational support	538,000	9%
Transport	425,600	7%
Miscellaneous Petty Cash	598,140	10%
Bank Charges	18,135	0.3%
Totals	6,151,321	100%

#### What is the alternative, what is the cost?

If the community's pump has failed, what is the alternative, an open source that will risk their health or a neighbouring pump that will cost them financially. The typical cost of 20L of water is around 5-10 Ksh.



## Histogram of How far away is the water? (kms)

The above graph indicates how far the person (mainly children) have walked to collect an alternative source of water carrying 20L weighing 20Kg, affecting their health and their education.

#### A sample of the pumps repaired

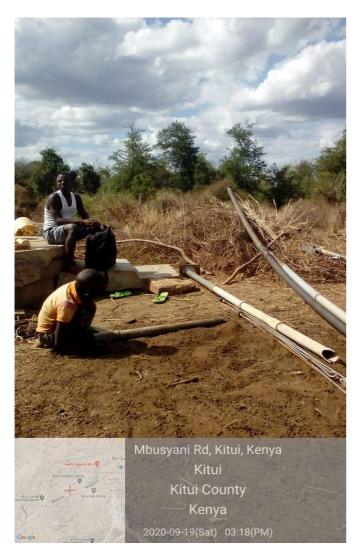
To monitor how the repairs are carried out for each region there is a <u>spreadsheet</u> to track progress, a snapshot version, showing just 19 of these pumps repaired, is shown in the table below:

No	County	Pump Name:	Depth (m)	Water (m)	Population	Type of Repair
1	Kisumu	Magina Health center	50	40	300	New Installation
2	Kisumu	Kanyatoro	30	22	500	Seal, bushes, centralizers
3	Kisumu	Mbogo women group	35	14	700	New Installation, 35m
4	Kisumu	Othith C	17	12	1000	New risers and cylinder
5	Kisumu	Pap onditi traders borehole	15	10	1000	Useal, Bobbin replaced
6	Kisumu	Nyabande water pump	40	30	390	Foot valve replaced
7	kisumu	wasare	140	50	700	Adding one rods
8	Siaya	Nyamula Kathieno	30	19	370	CylinderReplaced Rods 8pcs Rod Centralisers 8pc Main riser pipe 1pc
9	Siaya	Aduwa water pump	17	7	345	Head and cover replaced U seal Plastic bearings Fulcrum and Hanger Pins
10	Siaya	Koketch Water Project	30	8	321	8 Rods and Centralisers Cylinder Replaced 2pcs Risers
11	Siaya	Koketch Water Project	30	8	321	8 Rods and Centralisers Cylinder Replaced 2pcs Risers
12	Siaya	Komol water project	16	13	300	Bolts and nuts 2 stainless steel rods
13	Siaya	Kotit Water Project	45	25	410	
14	Kisumu	Kibogo market	45	7	300	Replaced plunger rod,U seal
15	Kisumu	Cherwa water pump	50	20	400	Replaced one riser,two rods
16	Kisumu	Kasawo primary school water pump	45	25	400	Bushes, U seal
17	Kisumu	Kanyangor primary school water pump	60	20	350	Bushes,U seal
18	Kisumu	Wasare school water pump	40	15	250	Bushes,U seal
19	Kisumu	Aluny community water pump	32	24	300	Rods, U seal

#### Pump repairs in Kitui (Dennis Njogu).

2020 SEPTEMBER KITUI REPORT DN.docx

#### SEPTEMBER 2020 PUMP 1 NGELANI COMMUNITY



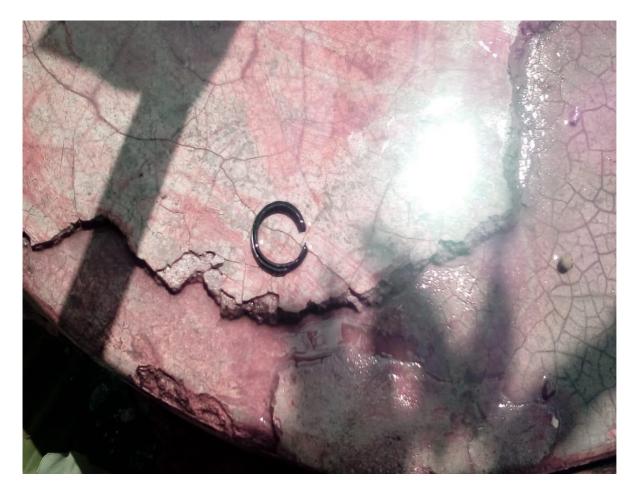
#### SEPTEMBER 2020 REPAIRS PUMP 2 KATHANDE COMMUNITY



#### SEPTEMBER 2020 REPAIR PUMP 3 KWA MWIMWA PUMP



#### SEPTEMBER 2020 REPAIRS PUMP 4 KWA VILIITA



A broken 'O' ring. This small cheap item will stop the pump from working.

					Expenditure	Receipts
Budget	Payment (P)	Pumps	Comment	Jan - Dec	(E)	(R)
Jan	24000 Ksh	1	Flooding	Accommodation	122000 Ksh	129500 Ksh
Feb	104000 Ksh	3		Contractors	160000 Ksh	173000 Ksh
Mar	107000 Ksh	4		Materials	85293 Ksh	83609 Ksh
Apr	63712 Ksh	2		Petty Cash	134500 Ksh	111400 Ksh
Мау		0	Covid	Transport	153340 Ksh	148040 Ksh
Jun	96128 Ksh	4	Demand	Sub totals	655133 Ksh	645549 Ksh
Jul	111000 Ksh	4				
Aug	124000 Ksh	4				
Sep	130000 Ksh	4				
	Waiting					
Oct	approval					
Nov						
Dec						
			University			
Jan	79500 Ksh		fees			
Total	839340 Ksh	26				
Cost/pump	32282 Ksh	£ 248.33				

## Audit January-september (Dennis Njogu) 2020.xlsx

Summary; 26 hand pumps were repaired by Dennis in the Kitui region between Jan - Sept at an average cost of £248.33 per pump, this does not include the extra demands from the restrictions from Covid controls, sanitation, increased delays in the cost and collection, transport and delivery to the site of materials.

#### Encouraging volunteering.

Each 'volunteer' regional contact (Dennis Njogu example above) provides a monthly account of his expenditure and where possible provides receipts. For a brief period in May the project was halted due to COVID restrictions but restarted the following month due to requests from the local authorities that water due to Covid and the increased demand for water and WASH activities was essential.

The volunteers although not paid, have expenses covered and are encouraged to develop life skills and gain qualifications, so contributions are made towards their education fees. Where this is not requested from a volunteer it may be requested for assistance to a partner or sibling. For example the daughter of a volunteer was sent home from school because he could not pay the fees, she went back to school the following day with the fees paid. She completed her studies and because of her grades is now in a good high school. Dennis will at some stage hopefully complete his BSc in logistics. So developing life skills and encouraging education, volunteers are motivated by providing opportunities for employment and in investing in their future.

## Water Quality, why it is so important.

Not only is it essential to gain access to water but it is important to monitor the quality. A repaired handpump/borehole in Kisumu was tested and the results shown below. indicates that water quality from a ground source if properly sampled can be safe as referenced to WHO and KEBS Standards.

**Quote** "Based on the parameter done, turbidity, Iron and fluoride concentration have failed compliance for drinking@ water however the rest of the parameters have complied with the standards for drinking water"

SERIAL NO

1

0200/19-20

Name of

Noe 0746618820

Purpose of sampling. Assessment for drinking water. , ...County of Homa Bay

Sample No

Date Sampled....27/11/2019

Date Received 28/11/2019

WATER RESOURCES MANAGEMENT AUTHORITY				
TITLE: Water Sample Analytical Certificate REF NO: F/9/1/3 -Physical Chemical Results				
	ISSUE NO: 04			
DEPARTMENT: Technical	REVG NO: 03			

ISSUED BY: DTCM	DATE OF ISSUE: 15 <sup>t</sup> April, 2013
AUTHORIZED BY: TCM	PAGE:I of 2

Source Borehole o, n (Kanyangano primary school), Date compiled. e , 4/12/2019

PARAMETERS	UNIT	RESULTS	WHO STANDARDS	KEBS(KS 459-1:2007) STANDARDS
рН	pH Scale	688	605-805	605-805
Color	mgPt/l	5	Max 15	Max 15
Turbidity	N.T.U.	25	Max 5	Max 5
Conductivity (25 C)	PIS/cm	1420	Max 2500	
Odour	mg/l	Sharp smell of Chlorine		
Taste	mg/l	Slightly saline	Max 100	Max 100
Total Hardness	mgCaC03/I		Max 500	Max 300
Total Alkalinity	mgCaC03/I		Max 500	
Chloride	mg/l		Max 250	Max 250
Fluoride	mg/l	3.42	Max 1.5	Max 1.5
Nitrate	mgN03/I	7.0	Max 10	Max 10
Nitrite	mgN02/l	0.01	Max 0.1	Max 0.003
Orthophosphate	mg/l			
Total Dissolved Solids	mg/l		Max 1500	Max 1000
Aluminium	mg/l	00034	Max 0.2	Max 0.2
Ammonia	mg/l	< 0.02	0	0
Iron	mg/l	0.55	Max 0.3	Max 003
Name of analyst	Beryl Aki	nyi Signa	ature	

Comments by head of laboratory:

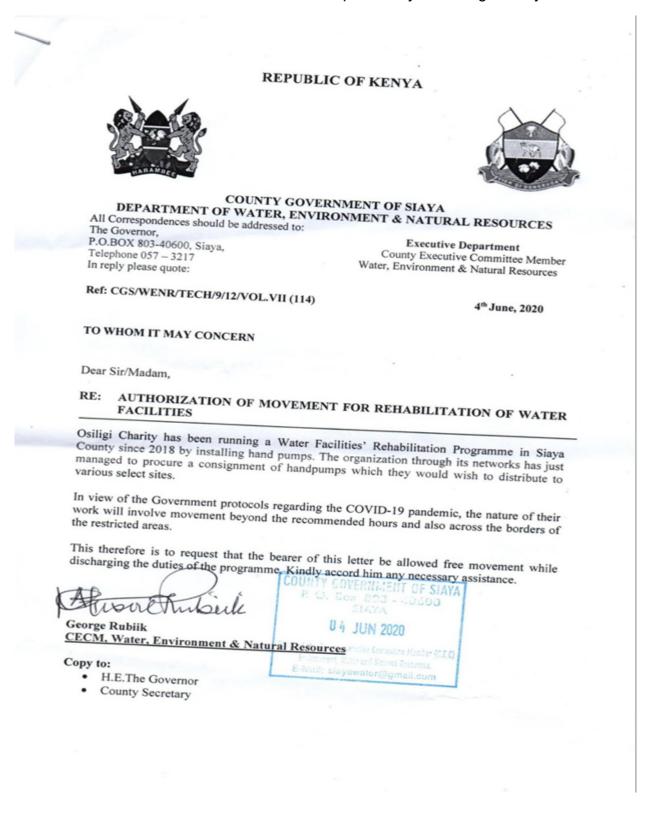
Based on the parameter done, turbidity, Iron and fluoride concentration have failed compliance for drinkin@ water however the rest of the parameters have complied with the standards for drinking water.

Name, Fanuel Onyango

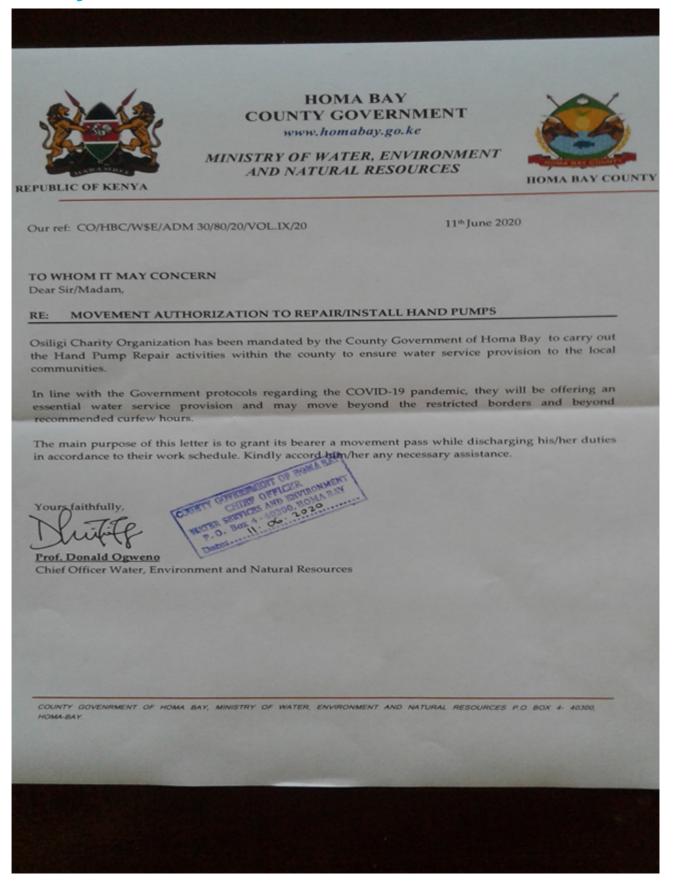
WATER RESOURCES MANAGEMENT AUTHORITY				
TITLE: Water Sample Analytical Certificate -Physical Chemical Results	REF. NO: F/9/1/3			
	ISSUE NO: 04			
DEPARTMENT: Technical	REV. NO: 03			
ISSUED BY: DTCM	DATE OF ISSUE: 15t April, 2013			
AUTHORIZED BY: TCM	PAGE:2 of2			

## **Letters of Authority - Siaya**

Covid imposed restrictions in movement incurring fines if challenged by the authorities, so it was important that the volunteers had documentation that would enable them to move between regions and sub locations. This documentation was requested by the Osiligi charity.



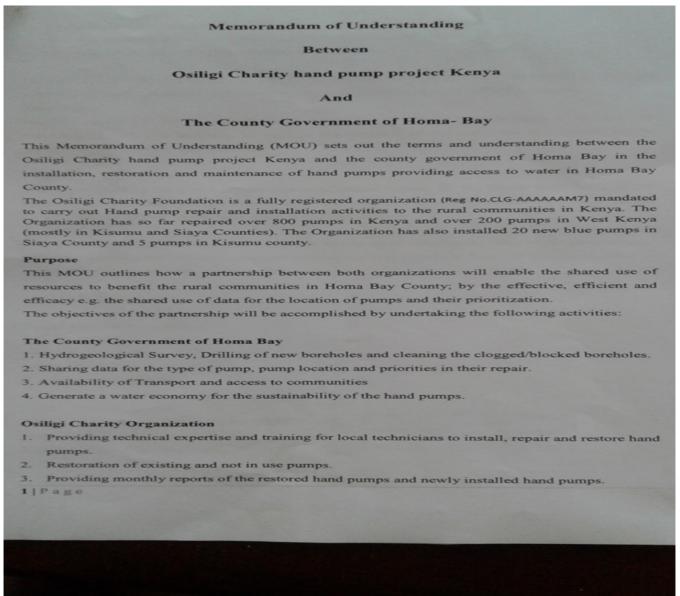
## **Homa Bay**



## Meeting expectations (MOU).

MOU's between the Osiligi charity and Local Authorities (LA's) can be reviewed and renewed on a yearly basis. They provide the opportunity for the regional contacts to discuss the progress they have achieved and what if any amendments either party would like to make. Covid raised the need for support from the LA's to permit access and provide sanitisation. The MOU indicates to a community <u>registered</u> with the LA the and commitment from them and the Osiligi charity. This helps to gain their trust and support. On one occasion we were threatened by someone with a machete. He was marched off site but not after he slapped our vehicle with his machete as we made a rather quick exit.

#### Homa Bay p1.



MOU – Homa Bay p2.

- 4. Sourcing, transporting and installing new pumps in rural communities.
- 5. Training the local communities for their basic maintenance of the hand pump.
- 6. Generate a water economy for installation and maintenance.

The outcome will be a more effective use of knowledge and resources for the benefit of the recommunities as it will enable more hand pumps to be restored in a cost effective manner.

#### Reporting

Monthly reports on the number of pumps repaired with service level agreements, budget expenditure costs will be made to monitor the progress of the outcomes and benefit to partnership and the rural communities

#### Funding

The future funding for pump repairs and installations depend on the future fundraising of Charity funds from the potential donors. The County government of Homa Bay commits to bud for future pump repairs, pump replacements and installations.

#### Duration

This MOU is for a Two years plan renewable at request of either party. This MOU shall beco effective upon signature by the authorized officials and will remain in force but may be modified terminated by any one of the partners through notice.

#### **Contact Information**

#### **Osiligi Charity Foundation**

Victor Ogwenya (P. Eng.)
 Regional Contact Person-West Kenya,
 Mobile: 0720536300.
 E-mail: ogwenya@gmail.com.

#### 2. Prof. Donald Ogweno.

Chief Officer, Water and Environmental Services, Homa Bay County, Email: dogweno54@gmail.com. 2|Page

## **Recognition and appreciation**

THE PRESIDENCY MINISTRY OF INTERIOR AND CO-OPERATION OF NATIONAL GOVERNMENT

## DISCTRICTER: RANGWE SUB - COUNTY OFFICE OF THE CHIEF

SOUTH

TELEPHONE: 0722906616... P.O 40303

WHEN REPLYING, PLEASE QUOTE DATE:...21/09/2020...

RANGWE

LOCATION

KAGAN

## **REF: SKUADMIN/WAT/12/S9**

TO OSILIGI CHARITY ORGANIZATION p.o. BOX

## NAIROBI

## **RE: APPRECIATION**

On behalf of the Kirongo community I wish to convey an appreciation for the donation Of a manual water pump and for the repair of the shallow well.

The pump was timely since it was at the Of COVID 19 period. This donation came at a time when water was being used in every aspect of our daily lives.

The water point is serving Kirongo primary with a pupil population of 500 pupils and over 14 teaching staff\_ The communities around the water point benefiting are over 300 Runilies. This will help in alleviating the clean water problem in the society.

The community will always remain grateful for the donation.

Thank you may God bless you.

Yours faithfully,

Mr. Sospeter Oyugi



SOUTH KAGAN. . CHIEF. SOUTH KAGAN

#### THE PRESIDENCY MINISTRY OF INTERIOR AND CO-OPERATION OF NATIONAL GOVERNMENT

DISCTRICTER: RANGWE SUB - COUNTY

0722906616...

OFFICE OF THE CHIEF SOUTH KAGAN LOCATION TELEPHONE:

WHEN REPLYING, PLEASE QUOTE

P.O 40303

RANGWE DATE:...21/09/2020...

REF: SKUADMIN/WAT/12/S9 TO OSIGILI CHARITY ORGANIZATION p.o. BOX

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Thank you may God bless you.

Yours faithfully,

Mr. Sospeter Oyugi

CHIEF SOUTH KAGAN.

. CHIEF. SOUTH KAGAN

## Stretching the budget, additional project requests

The Osiligi charity has a monthly programme to restore the hand pumps in the rural communities and occasionally additional demands are made on the budget to do more:

Our ref: CO/HBC/W\$E/ADM50/92

17<sup>th</sup> April 2020

Eric McKinnon Osiligi Charity Foundation Project Manager Mobile +447-970-036-307

Dear Sir,

#### **RE: REQUEST FOR A HAND PUMP AT ACHUNE BOREHOLE**

The above subject matter refers.

On behalf of the County Government of Homa Bay, Department of Water, Environment and Natural Resources, I take this opportunity to thank you for the support The Osiligi Charity Foundation had offered for Hand Pump Projects in Homa Bay County and especially at my Kibiri Administrative ward from 2016 to early 2019.

A new Achune borehole which is based in my administrative ward has been drilled and the borehole depth is 130m and Static Water Level is 40m . As a matter of urgency we request your office to facilitate the procurement of the India Mk II pump to be installed as soon as possible to reduce chances of the new borehole blocking.

The MOU is now ready and will be signed after the COVID-19 has ceased to be a threat,

Yours faithfully,

Hon. Michael Odira Chairman, Water, Environment and Natural Resources at the County Assembly.

c.c Victor Ogwenya Regional Contact Person, West Kenya

# REQUEST FOR TWO AFRIDEV HAND PUMPS- 30M DEEP WITH STAINLESS STEEL RODS

The above subject matter refers.

On behalf of the County Government of Kisumu, Department of Water, Environment and Natural Resources, residents of Ombeyi ward and on my own behalf, I take this opportunity to thank you for the support, The Osiligi Charity Foundation has offered towards the Hand Pump Projects in Kisumu County and especially at my OmbeyiAdministrative ward from 2019 to now.

We have successfully constructed and developed two shallow wells of good amount and quality water, they are approximately 30 m deep. As a matter of urgency we request your organization to facilitate the procurement of the Two Afridev pumps to be installed as soon as possible to help our local poor community have access to clean water and also enable them to manage the COVID-19.

Yours faithfully,

Hon. Vitalis Augustine Ogudi Otura

Member of County Assembly.



With the financial help from the Eagle Foundation, we can support such request for hand pumps.

## Education, education, education

As mentioned about, although we do not pay the water engineers, we do support them with education costs against an invoice.

**RCP** - Emanuel Muthcar

September 2019

## NORTH COAST MEDICAL TRAINING COLLEGE



Fee structure Year 1

**Community Health and Development - Certificate** 

			Fees Per Term		
			Item		Costs
1	Total tuition fee – includes:       KES 20,000         Tuition fee       KES 20,000         Infrastructure & Administration       KES 7,500         Teaching &Learning Equipment       KES 3,000         Clinical &Community Attachment       KES 3,000				KES 33,500
2		Jamii Bora 529901	KES 1,000		
3	Bank Account number 2101758493001, Pay bill number 529901 Medical fee - includes acute basic out-patient consultation and lab Expenses for chronic illnesses, admission, or advanced medical care are NOT included				KES 1,500
		Pay	able once (upon admissio	n)	
4	Caution m	oney (deposit) – Re	fundable		KES 3,000
5		avaccination.			KES 2,500
6		on and student ID			KES 3,000
Fe	es for first y	ear			
_	ERIOD AMOUNT FOR MARCH INTAKE FOR SEPTEMBER INTA		and the second se		
TE	RM 1	KES 44,500	March – June	September - December	
TE	RM 2	KES 36,000	July - October	January - April	
TE	RM 3	KES 36,000	November - February	ruary May - August	
PE	R YEAR	KES 116,500			

Meals are provided at the college at an affordable rate on a pay-as-you-eat basis.

NOTES:

- 1. All fees should be paid in full before the start of each term to: North-Coast Medical T: aining College, account number 1190299018990, Equity Bank - Mtwapa Branch (MPESAPAYBILL 247 247), or account number 01147144593600, Co-operative Bank – Mtwapa Branch (MPESA PAYBILL 400200), or through Banker's cheques addressed to North-Coast Medical Training College. Cash payments and personal cheques will not be accepted.
- 2. Payment for student union fees should be paid to Jamii Bora Bank Account number 2101758493001, Pay bill number 529901.
- 3. Receipts for the money paid will only be issued upon confirmation of payment by bank slip or TRAINING QU NORTH statement. 13 FEB 201

80109

Box MTWA

4. Fees once paid are not refundable



#### JOMO KENYATTA UNIVERSITY

# JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY P.O. BOX 62000, CITY SQUARE, NAIROBI, 00200, KENYA. TELEPHONE: (067) 52711, FAX: (067) 52446, THIKA Office of the Registrar (Cacdemic Affairs) E-mail: registrar@aajkuat.ac.ke FEE STRUCTURE FOR MSc. (ENGINEERING BASED) PROGRAMMES FOR KENYAN STUDENTS 2015/2016

## A. FEES PAYABLE DIRECTLY TO THE UNIVERSITY

		THE OTHERSTITY	
FIRST YEAR			
	1ª Semester	2 <sup>nd</sup> Semester	Total
Tuition     Registration     Registration     Examination     Identification card     Identification card     Medical Subscription     Computer/Informet     Laboratory fees     Total	65,000 1,500 3,000 500 1,250 2,000 1,500 	65,000 3,000 1,250 2,000 1,500 25,000 <b>97,750</b>	130,000 1,500 6,000 500 2,500 4,000 3,000 <u>25,000</u> 172,500
SECOND YEAR			
I. Tuition	1" Semester	2nd Semester	Total
Library fees     Computer/Internet     Medical Subscription     Thesis, Project, Portfolio     Total	65,000 1,250 1,500 2,000 25,000 94, 750	70,000 1,250 1,500 2,000 25,000 94,750	140,000 2, 500 3,000 4,000 50,000

94, 750

GRAND TOTAL FEES

362,000

1

189,500

B. OTHERS Estimated Research / computer Lab/ field work

75,000 per research year.

1

94, 750

## **Movement & Authorisation**



Our ref. CO/HBC/WBE/ADM 30/80/20/VOL.D/20

11\* June 2020

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

#### RE: MOVEMENT AUTHORIZATION TO REPAIR INSTALL HAND PUMPS

Onligi Charity Organization has been mandated by the County Government of Homa Bay: to carry out the Hand Pump Repair activities within the county to ensure water service provision to the local communities.

In line with the Government protocols regarding the COVID-19 pandemic, they will be offering an essential water service provision and may move beyond the restricted borders and beyond recommended curles hours.

The main purpose of this letter is to grant its bearer a movement pass while discharging his/her duties is accordance to their work schedule. Kindly accord him/her any necessary assistance.

5203

Yours Saithfully.

Frod. Denald Opvens Chief Officer Water, Environment and Natural Resources

COUNTY COVENEMENT OF ACRES BAY, MINETRY OF MATER, ENVIRONMENT AND NATURAL RESOLUCES FO BOX 4. 40300, HOMA BAY

#### Email 20th May 2020

Dear Sir,

I believe you are doing well and keeping safe despite the restrictions.

This is a consent to allow your office to continue working in order to boost our effort in water provision especially during this time when it is needed the most. So far due to flood several water points have been destroyed that need replacement and your effort on the same would be highly appreciated. My office will facilitate the mask and sanitizers during the operations.

Warm regards

Zacheus Okoth Chief Officer,

Water and Sewerage Services.

Kisumu County

Tel: +254-724 838 268, 0708944444

skype: zacheus.okoth