# *資料－７　その他資料*

*マーケットセンター給水計画*

***7-1 水源評価***

***7-2 水質検査（既存給水施設）***

***7-3 社会条件調査（マーケットセンター給水計画）***

***7-4 取水ポンプ設備の検討***

***7-5 水理計算書***

*ムチンジ井戸修繕計画*

***7-6 井戸調査***

***7-7 水質検査***

***7-8 井戸環境調査***

***7-9 社会条件調査（ムチンジ井戸修繕計画）***

***7-10 井戸修繕、建設計画***

# マラウイ国中西部地方給水計画準備調査

## マーケットセンター給水計画

## 水源評価結果

# 目 次

## １．概要

本調査は、マラウイ国中西部給水計画準備調査の一環として、マーケットセンター給水計画の水源を確定するため、「マ」国から要請された以下の 3 地区とそれぞれの候補とされる水源の特性を調査し、施設計画として設定される需要に対する評価を行ったものである。

（1）ナミテテ・チレカマーケットセンター（リロングウェ県）
（2）ムカンダマーケットセンター（ムチンジ県）
（3）サンテマーケットセンター（カスング県）

調査内容は下表のとおりである。

**表　A 7- 1 － 1　水源調査内容**

| 対象水源 | 調査項目 | 調査方法 | 対象となるマーケットセンター | | |
|---|---|---|---|---|---|
| | | | ナミテテ/チレカ | ムカンダ | サンテ |
| 表流水 | 河川流量 | 観測データの収集整理<br>２観測所、各 10 年間<br>（MoAIWD 水資源局表流水課資料） | ナミテテ川 | リウェレジ川 | なし |
| | 水質（農薬含） | MoAIWD 中央水質試験所に委託<br>物理化学的性質　４サンプル<br>微生物学　４サンプル | | | |
| | | 採水：調査団、試験：日本の機関<br>農薬　２サンプル | | | |
| | 水利権 | 既に設定された水利権の資料整理<br>（MoAIWD 水資源管理局資料） | | | |
| 地下水 | 井戸位置選定 | 電気探査（水平探査・垂直探査）<br>CRWB・調査団協議による候補地域 | ナミテテ２ヶ所<br>チレカ１ヶ所 | ３ヶ所 | ３ヶ所<br>（追加）<br>３ヶ所 |
| | 試掘 | ケーシング径 160mm (PVC)<br>深度 50～80m | | | |
| | 揚水試験 | 段階揚水試験　4 段階<br>連続揚水試験　24 時間<br>回復試験　2 時間以上 | | | |
| | 水質試験 | 各井戸　１試料 | | | |

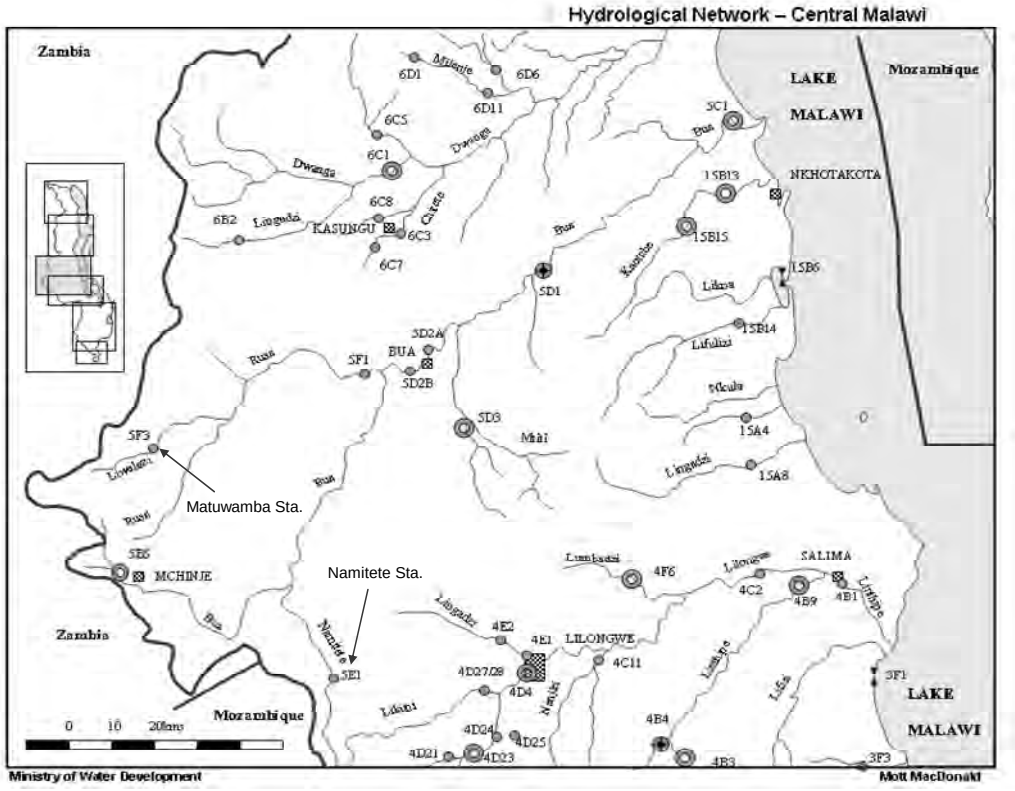
## 1.1 表流水源

### （1）流量観測資料

水資源局の所管する中部地域の水文観測所を、表 A7－1－2　及び図 A7－1－1 に示す。本調査では、ナミテテ川の 5.E.1 及びリウェレジ川の 5.F.2,5.F.3 の３ヶ所の観測所を調査対象としている。

表 A7 － 1 － 2 ナミテテ川とリウェレジ川の水文観測所

| Target Market Centres | Station No. | Name of Station | River Name | Catchments Area ($km^2$) | Year Observation Started | Remarks |
|---|---|---|---|---|---|---|
| Namitete/Chileka | 5.E.1 | Namitete town | Namitete | 147 | 1953.11.17 | |
| Mkanda | 5.F.2 | Mkanda | Liwelezi | - | 1976.10.08 | Stopped after starting observation at 5.F.3 |
| | 5.F.3 | Matumamba | Liwelezi | 278 | 1987.8.27 | Established at 5 km upper stream from 5.F.2 |




Source: NWDP (2003) Strengthening of the Water Resources Board, Ministry of Water Development, National Water Development Project

図 A7 － 1 － 1 「マ」国中部地域の河川水文観測所位置図

### （２）水質試験

水質試験は、対象地域の地下水の特性を把握するために、以下の４地点の表流水と各試掘井戸１試料（計１２試料）について、物理・化学的パラメーター19 項目と微生物学項目（糞便性大腸菌、糞便性連鎖球菌）の試験を行った。表流水の水質試験採水地点を表Ａ７－１－３に示す。

**表　A7 - 1 - 3　表流水水質試験採水地点**

| 対象となるマーケットセンター | 水系 | 採水地点 | 採水年月日 | 備考 |
|---|---|---|---|---|
| ナミテテ/チレカ | Namitete 川 | 国道 M12 橋梁上流側 | 2010 年 10 月 7 日 | 水文観測所 5.E.1 |
| | | Kakuyu ダム | 2010 年 10 月 7 日 | ナミテテとチレカの中間に流れる支流 |
| ムカンダ | Liwelezi 川 | Mkanda 橋上流 | 2010 年 10 月 9 日 | 水文観測所 5.F.2 |
| | | Matuwamba 村 | 2010 年 10 月 9 日 | 水文観測所 5.F.3 |

【水質試験】

① 検査試料: 表流水　4 試料（表 A7 - 1 - 3)、試掘井戸　12 試料

② 分析項目: 下表に示す

**表 A7 - 1 - 4 水質試験項目**

| | |
|---|---|
| 物理的性質：4 | pH Value, Electric Conductivity, Turbidity, Suspended Solids (SS) |
| 化学的性質：15 | Carbonate (as $CO_3^{2-}$), Bicarbonate (as $HCO_3^-$), Chloride (as $Cl^-$), Sulphate (as $SO_4^{2-}$), Nitrate (as $NO_3^-$), Fluoride (as $F^-$), Sodium (as $Na^+$), Potassium (as $K^+$), Calcium (as $Ca^{++}$), Magnesium (as $Mg^{++}$), Iron($Fe^{++}$), Manganese ($Mn^{++}$), Total Hardness (as $CaCO_3$), Total Alkalinity (as $CaCO_3$), Silica (as $SiO_2$) |
| 微生物学的性質：2 | Faecal Coliform , Faecal Streptococci |

【残留農薬の分析】

**表 A7 - 1 - 5 水質試験項目(農薬・殺虫剤)**

| | |
|---|---|
| 被検試料 | ナミテテ川・リウェレジ川の河川水 |
| 分析項目 | DDT (DDD 及び DDB を含む)、アルドリン、クロルデン、ジブロモクロロプロパン、シペルメトリン、ディルドリン、ヘキサクロロベンゼン、ヘプタクロル、ペルメトリン、メトキシクロール |
| 分析方法 | ガスクロマトグラフ質量分析法 |

### 水利権

河川の開発可能量を評価するために、水源管理委員会及び MoIWD へ既存の水利権に関する聞き取り調査を実施した。

「マ」国では The Water Resource Act（Chapter 72:03）に基づき、家庭用水を目的する水利以外については、表流水、地下水ともに水利用者が水利権を灌漑・水開発省水資源局の Water Resources Board に申請する必要がある。水利用者は、水利権費用として初回申請時に 3,000MK（申請用紙の購入費）と申請水利量に応じた年間の水利権料を支払う必要がある。水利権の更新は、表流水で 5 年、地下水で 10 年と規定されているが、更新されていない水利権が存在するものと推定される。

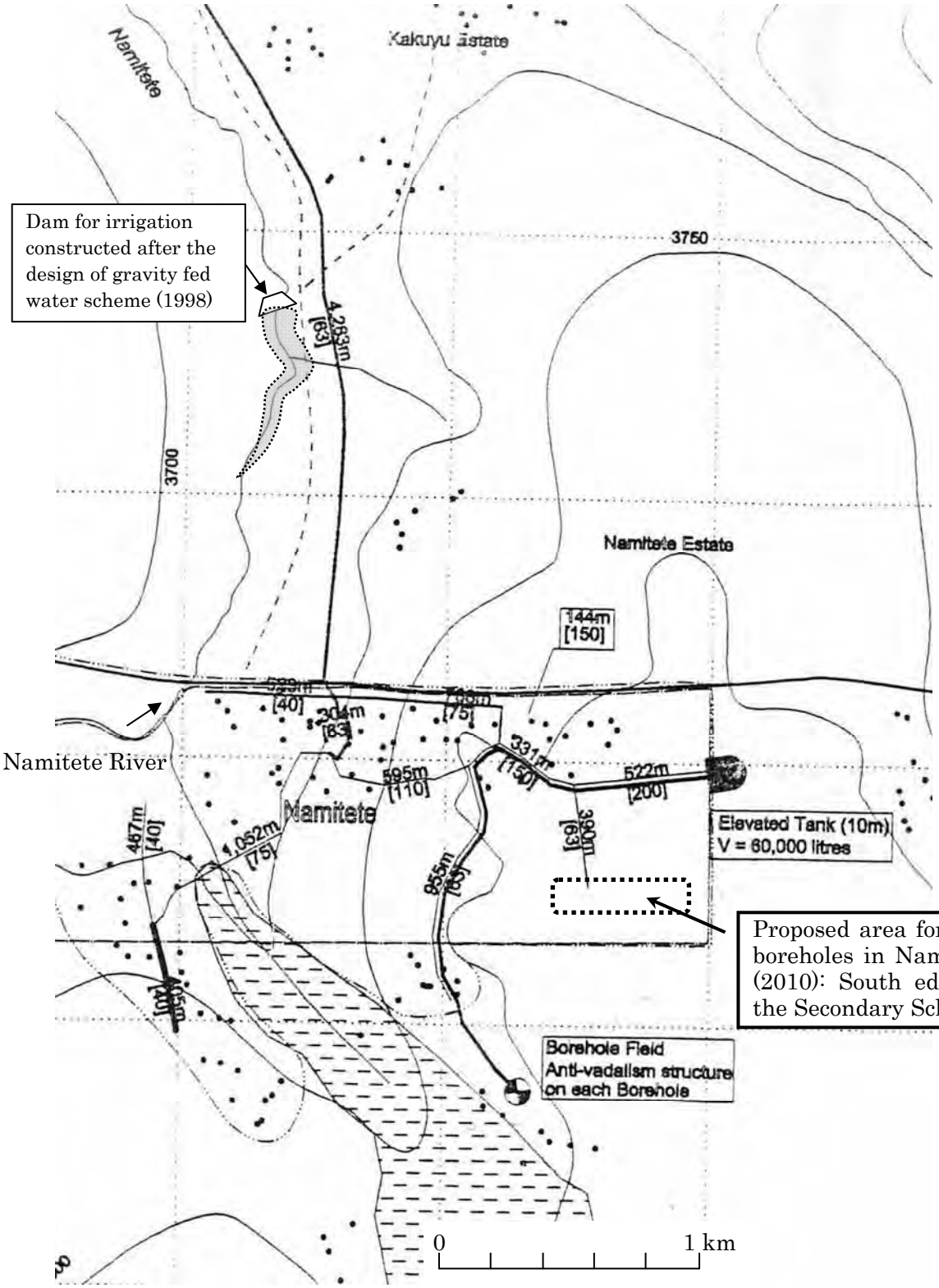
## 1.2 地下水水源

地下水水源の開発可能量を評価するため、2010 年各々のマーケットセンターに３本ずつ計９本の試掘調査を実施した。また、サンテマーケットにおいては 2011 年に追加で３本の試掘調査を実施した。

表 A7－1－1 に示した試掘井戸掘削候補地域は、MoAIWD 及び CRWB の推奨に基づき物理探査を実施し、図 A7－1－2 ～A7－1－4 に示す範囲に選定した。試掘井戸候補地域の選定に際しては、以下の点を考慮した。

- 予備調査[1]で計画された井戸フィールドを参考とする
- 給水区域内、あるいは給水区域に近接する範囲
- 生産井戸として用地取得が可能な範囲
- 既存井戸に近接しない

[1] NWDP(1998),Detailed Design for New Urban and Rural Gravity Fed Water Schemes
NWDP (1998), 16 New Water Supply Schemes Feasibility Study




試掘井戸開発候補地区は、FS 調査（1998）で計画された井戸フィールドに対し、給水区域と井戸フィールドの近傍で用地取得交渉の容易さを考慮し、CRWB、MoAIWD からの推奨・承認を経て中学校用地に決定された。

チレカ地区は、予備調査の対象ではなかったため、事前の計画はなかったが、上記同様に、ADMARC（農業開発マーケティング公社）の敷地内に決定された。

**図 A7 - 1 - 2　FS 調査時の給水施設計画と本調査の地下水開発候補地（ナミテテ地区）**

（出典 NWDP(1998),Detailed Design for New Urban and Rural Gravity Fed Water Schemes に加筆）

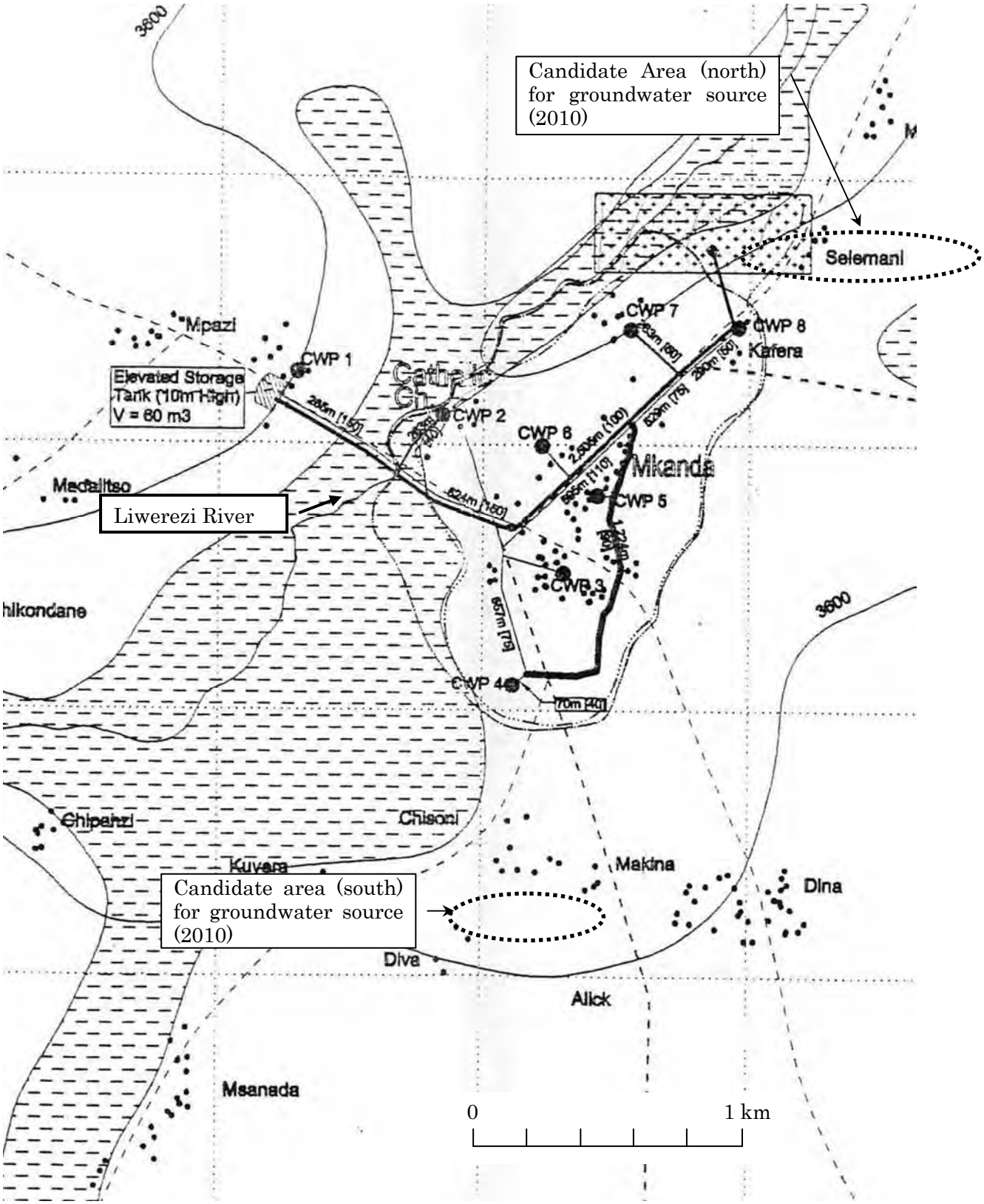



図 A7 - 1 - 3 ムカンダ地区の給水施設配置計画と地下水開発の候補地

（出典 NWDP(1998),Detailed Design for New Urban and Rural Gravity Fed Water Schemes に加筆）

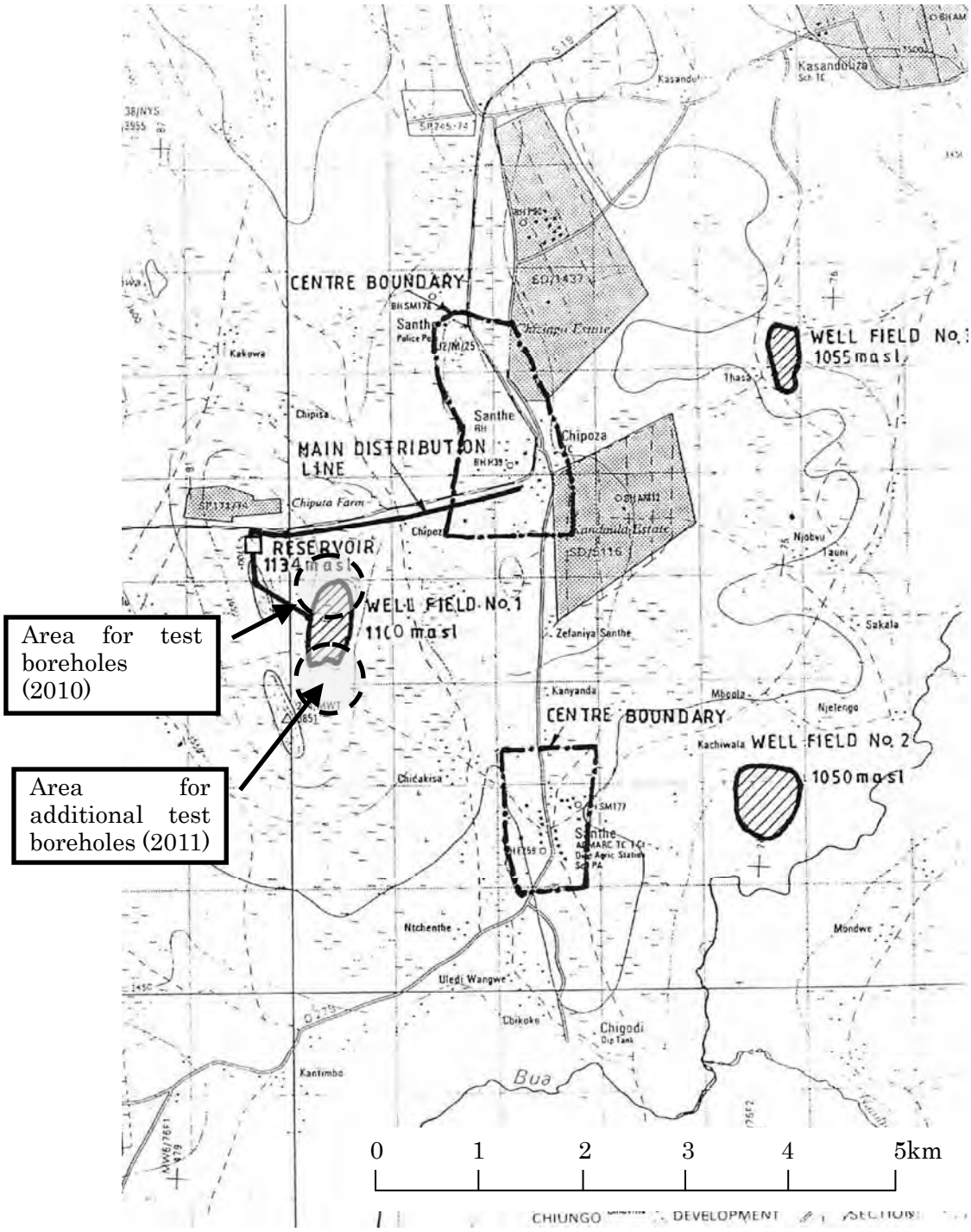



図 A7 - 1 - 4 サンテ地区の給水施設配置計画と地下水開発の候補地
（出典：NWDP (1998), 16 New Water Supply Schemes Feasibility Study に加筆）

## ２．ナミテテ・チレカ地区の水源

### 2.1 表流水

#### (1) 河川流量の変動

ナミテテ川観測所（5.E.1）における過去 10 年間の月別流量（最大、最小及び欠測日数）のデータ及び流況を表 A7 – 1 – 6、図 A7 – 1 – 5 に示す。流量データの値は、毎日定時に観測した瞬間流量($m^3/s$)に基づいている。表に示されている測定期間は全データから可能な限り測定値の連続した期間のデータを選択しているが、最近（２００２年６月以降）のデータは測定されておらず、それ以外でも雨期のデータには欠測が多い。雨期のデータ欠測は河川水位が量水標の最大値を超えていることが原因として考えられる。

MoAIWD 水資源局表流水課が所有する 10 年間（1993～2002 年）の流量データによれば、月別の最小流量として 1 年間の内、8 ヶ月流量が 0（l/sec）となる月がある。また、最大流量でも乾期の後半の 4 ヶ月（8 月～11 月）は流量が 0 (l/sec)となる年がある。

従って、流量の安定しないナミテテ川の河川水をマーケットセンター給水施設の水源とすることは適切ではないと判断される。

表 A7 - 1 - 6 Namitete 川の過去 10 年間の流量 (1993-2002)

過去10年間の月別流量の最大値(m3/s)

| | JAN. | FEB. | MAR. | APR. | MAY. | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1993 | 2.254 | 1.859 | 2.244 | 1.945 | 2.249 | 0.434 | 0.304 | 0.203 | 0.155 | - | - | 0.713 |
| 1994 | 0.445 | 0.379 | 0.694 | 0.302 | 0.103 | 0.045 | 0.025 | 0.025 | 0.018 | 0.018 | 0.025 | 0.370 |
| 1995 | 0.685 | 0.518 | 0.544 | 0.222 | 0.044 | 0.018 | 0.018 | 0.018 | 0.034 | 0.025 | - | 0.291 |
| 1996 | 0.651 | 0.251 | 0.260 | 0.541 | 0.302 | 0.212 | 0.120 | 0.045 | 0.008 | 0.000 | - | - |
| 1997 | - | - | - | - | - | - | - | - | - | - | 0.159 | 4.954 |
| 1998 | 6.572 | 5.040 | 4.454 | 1.189 | 0.427 | 0.165 | 0.064 | 0.000 | 0.000 | 0.000 | 0.000 | 2.091 |
| 1999 | 1.749 | 1.126 | 1.456 | 2.322 | 1.816 | 0.431 | 0.497 | 0.083 | 0.064 | 0.003 | 1.051 | 0.872 |
| 2000 | 0.938 | - | - | 1.855 | 0.230 | 0.080 | - | - | - | - | - | - |
| 2001 | - | - | - | - | - | - | - | - | - | - | - | - |
| 2002 | - | - | - | 1.714 | 0.543 | - | - | - | - | - | - | - |
| Max | 6.572 | 5.040 | 4.454 | 2.322 | 2.249 | 0.434 | 0.497 | 0.203 | 0.155 | 0.025 | 1.051 | 4.954 |
| Min | 0.445 | 0.251 | 0.260 | 0.222 | 0.044 | 0.018 | 0.018 | 0.000 | 0.000 | 0.000 | 0.000 | 0.291 |

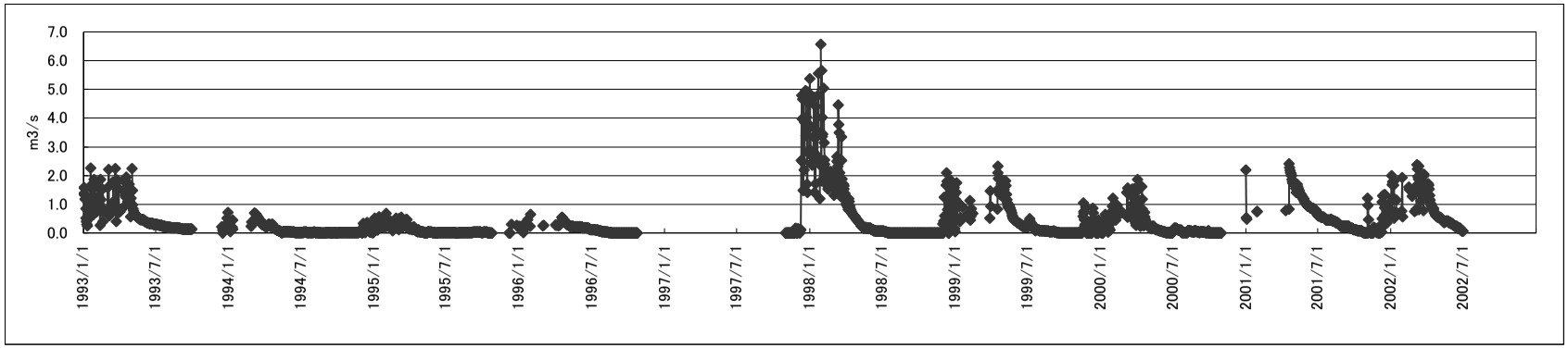
過去 10 年間の月別流量の最小値(m3/s)

| | JAN. | FEB. | MAR. | APR. | MAY. | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1993 | 0.245 | 0.272 | 0.392 | 0.570 | 0.459 | 0.304 | 0.203 | 0.168 | 0.126 | - | - | 0.005 |
| 1994 | 0.054 | 0.233 | 0.296 | 0.118 | 0.012 | 0.012 | 0.012 | 0.002 | 0.003 | 0.008 | 0.012 | 0.006 |
| 1995 | 0.083 | 0.090 | 0.121 | 0.034 | 0.002 | 0.000 | 0.003 | 0.004 | 0.012 | 0.002 | - | 0.000 |
| 1996 | 0.024 | 0.251 | 0.260 | 0.251 | 0.212 | 0.120 | 0.055 | 0.008 | 0.001 | 0.000 | - | - |
| 1997 | - | - | - | - | - | - | - | - | - | - | 0.000 | 0.001 |
| 1998 | 1.191 | 1.532 | 1.258 | 0.430 | 0.165 | 0.064 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 1999 | 0.052 | 0.442 | 0.516 | 0.826 | 0.452 | 0.230 | 0.088 | 0.049 | 0.003 | 0.000 | 0.000 | 0.000 |
| 2000 | 0.000 | 0.409 | 0.262 | 0.241 | 0.081 | 0.002 | 0.015 | 0.015 | 0.009 | 0.001 | - | - |
| 2001 | 0.490 | - | - | 0.784 | 1.054 | 0.638 | 0.452 | 0.230 | 0.123 | 0.000 | 0.000 | 0.000 |
| 2002 | 0.064 | 1.275 | 0.745 | 0.543 | 0.335 | - | - | - | - | - | - | - |
| Max | 1.191 | 1.532 | 1.258 | 0.826 | 1.054 | 0.638 | 0.452 | 0.230 | 0.126 | 0.008 | 0.012 | 0.006 |
| Min | 0.000 | 0.090 | 0.121 | 0.034 | 0.002 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

過去 10 年間の月別流量の欠測日数

| | JAN. | FEB. | MAR. | APR. | MAY. | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1993 | 5 | 13 | 10 | 12 | 1 | 0 | 0 | 0 | 0 | 31 | 30 | 22 | 124 |
| 1994 | 24 | 26 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 61 |
| 1995 | 6 | 16 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 30 | 25 | 90 |
| 1996 | 19 | 28 | 30 | 10 | 0 | 0 | 0 | 0 | 0 | 7 | 30 | 31 | 155 |
| 1997 | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 0 | 3 | 307 |
| 1998 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 6 |
| 1999 | 19 | 21 | 28 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 84 |
| 2000 | 0 | 15 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 31 | 87 |
| 2001 | 26 | 28 | 31 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 108 |
| 2002 | 1 | 24 | 4 | 0 | 0 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | 243 |

Namitete 川流況(全体)




Namitete 川流況(低水流量)

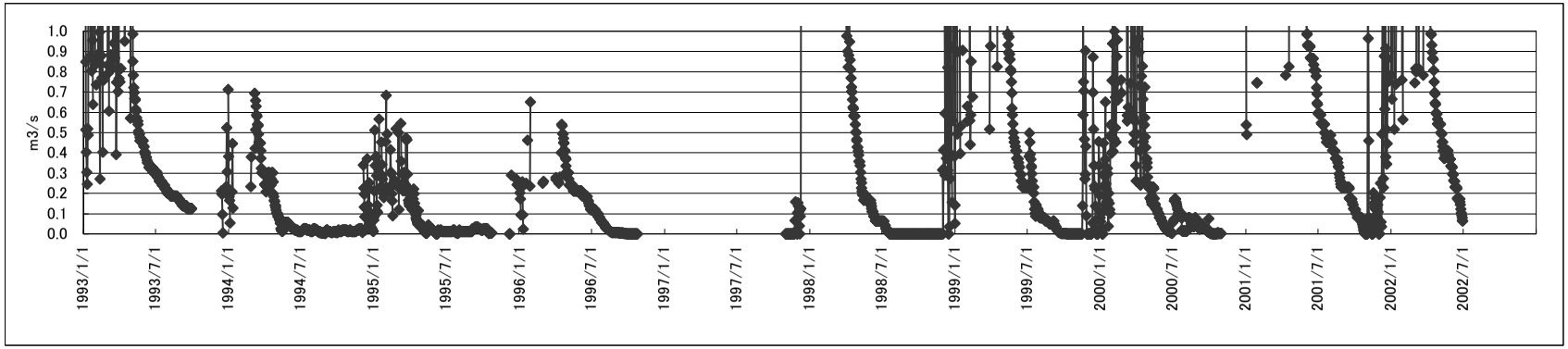



図 A7 - 1 - 5　Namitete 川の過去 10 年間の流況 (1993～2002 年)

### (2) 水質

水源の候補であるナミテテ川(N-1)とその支流にある Kakuyu ダム(N-2)において各 1 試料の水質試験（一般項目および農薬・殺虫剤）を実施した。採水地点を図 A7 – 1 – 6 に、一般項目の試験結果を過去の試験結果と共に表 A7 – 1 – 7 に示す。

水質試験結果をマラウイ国の水道水基準（MS 214: 2005）に照らすと、濁度、鉄分、大腸菌類が基準値を越えている。また、過去の水質試験結果によれば、雨季に pH 値が基準値を越えて高い値を示す試験結果がある。

物理化学的な水質項目については急速ろ過による浄水処理を行えば水質基準を満たすことができる範囲の値であるが、高い値の糞便性大腸菌（270～400/ 100 ml）および糞便性連鎖球菌（70～100 / 100 ml）が検出されており、生活排水や汚水および家畜類の糞尿による汚染が進んでいることを示している。

ナミテテ川で採取したサンプルを日本に持ち込み、農薬・殺虫剤有無の検査を実施した。農薬・殺虫剤の試験項目は、「マ」国内のタバコ栽培農場でよく使われるとされる農薬類とした。残留農薬についての試験結果を表 A7 – 1 – 8 に示す。農薬類は検出されていないが、今回の検査は一般に農薬類を使用しない乾季に採水した試料であることを考慮する必要がある。

表 A7 - 1 - 7 ナミテテ川の水質試験結果（国道 M12 橋梁下，No.682 は Kakuyu ダム）

| LAB No. (Sample No.) | | MS 214:2005 | 303 | 267 | 477 | 519 | 485 | 87 | 683 (N-1) | 682 (N-2) |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | | | 17/09/ ‘98 | 27/2/ ‘02 | 17/6/ ‘02 | 21/10/ ‘03 | 27/9/ ‘04 | 10/?/ ‘05 | 07/10/ ‘10 | 07/10/ ’10 |
| Season | | | Dry | Rainy | Dry | Dry | Dry | Dry | Dry | Dry |
| pH Value | | 5.0-9.5 | 7.3 | 10.09 | 7.43 | 7.4 | 6.4 | 7.43 | 7.57 | 7.59 |
| Conductivity | (µS/cm) | 700-1500 | 158 | 169 | 154 | 519 | 230 | 156 | 230 | 331 |
| Total Dissolved Solids | (mg/l) | 450-1000[a)] | 73 | 87 | 77 | 277 | 111 | 78 | 166 | 166 |
| Carbonate (as $CO3^{2-}$) | (mg/l) | - | 0 | 7 | 0 | 0 | 0 | 0 | 14 | 20 |
| Bicarbonate (as $HCO3^{-}$) | (mg/l) | - | 85 | 19 | 64 | 315 | 100 | 77 | 97 | 139 |
| Chloride (as $Cl^{-}$) | (mg/l) | 100-200 | 2.1 | 50 | 6.2 | 4.3 | 14.4 | 7.4 | 1 | 5.9 |
| Sulphate (as $SO4^{2-}$) | (mg/l) | 200-400 | 3.5 | 35.3 | 3,6 | 1.3 | 7.7 | 3.5 | 2.9 | 3.78 |
| Nitrate (as NO3-) | (mg/l) | 6.0-10.0 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.8 | 0.029 | 0.042 |
| Fluoride (as $F^{-}$) | (mg/l) | 0.7-1.0 | N.A | N.A | N.A | 0.48 | 0.43 | 0.46 | 0.7 | 0.69 |
| Sodium (as $Na^{+}$) | (mg/l) | 100-200 | 9.5 | 8.3 | 8 | 64.8 | 6.1 | 12.2 | 3.8 | 16.3 |
| Potassium (as $K^{+}$) | (mg/l) | 25-50 | 1 | 2.2 | 1 | 1 | 1.2 | 1.4 | 1.8 | 1.1 |
| Calcium (as $Ca^{++}$) | (mg/l) | 80-150 | 12.4 | 15.8 | 9.9 | 27.2 | 20.8 | 13.6 | 23 | 32 |
| Magnesium (as $Mg^{++}$) | (mg/l) | 30-70 | 4.9 | 15.8 | 4.1 | 17.8 | 11.7 | 4 | 8.6 | 9.7 |
| Iron($Fe^{++}$) | (mg/l) | 0.01-0.2 | 1.3 | 1.1 | 1,10 | 0.73 | 0.11 | 0.16 | 0.628 | 0.396 |
| Manganese ($Mn^{++}$) | (mg/l) | 0.05-0.1 | N.A | 0.01 | N.A | N.A | <0.01 | <0.01 | <0.01 | <0.01 |
| Total Hardness (as CaCO3) | (mg/l) | - | - | - | - | - | - | 50 | 93 | 120 |
| Total Alkalinity (as CaCO3) | (mg/l) | - | - | - | - | - | - | 63 | 102 | 147 |
| Silica (as SiO2) | (mg/l) | - | 21 | 13 | 5 | 15 | 6 | 7 | 21 | 17 |
| Turbidiy | (NTU) | 0.1-1 | 10 | 35 | 20 | 10 | 14 | 6 | 13 | 1 |
| Suspended Solids (SS) | (mg/l) | - | 7 | 28 | 17 | 11 | 13 | 5 | 9 | 3 |
| Faecal Coliform | (/100 ml) | 0 in 100ml | | | | | | | 400 | 270 |
| Faecal Streptococci | (/100 ml) | 0 in 100ml | | | | | | | 70 | 100 |

Note: a) Dissolved Solids

表 A7 - 1 - 8 ナミテテ川の水質試験結果（農薬・殺虫剤）

| 農薬名(和名) | 農薬名(英語) | 検出限界<br>detection limit<br>(mg/L) | 分析結果<br>2010.7.10<br>試料 N-1 | WHO 飲料水 水質ガイドライン<br>(mg/L) |
|---|---|---|---|---|
| ディーディーティー<br>(ディーディーディー、ディーディーイーを含む) | DDT*<br>(include DDD & DDE) | 0.001 | N.D. | 0.002 |
| アルドリン, | Aldrin | 0.00003 | N.D. | Aldrin + Dieldrine<br>0.00003 |
| ディルドリン | Dieldrin | 0.00003 | N.D. | |
| クロルデン | Chlordane | 0.0002 | N.D. | 0.0002 |
| ジブロモクロロプロパン | Dibromochloropropane (DBCP) | 0.001 | N.D. | 0.001 |
| シペルメトリン、 | Cypermethrin | 0.02 | N.D. | ー |
| ペルメトリン | Permethirin | 0.02 | N.D. | ー |
| ヘプタクロル | Heptachlor | 0.00003 | N.D. | ー |
| ヘキサクロロベンゼン | Hexachlorobenzene | 0.001 | N.D. | 0.001 |
| メトキシクロル | Methoxychlor | 0.02 | N.D. | 0.02 |

Notes:

N.D.: Not detected (不検出)

DDT: Dichloro-dipheny-trichloroethane (p,p'-DDD, p,p'-DDE, o,p'-DDT, p,p'-DDT を含む)

試験方法： ガスクロマトグラフ質量分析法

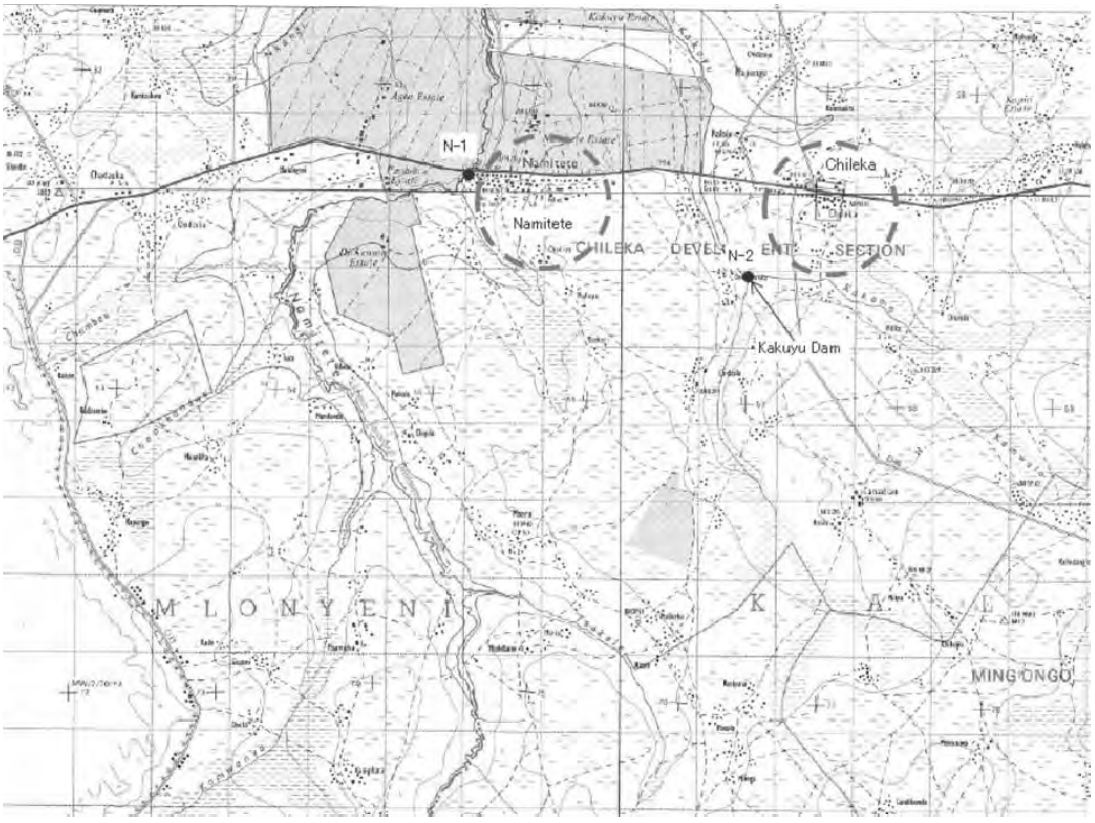



図 A7 - 1 - 6 表流水の水質試験サンプリング位置図

(3) 水利権

現在ナミテテ川に設定されている許可水量を表 A7－1－9 示す。

表 A7 - 1 - 9 Namitete 川の許可水利権量（2010 年 10 月現在）

| No. | 計画対象地点 (M12 上の橋梁) からの位置 | 水利権者 | ライセンス No. | 使用目的 | 水利権量 | |
|---|---|---|---|---|---|---|
| | | | | | $m^3$/day | $m^3$/s/10hr 10 時間で取水 |
| 1 | 下流側 | Press Agric (Lisoka estate) | S19/1993 | Irrigation | 144 | 0.0040 |
| 2 | | Press Agric (Nsangwa estate) | S21/1993 | Irrigation | 288 | 0.0080 |
| 3 | | Press Agric (Kalowe estate) | S23/1993 | Irrigation | 4,800 | 0.1333 |
| 4 | | Press Agric (Namitete estate) | S24/1993 | Irrigation | 3,000 | 0.0833 |
| 5 | | DWK McPherson | S534/1974 | Irrigation | 109 | 0.0030 |
| 6 | | DWK McPherson | S3/1990 | Irrigation | 75 | 0.0021 |
| 7 | | DWK McPherson | S533/1974 | Irrigation, Domestic | 114 | 0.0032 |
| 8 | | DWK McPherson | S16/95 | Irrigation | 800 | 0.0222 |
| 9 | | Kakuyu Investiments | S1/1989 | Irrigation | 19.13 | 0.0005 |
| 10 | | Kakuyu Investiments | S46/1985 | Irrigation | 120 | 0.0033 |
| 11 | | Gulugulu Estate | S17/2008 | Irrigation | 94 | 0.0026 |
| 12 | | N.A | N.A | Irrigation | 432 | 0.0120 |
| 合計 | | | | | 9,995 | 0.2776 |

出典：Water Resources Management Board,MoAIWD

ナミテテ川（M12 上の橋梁から 20km 下流の範囲）の水利権量を表 A7－1－6 に示した河川流量と比較すると、一部の年の雨季を除き、流量以上の水利権が設定されている。

## 2.2 地下水

### (1) 物理探査による試掘地点の選定

試掘井戸の掘削候補地としてナミテテ地区ではナミテテ中学校の敷地南端に沿った範囲、チレカ地区では ADMARC の敷地の南端に沿った範囲において土地使用の了解が得られた。

この準備調査の計画では、ナミテテ／チレカマーケットセンターを対象として試掘井戸を 3 箇所掘削するので、両地区の人口規模から、ナミテテ地区 2 箇所、チレカ地区 1 箇所の試掘地点を選定するため電気探査（水平探査および垂直探査）を実施した。まず、上記の敷地境界部に沿って水平探査を行い、深度 80m に帯水層と想定される比抵抗値（30～200Ω－m）が認められる地点（ナミテテ地区で 4 点、チレカ地区で 3 点）を選定し、各点において行った垂直探査の結果を比較し、井戸試掘地点を選定した。選定に当たっては、帯水層に相当する比抵抗値の層厚が厚いこと、なるべく試掘井戸の間隔を広くとる方針とした。

水平探査の測線・垂直探査地点、水平探査の結果、垂直探査の結果（深度－比抵抗値の分布）を図 A7－1－7 から図 A7－1－10 に示す。

ナミテテ地区では、深度 80m の比抵抗値が非常に低い（10～30Ω-m）ことが特徴であり、粘性土か、あるいは電解質の多い水質の悪い地下水帯水層と考えられる。このような場合には、井戸を掘りすぎないよう掘削深度を設定することが肝要であり、垂直探査地点は水平探査の深度 80m で周辺よりやや高い比抵抗値（50Ω-m 前後）を示す地点を選定して、比抵抗値の垂直分布を計測した。その結果、帯水層と考えられる地層は、深度 16～24m 分布する 60～195Ω-m の地層、あるいはそれ以下、深度 70～75m までに分布する 18～30Ω-m の地層と考えられたため、掘削深度 72m として試掘井戸を計画した。

チレカ地区では、深度 80m の比抵抗値が帯水層として期待できる 100～150Ω-m にあるため、周辺より比抵抗値の低い地点を選定して、垂直探査 3 点を実施した結果、帯水層は深度 30～35m までに分布する比抵抗値 83～100Ω-m の地層、あるいはそれ以下深度 45～65m までに分布する比抵抗値 225～380Ω-m の地層と判断された。試掘地点は、比抵抗値 225～380Ω-m の地層が最も深くなる地点を選定した。ここでは、基盤に水質の問題がないので井戸底のサンドポケットも考慮して 72m を予定深度とした。

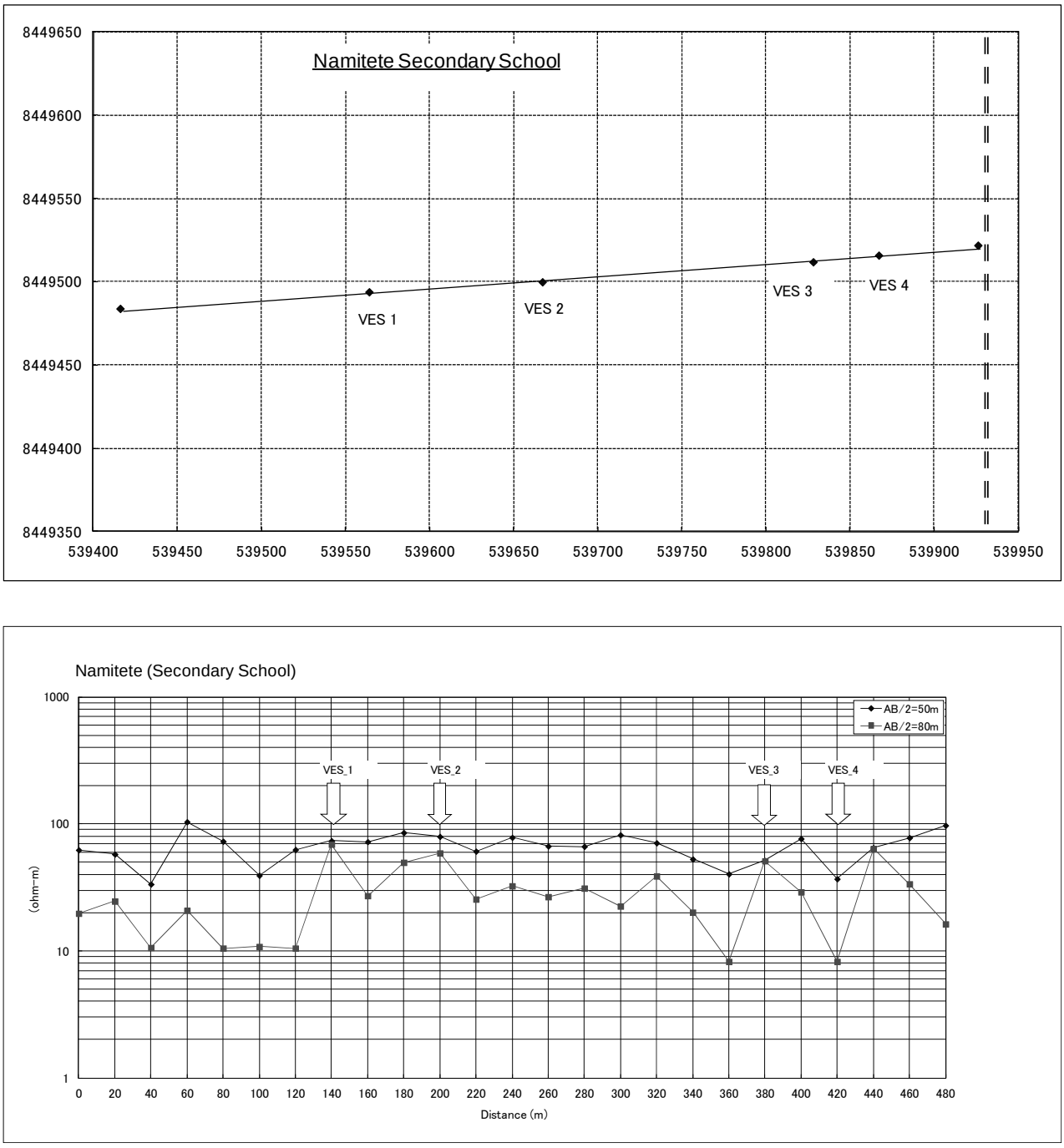



図 A7 - 1 - 7 ナミテテ地区水平探査測線位置および比抵抗分布に基づく垂直探査位置の選定

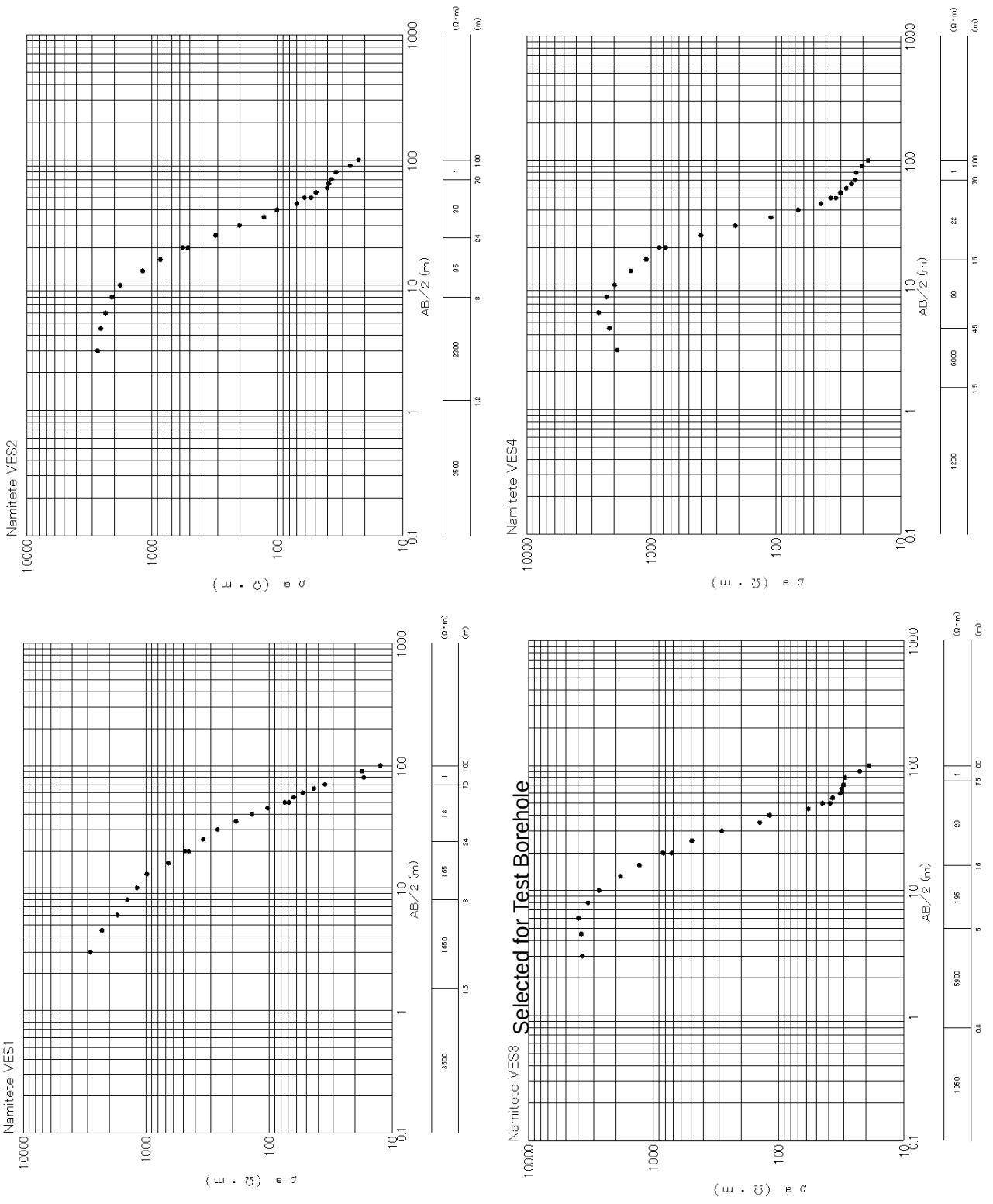
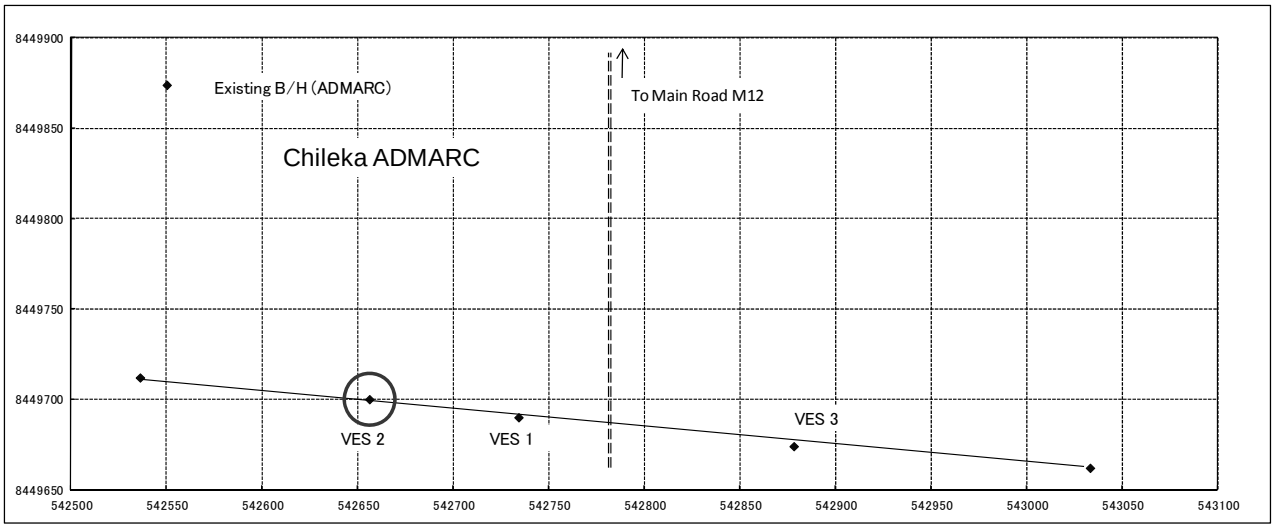



図 A7 - 1 - 8　電気探査（垂直探査）結果－ナミテテ地区－



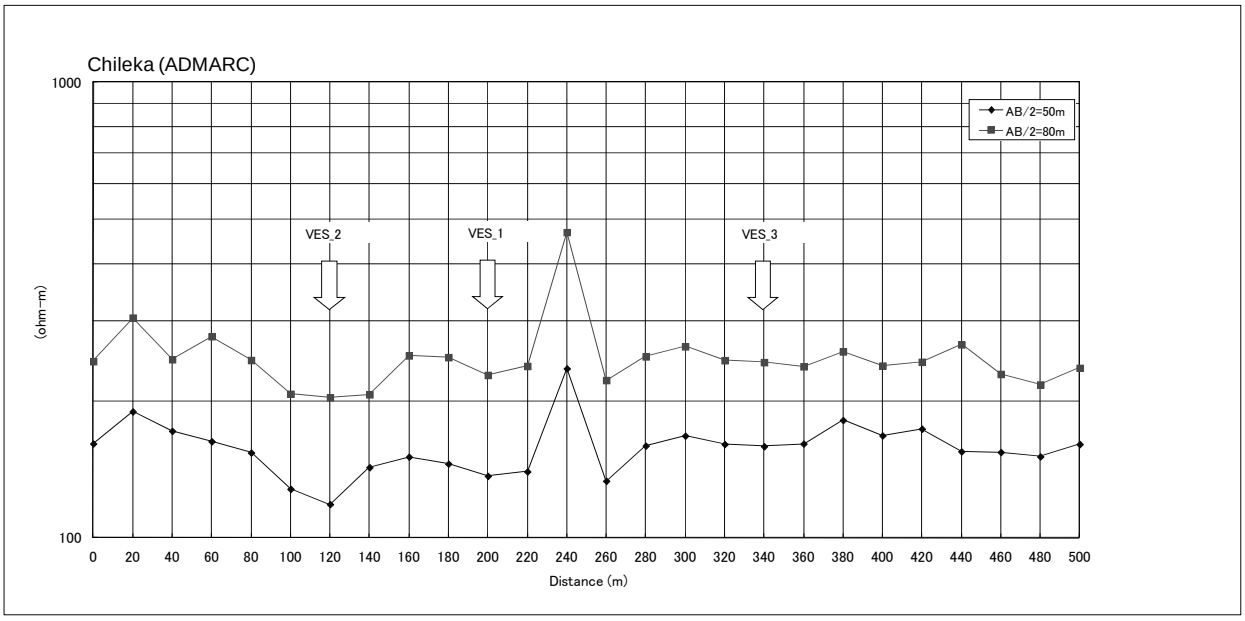




図 A7 - 1 - 9　チレカ地区水平探査測線位置および比抵抗分布に基づく垂直探査位置の選定

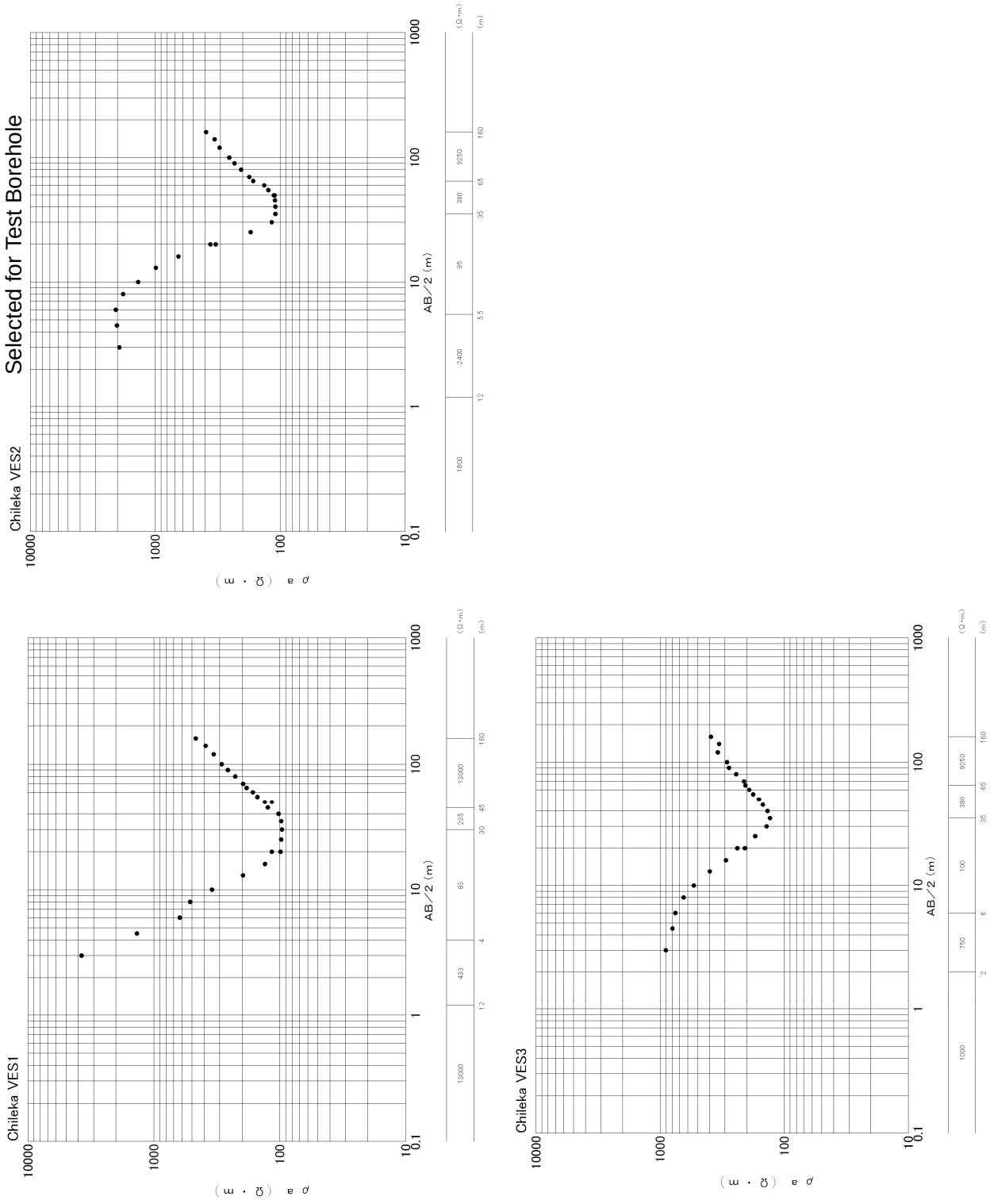



図 A7 - 1 - 10　電気探査（垂直探査）結果－チレカ地区－

### (2) 試掘

電気探査の結果と掘削機械の据付可能性に基づき、3 箇所の試掘井戸の位置を表 A7 – 1 – 10 および図 A7 – 1 – 11 に示すとおり決定した。

試掘調査の結果は、地質状況、井戸構造、静水位、動水位（連続揚水試験時）を示す柱状図として図 A7 – 1 – 12 に示した。

試掘の結果、主たる帯水層は、ナミテテ地区では深度 45m 前後より浅く分布し、チレカ地区では 54mより浅く分布していた。スクリーンの設置深度は、掘削中に把握された概略湧水量とその深度に基づいて設定された。

表 A7 - 1 - 10 試掘井戸位置

| BH No. | Coordinate* | | Remarks |
|---|---|---|---|
| | Easting | Northing | |
| NC-1 | 542653 | 8449398 | Chileka ADMARC (VES-2) |
| NC-2 | 539870 | 8449222 | Namitete Sec. School (VES-3) |
| NC-3 | 539669 | 8449212 | Namitete Sec. School (VES -2) |

*WGS 84/ UTM

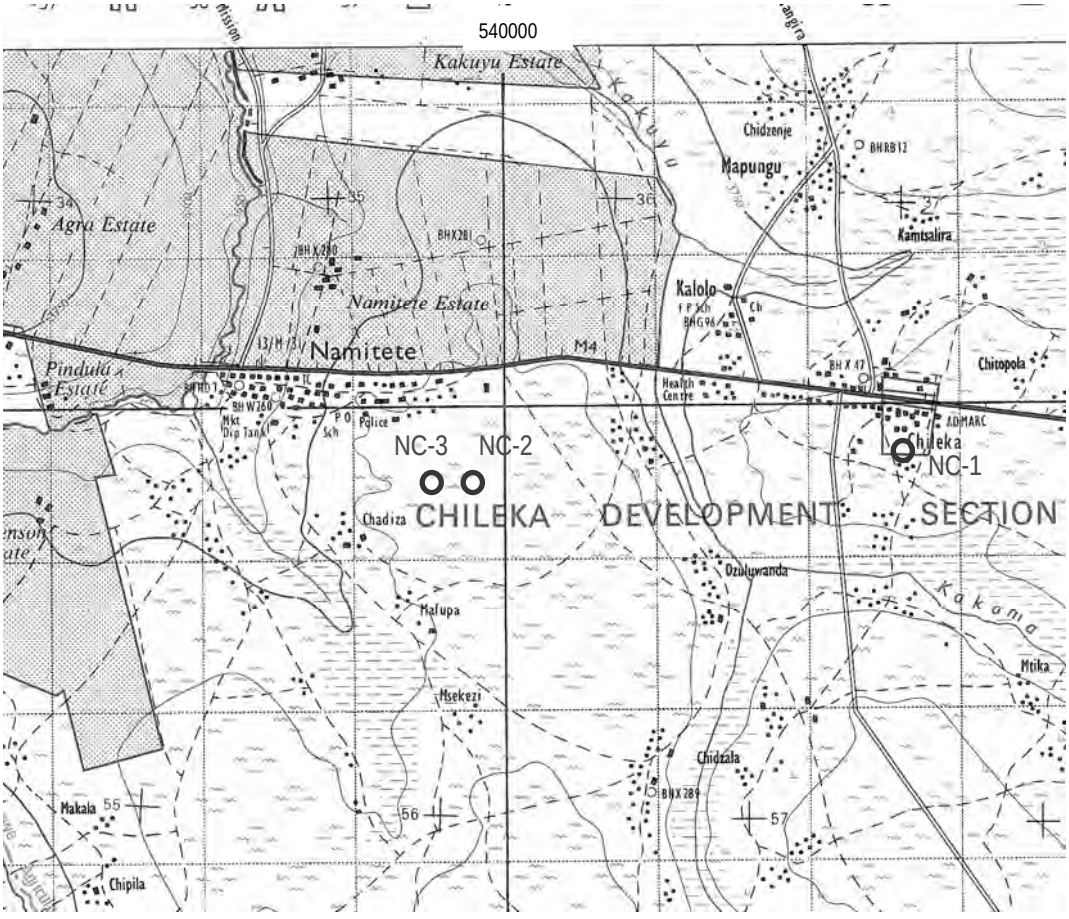
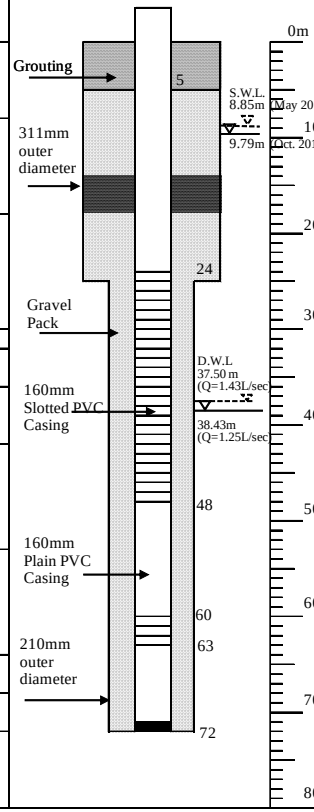



図 A7 - 1 - 11 試掘井戸位置図（ナミテテ・チレカ地区）

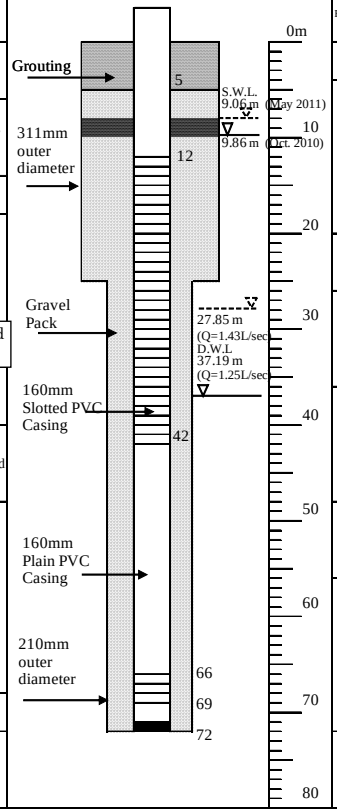
Location : Namitete Sch. BH2
BH No. NC - 3

| From | To | Lithology |
|---|---|---|
| 0 | 8 | Red top unconsolidated soil |
| 8 | 18 | Graysh brown medium grained and sediments with micaceous clays |
| 18 | 30 | Ditto as above but fine grained and with more clay percentage |
| 30 | 32 | Brown clayey soils |
| 32 | 36 | Gray,wet fine to medium grained sediments drills into fine clays |
| 36 | 42 | Coarse grained mottle of weathered rock sediments |
| 42 | 58 | Gray coarse grained mottle of sediments |
| 58 | 64 | Medium grained micaceous gneiss rock sediments; drills into quartzite rock sediments |
| 64 | 68 | Coarse grained mottle of micaceous sediments |
| 68 | 72 | Fine grained micaceous quartzite rock intercalated with biotite gneiss rock |



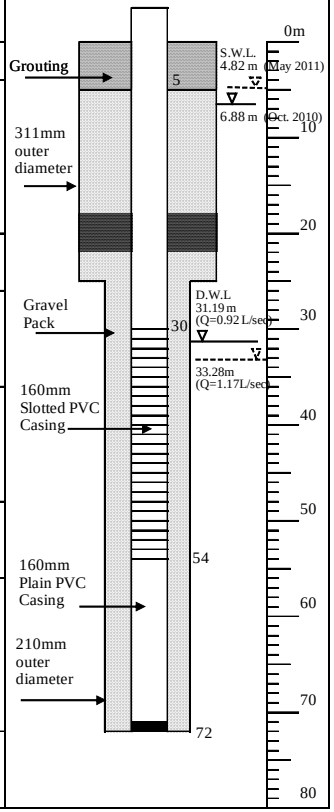

Location : Namitete Sch. BH1
BH No. NC - 2

| From | To | Litho logy |
|---|---|---|
| 0 | 6 | Red Top soil |
| 6 | 14 | Reddish brown very fine clayed soils (sticky) |
| 14 | 18 | Reddish brown fine micaceous clays;drills into fine sediments |
| 18 | 32 | Yellowish brown medium grained sediments; drills into fine micaceous rock sediments |
| 32 | 34 | Grey medium to fine grained weathered rock sediments |
| 34 | 40 | Graysh brown coarse grained rock sediments |
| 40 | 48 | Medium grained Gray gneiss rock sed |
| 48 | 68 | Fine grained Gray gneiss rock sediments ; drilles into small rock aggregates |
| 68 | 72 | Ditto as above but drills into quartzite rock sediments |




Location : Chileka BH1
BH No. NC - 1

| From | To | Lithology |
|---|---|---|
| 0 | 4 | Red top soils |
| 4 | 20 | Gray fine grained, well sorted unconsolidated sediments with yellow clays |
| 20 | 26 | Gray sticky silty clays; drills into very fine grained micaceous sediments |
| 26 | 36 | Gray medium grained loose sediments with less micaceous clays |
| 36 | 48 | Weathered brown mottle of coarse grained unsorted sediments |
| 48 | 56 | Medium grained micaceous gneiss rock sediments |
| 56 | 72 | Ditto as above but fine grained |




NC-3 (Namitete 2)　　NC-2 (Namitete 1)　　NC-1 (Chileka)

図 A7 - 1 - 12 試掘井戸柱状図・井戸構造図 (Namitete Chileka Market Centre)

### (3) 揚水試験

揚水試験の水位降下曲線を図 A7－1－13 から図 A7－1－15 に示す。

段階揚水試験の結果（表 A7－1－12、図 A7－1－16)、比湧出量（Q/s）は揚水量の増加とともに徐々に低下する傾向にあるが、最大揚水量（Q = 1.48～1.67 L/sec）まで急激な低下に転じる変曲点（限界揚水量）は認められない。したがって、連続揚水量を各井戸の最大揚水量の 76～97%で設定して 24 時間の連続揚水試験を実施した。

今回の揚水試験は、2010 年 10 月に掘削した井戸について、雨季明けの 2011 年 5 月に実施しているため、掘削時の揚水試験と比較すると、静水位には 0.8～2.1m の上昇がみられ、比湧出量（水位降下量１ｍ当りの揚水量（m3/hour/m））にも 0.012(Chileka), 0.109 (Namitete 1)および 0.023 (Namitete 2)の増加が認められる（表 A7－1－13 参照)。したがって、安定的に揚水できる水量は、今回の揚水試験結果の他に、乾季における自然水位の低下や揚水能力の低下を考慮して設定する必要がある。

以上の点を考慮して、試験井戸の安定的な揚水量を以下のように設定する。

**表　A7 - 1 - 11　試験井戸の安定的な連続揚水量**

| 試験井戸 | 安定的な連続揚水量 (L/sec) | 設定理由 |
|---|---|---|
| NC-1 (Chileka) | 1.2 | 乾季の静水位の低下がやや大きいため、雨季の最大揚水量(1.54 L/sec)の約 80% |
| NC-2 (Namitete 1) | 1.25 | 乾季の比湧出量低下が激しいため、雨季の最大揚水量(1.67 L/sec)の 75% |
| NC-3 (Namitete 2) | 1.25 | 乾季に比湧出量の低下を考慮し、雨季の最大揚水量(1.48 L/sec)の 85% |

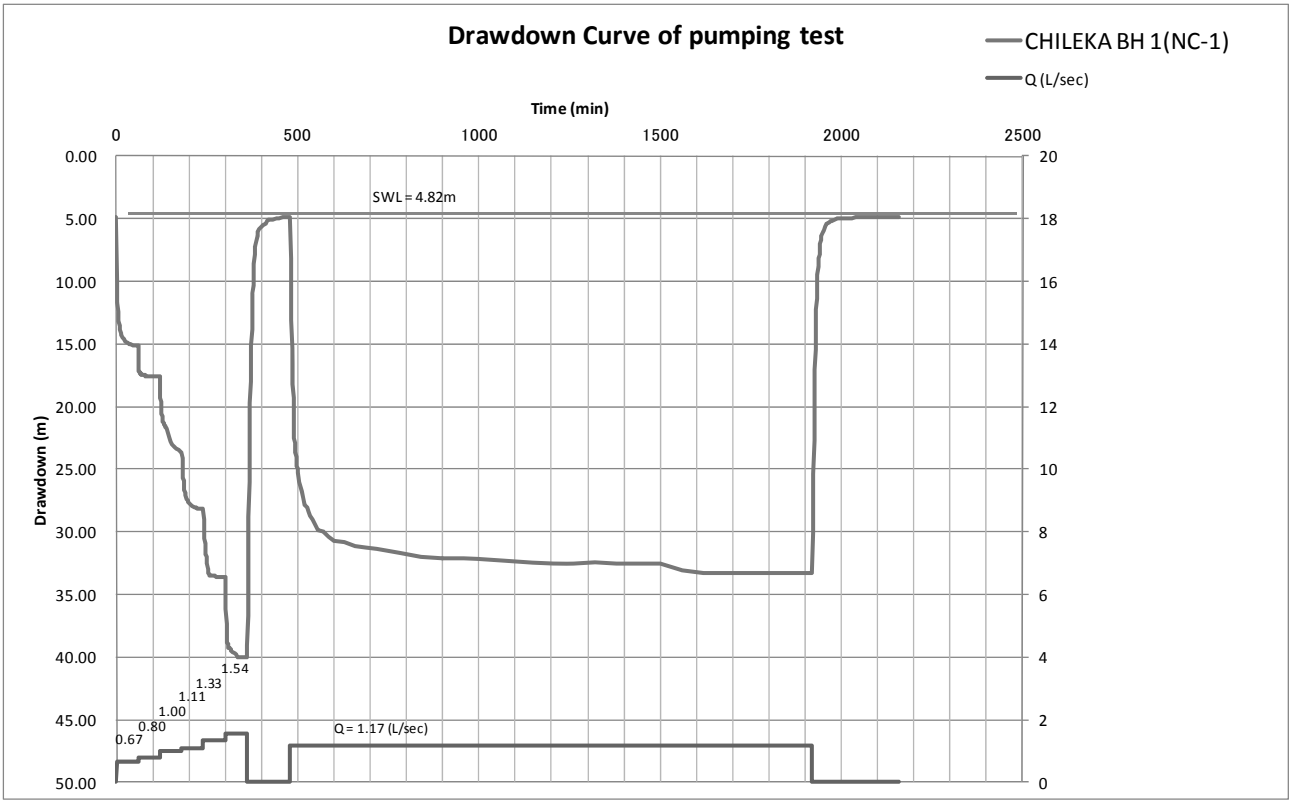



図 A7 - 1 - 13 揚水試験時の水位降下曲線（Chileka BH1 (NC-1)）

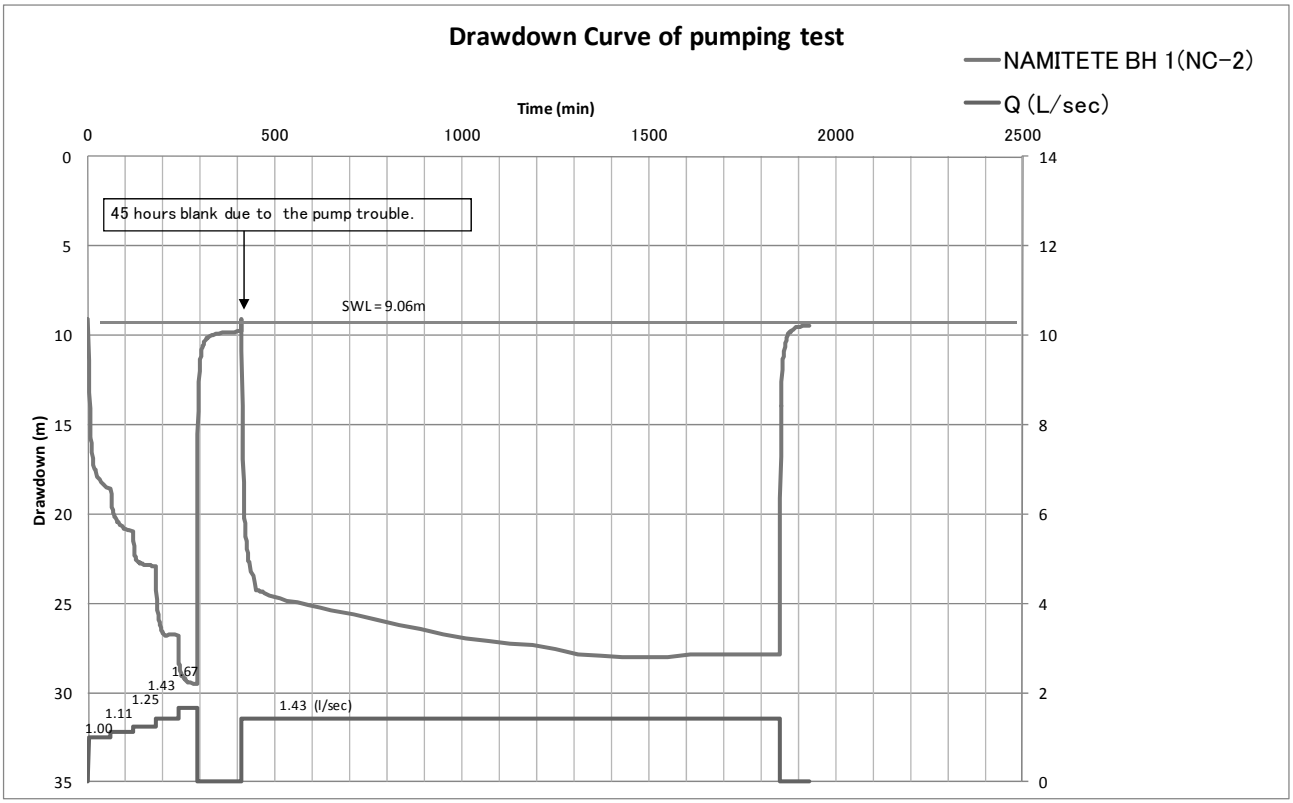



図 A7 - 1 - 14 揚水試験時の水位降下曲線（Namitete BH1 (NC-2)）

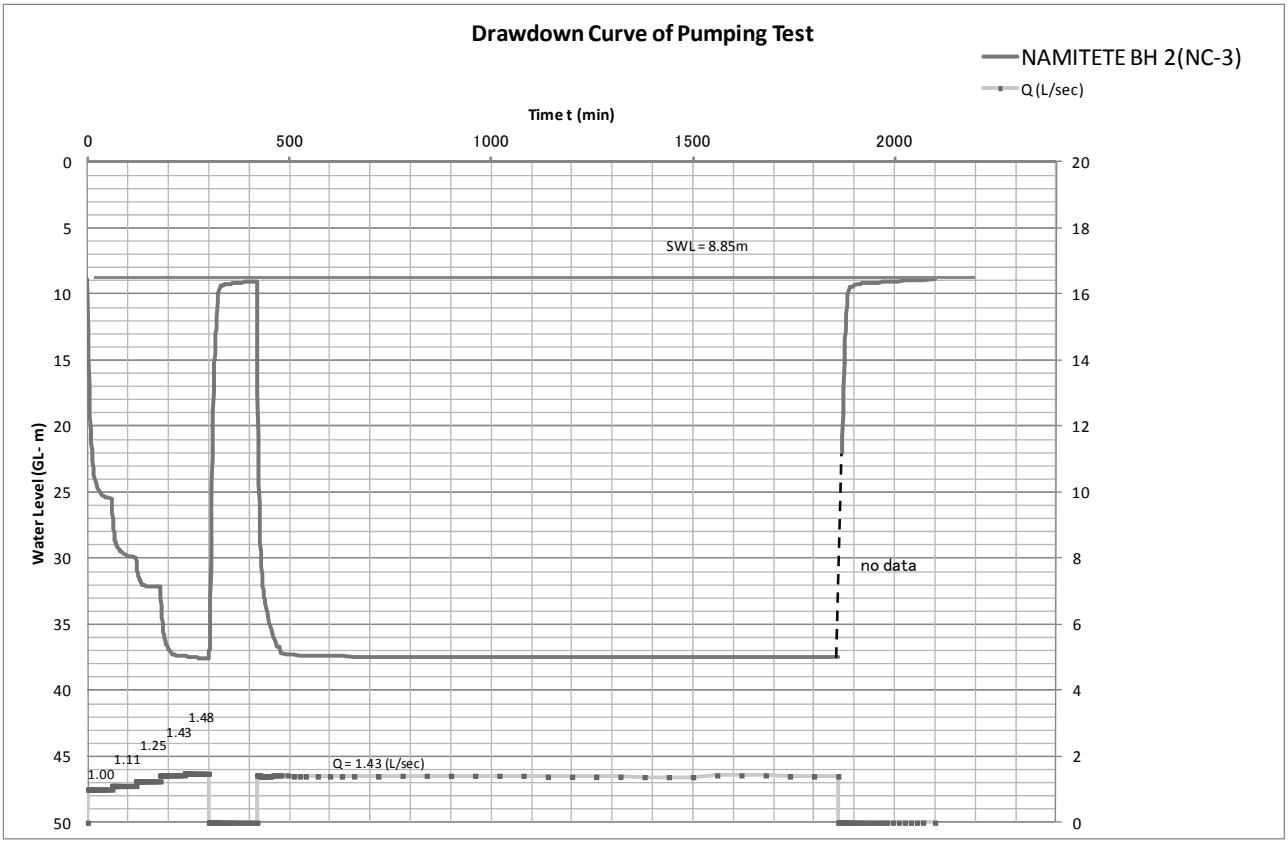



図 A7 - 1 - 15 揚水試験時の水位降下曲線（Namitete BH2 (NC-3)）

表　A7 - 1 - 12 段階揚水試験結果（ナミテテ・チレカ地区）

Chileka BH 1(NC-1)　　Q: Discharge,

| Step No | Time (Hours) | Q (L/sec) | s (m) | Q/s |
|---|---|---|---|---|
| 1 | 1.00 | 0.67 | 10.34 | 0.06 |
| 2 | 1.00 | 0.80 | 12.77 | 0.06 |
| 3 | 1.00 | 1.00 | 18.83 | 0.05 |
| 4 | 1.00 | 1.11 | 23.36 | 0.05 |
| 5 | 1.00 | 1.33 | 28.82 | 0.05 |
| 6 | 1.00 | 1.54 | 35.2 | 0.04 |

Namitete BH 1(NC-2)

| Step No | Time (Hours) | Q (L/sec) | s (m) | Q/s |
|---|---|---|---|---|
| 1 | 1.00 | 1.00 | 9.5 | 0.11 |
| 2 | 1.00 | 1.11 | 11.91 | 0.09 |
| 3 | 1.00 | 1.25 | 13.86 | 0.09 |
| 4 | 1.00 | 1.43 | 17.76 | 0.08 |
| 5 | 1.00 | 1.67 | 20.42 | 0.08 |

Namitete BH 2(NC-3)

| Step No | Time (Hours) | Q (L/sec) | s (m) | Q/s |
|---|---|---|---|---|
| 1 | 1.00 | 1.00 | 16.68 | 0.06 |
| 2 | 1.00 | 1.11 | 21.08 | 0.05 |
| 3 | 1.00 | 1.25 | 23.31 | 0.05 |
| 4 | 1.00 | 1.43 | 28.51 | 0.05 |
| 5 | 1.00 | 1.48 | 28.73 | 0.05 |

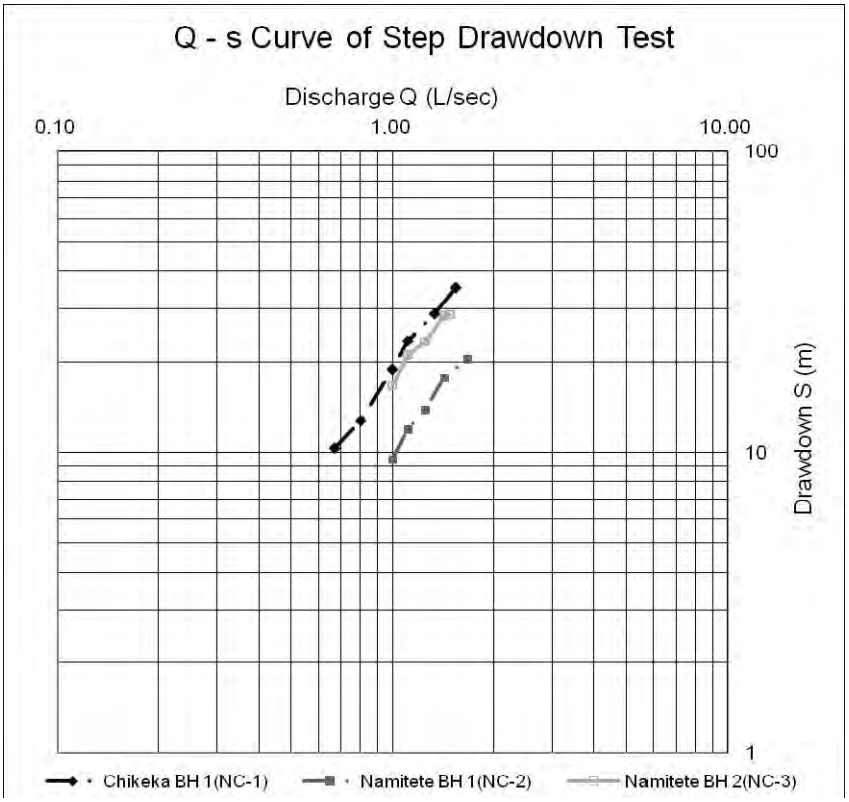



図 A7 - 1 - 16 段階揚水試験による揚水量(Q)-水位降下量(s) の関係　（ナミテテ・チレカ地区）

表　A7 - 1 - 13 静水位・動水位・比湧出量の季節変化（連続揚水試験時：ナミテテ・チレカ地区）

| BH No. | Month of Test | Discharge Q (m3/hour) | Static Water Level SWL (m) | Dynamic Water Level DWL (m) | Drawdown s (m) | Specific Yield (m2/hour) |
|---|---|---|---|---|---|---|
| Chileka | Oct. 2010 | 3.31 | 6.88 | 31.19 | 24.31 | 0.136 |
| | May 2011 | 4.21 | 4.82 | 33.28 | 28.46 | 0.148 |
| Namitete 1 | Oct. 2010 | 4.50 | 9.86 | 37.19 | 27.33 | 0.165 |
| | May 2011 | 5.15 | 9.06 | 27.85 | 18.79 | 0.274 |
| Namitete 2 | Oct. 2010 | 4.50 | 9.79 | 38.43 | 28.64 | 0.157 |
| | May 2011 | 5.15 | 8.85 | 37.50 | 28.65 | 0.180 |

### (4) 水質試験

試掘井戸の水質試験結果を表 A7 – 1 – 14 に示す。「マ」国水道水の水質基準（MS 214）に照らすと濁度と糞便性大腸菌が超過する値を示している。揚水試験後に目視で清浄であることを確認して採水しているが、人為的な影響も考えられるため、水道水源として使用する場合には、再度水質を確認して適切な処理を行う必要がある。なお、井戸水の水質基準である MS 733 に対しては、糞便性大腸菌 50 in 100 ml、濁度 25 NTU としており、ともに基準値以下である。

表 A7 - 1 - 14 水質試験結果（試掘井戸　ナミテテーチレカ地区）

| LAB No. | 148 | 760 | 761 | MS 214:2005 |
|---|---|---|---|---|
| Date Sampled | 14/10/2010 | 03/11/2010 | 03/11/2010 | |
| Source Type /Location Traditional Authority | Borehole/ Chileka ADMARC, Kalolo, Lilongwe District | Namitete Sec. School, BH No.1 Kalolo, Lilongwe District | Namitete Sec. School, BH NO.2 Kalolo, Lilongwe District | |
| pH Value | 6.54 | 7.41 | 7.69 | 5.0-9.5 |
| Conductivity (μS/cm at 25 ℃) | 200 | 570 | 430 | 700-1500 |
| Total Dissolved Solids, mg/l | 100 | 297 | 220 | 450-1000[a)] |
| Carbonate (as $CO_3^{2-}$), mg/l | 0 | 0 | 14 | - |
| Bicarbonate (as $HCO_3^-$), mg/l | 120 | 85 | 118 | - |
| Chloride as ($Cl^-$), mg/l | 1.8 | 3.4 | 10.1 | 100-200 |
| Sulphate (as $SO_4^{2-}$), mg/l ", | 2.9 | 171 | 62.3 | 200-400 |
| Nitrate (as $NO_3^-$) mg/l | 0.027 | < 0.001 | < 0.001 | 6.0-10.0 |
| Fluoride (as $F^+$) mg/l | 0.18 | 0.69 | 0.63 | 0.7-1.0 |
| Sodium (as $Na^+$) mg/l | 7.04 | 30.4 | 30.0 | 100-200 |
| Potassium (as $K^+$), mg/l | 1.5 | 5.6 | 5.0 | 25-50 |
| Calcium (as $Ca^{++}$), mg/l | 22.0 | 44.0 | 32.0 | 80-150 |
| Mgnesium (as $Mg^{++}$), mg/l | 8.2 | 13.3 | 8.7 | 30-70 |
| Iron ($Fe^{++}$) mg/l | 0.02 | 0.160 | 0.178 | 0.01-0.2 |
| Manganese ($Mn^{++}$) mg/l | <0.01 | < 0.001 | < 0.001 | 0.05-0.1 |
| Total Hardness (as $CaCO_3$), mg/l | 88 | 164 | 116 | - |
| Total Alkalinity (as $CaCO_3$), mg/l | 98 | 69 | 120 | - |
| Silica (as $SiO_2$), mg/l | 48 | 22 | 27 | - |
| Turbidity, NTU | 2.3 | 7.01 | 1.27 | 0.1-1 |
| Suspended Solids, mg/l | 1.0 | 8.0 | 2.0 | - |
| Faecal. Coliform, Count/100 ml | 5* | 2* | 10 | 0 in 100ml |
| Faecal Streptococci, Count/100 ml | 0 | 0 | 0 | 0 in 100ml |

*Tested on 22/01/2011

## 2.3 給水需要と水源の評価

ナミテテ・チレカ地区の給水人口を表 A7－1－15 に示し、計画給水量を表 A7－1－16 に示す。
計画年次(2020 年)の日最大給水量は、ナミテテ地区 849 ($m^3$/day),チレカ地区 377 ($m^3$/day)である。

ナミテテ川は、その流量が乾季の後半にほとんどなくなる（0 $m^3$/sec; ＜86 $m^3$/day）月が 4 ヵ月に及ぶ年もあるため、年間を通した安定的な水道水源とはなりえない。
また、下流の農業用水として 12 件、計約 10,000$m^3$/day の水利権が設定されており、この水量は乾期の河川流量よりも多いため、河川水の利用量は制限され、一時的に取水を計画する場合にも、水利権所有者との合意を得る必要がある。

河川水に対して水道水質基準を満足させるためには、急速ろ過による浄化が必要であり、大腸菌類に対しては、その濃度の変化に応じて適切に管理された塩素消毒が必要である。

一方、試掘井戸から供給できる水量は
ナミテテ地区： Q = 1.25 (L/sec) x 60 x 60 x 24 x 2 本 = 216,000 (L/day) = 216 (m3/day)
チレカ地区： Q = 1.2 (L/sec) x 60 x 60 x 24 x 1 本 = 103,680 (L/day) = 103 (m3/day)
であり、それぞれ 需要の 1/4 程度となり、給水需要を満足するには不十分である。

従って、今回の準備調査では、ナミテテ川からの取水は流量が安定していないこと及び水質汚染、水利権に問題があること、また、地下水の利用は試掘井 3 本の供給水量が需要量を満足しないため、水源としては不適であることが確認された。

## 2.4 提言

今後、ナミテテ・チレカ地区の水道水源を確定するためには、より適切な水源に関して詳細な調査や関係機関の調整が必要と考えられる。

ナミテテ川については、水文観測所 5.E.1 の流量観測記録が 2002 年以降得られていないことから、正確な水文データの蓄積が望まれる。また、既存観測所での水質は大腸菌類の汚染が認められるため、上流部での取水の可能性を検討することが望まれる。そのためには、上流部で水質確認と流量観測を行うことも必要である。

水利権に関しては、設定されてから更新されていないものも含まれるため、水利用状況の確認とともに、実態に応じた水利権の再設定が望まれる。

国道 M12 付近の水質については、細菌類の汚染が認められ、雨季に使用される農薬類の汚染も懸念される。農薬類に関しては雨季にもこれが含まれないことを確認する必要がある。

試掘した井戸の周辺には「リロングウェ西地区地下水開発計画（2006～2008)」で掘削したハンドポンプ付き井戸が分布している。これらの井戸の掘削中に確認された湧水量（Blown yield）は、図 A7

– 1 – 17 に示すように 0.25～3.33 L/sec の範囲にあり、マーケットセンターに必要とされる井戸の湧水量は 5L/sec が必要であることから、ナミテテ/チレカ地区から離れた場所で高い湧出量を産出する井戸を建設するために、より広いエリアを対象とした地下水水源の探査が必要とされる。

従って今後、地下水を水源とする給水計画を進めるためには、施設計画の前に、以下のような点に留意した水源フィージビリティスタディを行うことを提案する。

1. 給水区域を中心とした半径 10 km 程度の範囲で、過去の井戸掘削実績等から井戸 1 本で 5L/sec 程度以上の揚水が期待できる地下水開発候補地域を選定する。
2. 地下水開発候補地域内で電気探査等により、試掘井戸掘削地点を選定する（5 点程度)。試掘地点は相互に 200～300m 以上離して配置する。給水区域外では、既存のハンドポンプ付き井戸の分布に留意し、近接する場合には、既存井戸の水位低下の影響も考えられるため、既存井戸に代わる給水栓を設け、給水計画区域に含めるなどの対策を考慮する。
3. 試掘井戸を掘削し、揚水試験により安定的供給できる揚水量を検討する。揚水試験に際して、周辺の井戸への影響を確認する。
4. 2010 年に掘削した 3 箇所の試掘井戸を合わせて、需要を満たす最も効率的な水源計画を策定する。
5. 全ての試掘井戸を合わせても、給水可能量が需要に満たない場合には、さらに遠隔地域の地下水や湧水、表流水を水源候補としてフィージビリティスタディの範囲を広げる。

**表 A7 - 1 - 15 マーケットセンターの計画給水人口**

| 地区名 | 現在人口 (2008 年) | 人口増加率※ (%) | 推定人口 (2020 年) |
|---|---|---|---|
| ナミテテ | 6,316 | 3.1 | 9,100 |
| チレカ | 2,800 | 3.1 | 4,039 |

（注） ナミテテ地区及びチレカ地区は Lilongwe Rural の人口増加率(1998 – 2008) を使用。

**表 A7 - 1 - 16 本プロジェクトの計画給水量（試算）**

| 地区名 | | ナミテテ | チレカ | 備考 |
|---|---|---|---|---|
| 1. 人口 | （人） | 9,100 | 4,039 | 2020 年 |
| 2. 平均給水原単位 | (lcd) | 50.8 | 50.8 | 家庭用水※1 |
| 3. 家庭用水量 | ($m^3$/日) | 462 | 205 | 1×2÷1000 |
| 4. 公共用水量 | ($m^3$/日) | 139 | 62 | 3×30%*2 |
| 5. 需要水量合計 | ($m^3$/日) | 601 | 267 | 3+4 |
| 6. 一日平均給水量 | ($m^3$/日) | 707 | 314 | 5÷(1-0.15)*3 |
| 7. 一日最大給水量 | ($m^3$/日) | 849 | 377 | 6×1.2 |
| 8. 時間最大給水量 | ($m^3$/時) | 70.7 | 31.4 | 6×2.4÷24 |

※1：平均給水原単位：36×48%＋50×30%＋80×20%＋125×2%＝50.8 lcd

表 A7 – 1 – 17 に示す住居カテゴリー別給水原単位及び人口割合に基づいて算定。

※2：30%は「マ」国の通常の家庭用水に対する水量である。

※3：0.15 は想定漏水率を示す。

**表 A7 - 1 - 17 既存調査で使用している居住形態別人口割合**

| 住居カテゴリー | 給水原単位<br>（リットル/人/日） | 人口割合 |
|---|---|---|
| 伝統的な居住地域 | 36 | 48% |
| 高密度の居住地域 | 50 | 30% |
| 中密度の居住地域 | 80 | 20% |
| 低密度の居住地域 | 125 | 2% |

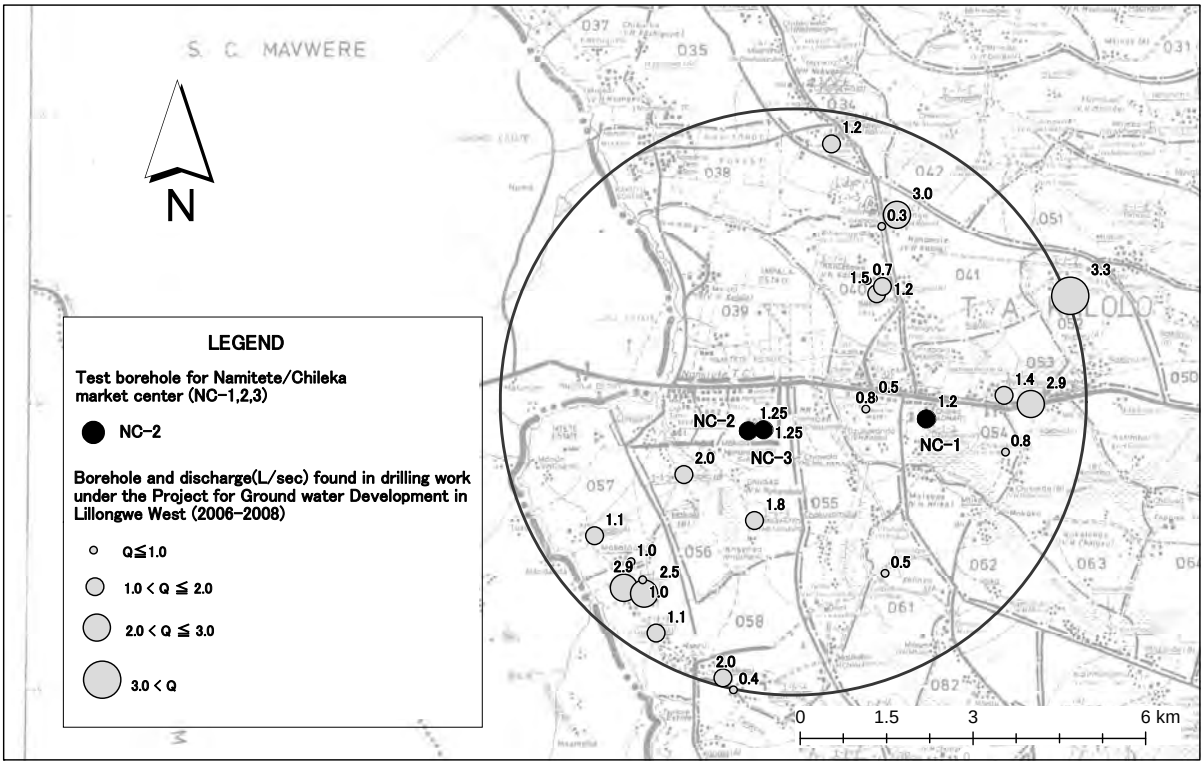



**図 A7 - 1 - 17 試掘井戸と周辺既存井戸の揚水量分布**

## ３．ムカンダ地区の水源

### 3.1 表流水

#### (1) 河川流量の変動

ムカンダ地区の計画水源として要請されている、マーケットセンター北側に隣接して流れるリウェレジ川に関して、過去 10 年間（1992-2001）の河川流量（最大値、最小値）を表 A7－1－18 に示す。

流量データの値は、毎日定時に観測した瞬間流量($m^3/s$)に基づいている。表に示されている測定期間は全テータから可能な限り測定値の連続した期間のデータを選択しているが、２０００年６月以降のデータは測定されておらず、２０００年以前のデータでも欠測のある月がある。このデータ欠測は機械/器具の不具合が原因として考えられる。

この観測期間中、月別の最小流量が乾期後半の 4 ヶ月（9 月～12 月）に 54L/sec（4,665（m3/day）相当)まで低下する年がある。ただし、10 年間の流量記録の最小値である 0.054 $m^3/sec$ は、月最小流量として 10 ヶ月に記録されており、特に 1992 年 11 月、1995 年 10 月、11 月の 3 ヶ月は、最大流量も同じ値である。このことから、0.054 ($m^3/sec$)は観測できる下限値、あるいは精度の限界である可能性があり、実際の流量はそれ以下であるかもしれない。

また、1999 年 7 月～2001 年 3 月までの欠測期間の後に観測された流量は、1999 年以前の同月の流量に比べて数倍以上大きくなっているので、観測方法、水位と流量の関係の検証が必要と考えられる。

表 A7 - 1 - 18 リウェレジ川の過去 10 年間の流量（1992-2001）

過去10年間の月別流量(最大値 m3/s)

| | JAN. | FEB. | MAR. | APR. | MAY. | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1992 | 3.925 | 0.900 | 0.939 | 0.576 | 0.229 | 0.186 | 0.169 | 0.157 | 0.138 | 0.113 | 0.054 | 2.144 |
| 1993 | 2.084 | 3.081 | 4.946 | 2.834 | 1.124 | 0.474 | 0.354 | 0.348 | 0.302 | 0.216 | 0.267 | 0.718 |
| 1994 | 2.710 | 3.444 | 3.723 | 0.490 | 0.261 | 0.254 | 0.252 | 0.216 | 0.184 | 0.160 | 0.132 | 0.163 |
| 1995 | 2.100 | 3.191 | 1.123 | 0.228 | 0.163 | 0.144 | - | 0.128 | 0.098 | 0.054 | 0.054 | 1.617 |
| 1996 | 2.983 | 6.001 | 6.629 | 0.725 | 0.553 | 0.382 | 0.305 | 0.290 | 0.237 | 0.186 | 0.139 | 0.214 |
| 1997 | 3.288 | 3.471 | 2.236 | 2.427 | 0.601 | 0.337 | 0.336 | 0.256 | 0.244 | 0.263 | 2.296 | 3.058 |
| 1998 | 3.808 | 2.328 | 3.169 | 0.843 | 0.270 | 0.228 | 0.211 | 0.172 | 0.211 | 0.157 | 0.879 | 7.431 |
| 1999 | 3.405 | - | - | 1.793 | 1.584 | 1.285 | - | - | - | - | - | - |
| 2000 | - | - | - | - | - | - | - | - | - | - | - | - |
| 2001 | - | - | - | 6.752 | 5.415 | - | - | 1.293 | 0.795 | 0.546 | - | - |
| Max | 3.925 | 6.001 | 6.629 | 6.752 | 5.415 | 1.285 | 0.354 | 1.293 | 0.795 | 0.546 | 2.296 | 7.431 |
| Min | 2.084 | 0.900 | 0.939 | 0.228 | 0.163 | 0.144 | 0.169 | 0.128 | 0.098 | 0.054 | 0.054 | 0.163 |

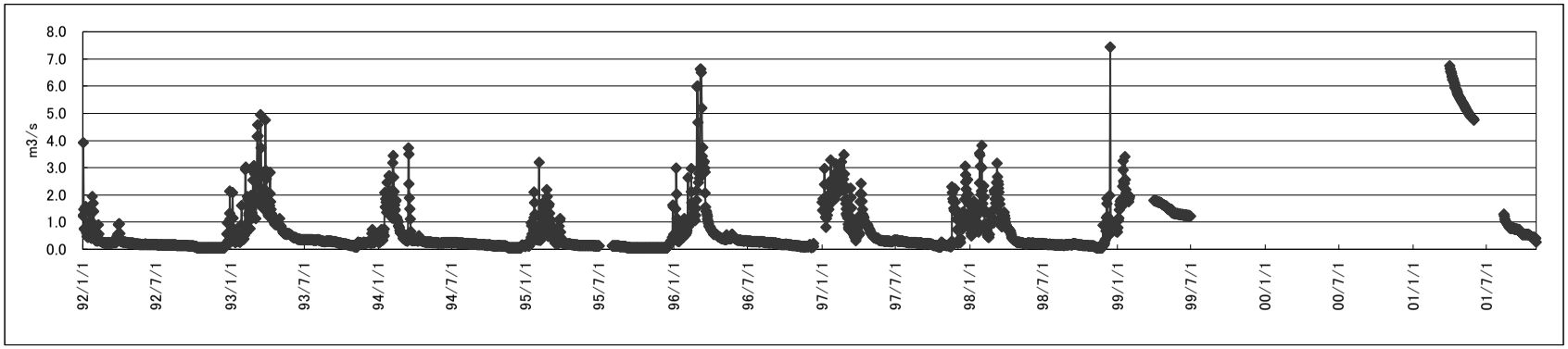
過去10年間の月別流量(最小値 m3/s)

| | JAN. | FEB. | MAR. | APR. | MAY. | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1992 | 0.382 | 0.217 | 0.218 | 0.225 | 0.182 | 0.169 | 0.157 | 0.136 | 0.119 | 0.054 | 0.054 | 0.054 |
| 1993 | 0.250 | 0.371 | 1.122 | 0.881 | 0.496 | 0.351 | 0.335 | 0.286 | 0.219 | 0.125 | 0.093 | 0.225 |
| 1994 | 0.250 | 0.589 | 0.308 | 0.260 | 0.229 | 0.227 | 0.216 | 0.185 | 0.150 | 0.118 | 0.054 | 0.054 |
| 1995 | 0.117 | 0.328 | 0.204 | 0.165 | 0.137 | 0.124 | - | 0.102 | 0.054 | 0.054 | 0.054 | 0.054 |
| 1996 | 0.288 | 0.594 | 0.772 | 0.391 | 0.354 | 0.303 | 0.269 | 0.235 | 0.174 | 0.127 | 0.092 | 0.075 |
| 1997 | 0.809 | 1.669 | 0.317 | 0.532 | 0.311 | 0.276 | 0.257 | 0.226 | 0.178 | 0.087 | 0.103 | 0.236 |
| 1998 | 0.490 | 0.442 | 0.824 | 0.254 | 0.197 | 0.210 | 0.160 | 0.147 | 0.157 | 0.124 | 0.054 | 0.318 |
| 1999 | 0.787 | - | - | 1.590 | 1.297 | 1.216 | - | - | - | - | - | - |
| 2000 | - | - | - | - | - | - | - | - | - | - | - | - |
| 2001 | - | - | - | 5.442 | 4.757 | - | - | 0.773 | 0.546 | 0.258 | - | - |
| Max | 0.809 | 1.669 | 1.122 | 5.442 | 4.757 | 1.216 | 0.335 | 0.773 | 0.546 | 0.258 | 0.103 | 0.318 |
| Min | 0.117 | 0.217 | 0.204 | 0.165 | 0.137 | 0.124 | 0.157 | 0.102 | 0.054 | 0.054 | 0.054 | 0.054 |

過去10年間の月別流量の欠測日数

| | JAN. | FEB. | MAR. | APR. | MAY. | JUN. | JUL. | AUG. | SEP. | OCT. | NOV. | DEC. | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1992 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1993 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1994 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 1995 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 31 |
| 1996 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 20 |
| 1997 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1998 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1999 | 0 | 28 | 31 | 0 | 0 | 0 | 31 | 31 | 30 | 31 | 30 | 31 | 243 |
| 2000 | 31 | 29 | 31 | 30 | 31 | 30 | 31 | 31 | 30 | 31 | 30 | 31 | 366 |
| 2001 | 31 | 28 | 31 | 0 | 0 | 30 | 31 | 12 | 0 | 0 | 30 | 31 | 224 |

リウェレジ川流況(全体)




Liwelezi 川流況(低水流量)

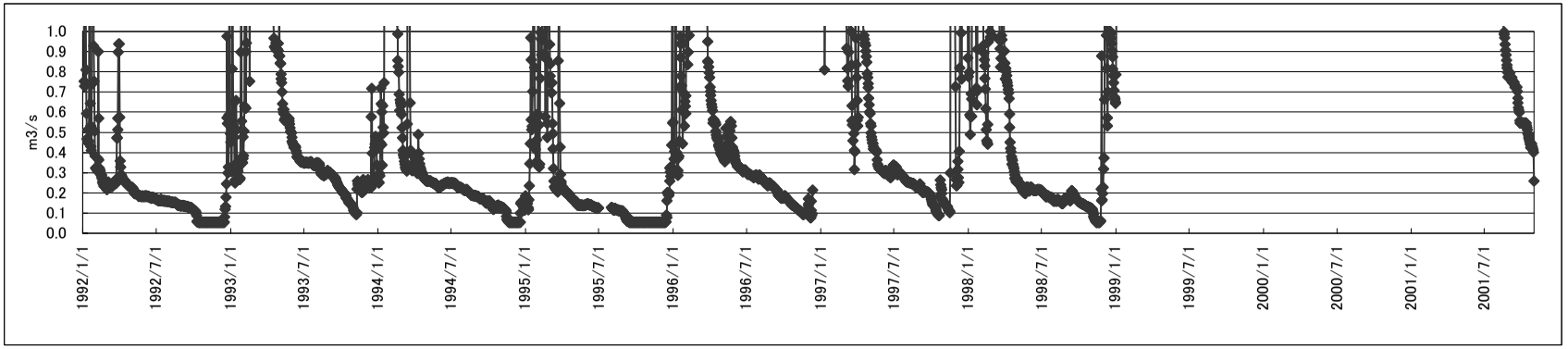



図 A7 - 1 - 18 リウェレジ川の過去 10 年間の流況 (1992～2001 年)

### (2) 水質

リウェレジ川の２ヶ所（マーケットセンター付近及び上流約５km 地点）において各 1 試料の水質試験を実施した。採水地点を図 A7 – 1 - 19 に、一般項目の試験結果を過去の試験結果と共に表 A7 – 1 – 19 に示す。また、農薬・殺虫剤の試験を内１ヶ所（下流部）について実施した。項目は、「マ」国内でよく使われるとされる農薬類とした。残留農薬についての試験結果を表 A7 – 1 – 20 に示す。

水質試験結果をマラウイ国の水道水基準（MS 214: 2005）に照らすと、鉄分及び大腸菌類が基準値を越えている。また、過去の水質試験結果によれば、濁度が基準値を越えて高い値を示す試験結果がある。

リウェレジ川は計画取水地点から上流約 30km まで多くの村落があり、生活排水や汚水の流入、洗濯等による水質の汚濁がある。水質分析の結果、大腸菌群数 4,000/100ml、糞便性連鎖球菌群数 200/100ml が検出されており、人的な水質汚染が顕著であることを示している。

農薬類は検出されていないが、一般に農薬類を使用しない乾季に採水した試料であることを考慮する必要がある。今回雨期の農薬試験は、この時期にマラウイ国内の試験所がすべて改装中であったことがあり実施できなかった。

表 A7 - 1 - 19 リウェレジ川の水質試験結果(No. 304, 602, 453, 487 は L-1 の過去データ)

| LAB No. (Sample No.) | | MS 214:2005 | 304 | 602 | 453 | 487 | 710 (L-1) | 711 (L-2) |
|---|---|---|---|---|---|---|---|---|
| Date Sampled | | | 17/09/ '98 | 29/10/ '01 | 21/10/ '03 | 27/09/ '04 | 09/10/ '10 | 09/10/ '10 |
| Season | | | Dry | Dry | Dry | Dry | Dry | Dry |
| pH Value | | 5.0-9.5 | 7.4 | 7.76 | 7.4 | 7.1 | 6.73 | 8.1 |
| Conductivity | (µS/cm) | 700-1500 | 161 | 240 | 353 | 120 | 136 | 102 |
| Total Dissolved Solids | (mg/l) | 450-1000[a)] | 75 | 120 | 177 | 78 | 70 | 50 |
| Carbonate (as $CO3^{2-}$) | (mg/l) | - | 0 | 10 | 0 | 0 | 0 | 5 |
| Bicarbonate (as $HCO3^{-}$) | (mg/l) | - | 88 | 108 | 197 | 83 | 85 | 26 |
| Chloride (as $Cl^{-}$) | (mg/l) | 100-200 | 1 | 8.1 | 7.3 | 7.8 | 3 | 11.9 |
| Sulphate (as $SO4^{2-}$) | (mg/l) | 200-400 | 0.3 | 4.4 | 1.2 | <0.01 | <0.01 | <0.01 |
| Nitrate (as NO3-) | (mg/l) | 6.0-10.0 | <0.01 | <0.01 | <0.01 | 0.1 | 0.013 | <0.01 |
| Fluoride (as $F^{-}$) | (mg/l) | 0.7-1.0 | N.A | 0.27 | 0.22 | 0.87 | 0.54 | 0.63 |
| Sodium (as $Na^{+}$) | (mg/l) | 100-200 | 5 | 1.8 | 3.6 | 3.1 | 3.6 | 5.9 |
| Potassium (as $K^{+}$) | (mg/l) | 25-50 | 0.3 | <0.01 | 0.5 | 0.4 | 0.4 | 0.6 |
| Calcium (as $Ca^{++}$) | (mg/l) | 80-150 | 15.2 | 38.7 | 48 | 21.6 | 15.4 | 7.6 |
| Magnesium (as $Mg^{++}$) | (mg/l) | 30-70 | 7.3 | 4.3 | 13.6 | 5.3 | 5.8 | 3 |
| Iron($Fe^{++}$) | (mg/l) | 0.01-0.2 | 0.76 | 0.36 | 0.35 | 0.52 | 0.335 | 0.008 |
| Manganese ($Mn^{++}$) | (mg/l) | 0.05-0.1 | N.A | N.A | N.A | N.A | <0.01 | <0.01 |
| Total Hardness (as CaCO3) | (mg/l) | - | - | - | - | - | 62 | 31 |
| Total Alkalinity (as CaCO3) | (mg/l) | - | - | - | - | - | 69 | 29 |
| Silica (as SiO2) | (mg/l) | - | 23 | 5 | 15 | 6 | 21 | 26 |
| Turbidity | (NTU) | 0.1-1 | 9 | 7 | 3 | 4 | 1 | 0 |
| Suspended Solids (SS) | (mg/l) | - | 4 | 3 | 1 | 4 | 0 | 0 |
| Faecal Coliform | (/100 ml) | 0 in 100ml | | | | | 3020 | 4000 |
| Faecal Streptococci | (/100 ml) | 0 in 100ml | | | | | 90 | 200 |

L-1: Mkanda 中心部から北西約 750 m の橋の上流側
L-2: L-1 の上流約 5 km の Matuwamba 橋

表 A7 - 1 - 20 リウェレジ川の水質試験結果（農薬・殺虫剤）

| 農薬名(和名) | 農薬名(英語) | 検出限界 detection limit (mg/L) | 分析結果 2010.7.10 試料 L-1 | WHO 飲料水 水質ガイドライン (mg/L) |
|---|---|---|---|---|
| ディーディーティー (ディーディーディー、ディーディーイーを含む) | DDT* (include DDD & DDE) | 0.001 | N.D. | 0.002 |
| アルドリン, | Aldrin | 0.00003 | N.D. | Aldrin + Dieldrine 0.00003 |
| ディルドリン | Dieldrin | 0.00003 | N.D. | |
| クロルデン | Chlordane | 0.0002 | N.D. | 0.0002 |
| ジブロモクロロプロパン | Dibromochloropropane (DBCP) | 0.001 | N.D. | 0.001 |
| シペルメトリン、 | Cypermethrin | 0.02 | N.D. | ー |
| ペルメトリン | Permethirin | 0.02 | N.D. | ー |
| ヘプタクロル | Heptachlor | 0.00003 | N.D. | ー |
| ヘキサクロロベンゼン | Hexachlorobenzene | 0.001 | N.D. | 0.001 |
| メトキシクロル | Methoxychlor | 0.02 | N.D. | 0.02 |

Notes:
N.D.: Not detected (不検出)
DDT: Dichloro-dipheny-trichloroethane (p,p'-DDD, p,p'-DDE, o,p'-DDT, p,p'-DDT を含む)
試験方法： ガスクロマトグラフ質量分析法

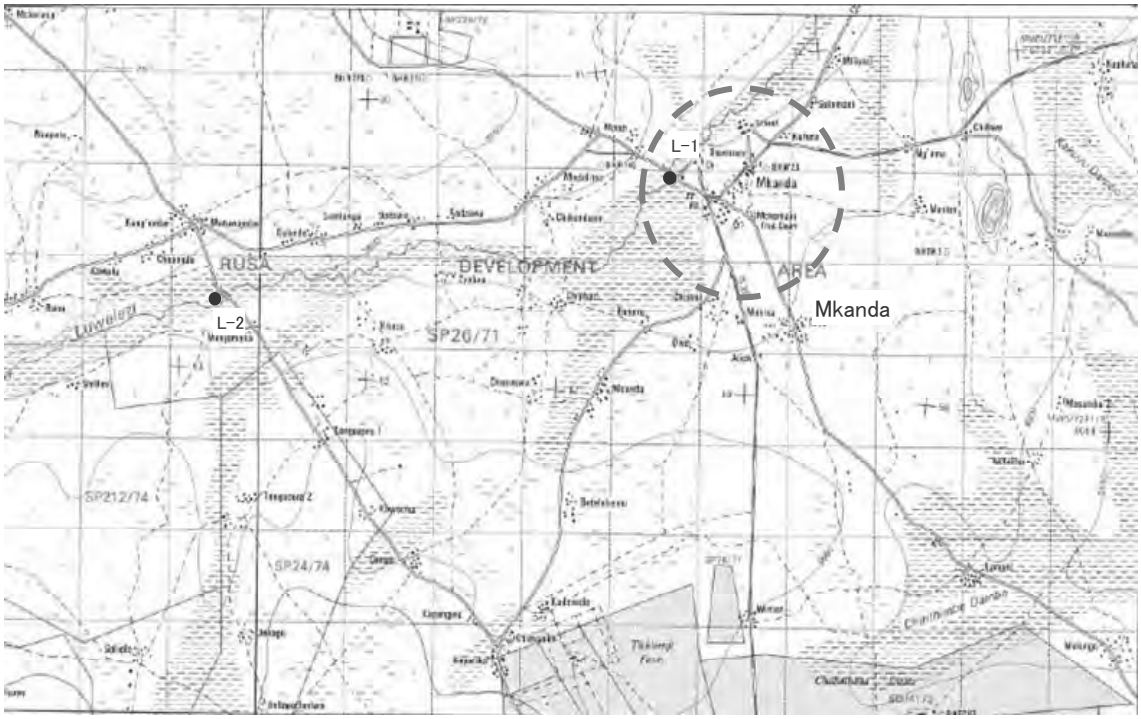



図 A7 - 1 - 19 表流水の水質試験サンプリング位置図

### (3) 水利権

現在リウェレジ川に設定されている許可水量を表 A7－1－21 に示す。

**表 A7 - 1 - 21 リウェレジ川の許可水利権量（2010 年 10 月時点）**

| No. | 計画対象地点(橋梁)からの位置(km) | | 水利権者 | ライセンス No. | 使用目的 | 水利権量 | |
|---|---|---|---|---|---|---|---|
| | | | | | | $m^3$/day | $m^3$/s/10hr 10 時間で取水 |
| 1 | 上流側 | 12 | Press Agric | S16/1982 | Irrigation | 15,400 | 0.4278 |
| 2 | | 0.5 | Press Agric | S10/2006 | Irrigation | 310 | 0.0086 |
| 3 | 下流側 | 0.5 | Press Agric | S921/1979 | Irrigation | 136 | 0.0038 |
| 4 | | 15 | Press Agric | S11/2006 | Irrigation | 413 | 0.0115 |
| 5 | 不明 | | Press Agric | S26/2006 | Irrigation | 416 | 0.0116 |
| 合計 | | | | | | 16,675 | 0.4633 |

計画取水点(リウェレジ川ムカンダ橋)の上流側 12km および下流側 15km の範囲に 16,675 $m^3$/日の灌漑用水の水利権が設定されている。10 年間（1992 - 2001）の河川流量を現在の水利権量と比較すると、乾季後半の 9～11 月に最大流量が水利権量を下回る年が 2 年に 1 度程度あり、旱魃年(1995)では 5～12 月の 8 ヵ月に渡り下回り、特に 10～11 月では水利権量の 1/3 以下となる。

このような流況と既存水利権の関係を考慮すると、新規に河川水を取水する場合には、水利用実態と適切な流量の把握に基づき、既存の水利権者との合意が必要である。

### 3.2 地下水

#### (1) 物理探査による試掘地点の選定

地下水開発の試掘地点を決定するため、Mkanda 中心の北側（Selemani vill.付近）および南側（Makina vill.付近）において、それぞれほぼ東西方向の水平電気探査測線を設定した。 図 A7－1－20 に水平電気探査位置図を示す。

図 A7－1－21 に北側の水平電気探査結果を示す。測定の結果、北側エリアで帯水層の期待される比抵抗値を示す箇所が 1 箇所捉えられたが湿地（Dambo）にあたり、雨期には冠水し井戸の設置に不適と判断された。一方、図 A7－1－22 に示す南側エリアの水平電気探査結果からは風化層が厚く分布することが推定されたため、南側エリアを地下水開発の対象地域とすることとし、垂直電気探査 3 測点（VES1～VES3）を実施し掘削候補地点とした。図 A7－1－23 に垂直探査結果を示す。掘削の優先順位は VES2－VES3－VES1 とし、掘削予定深度は 80m とした。

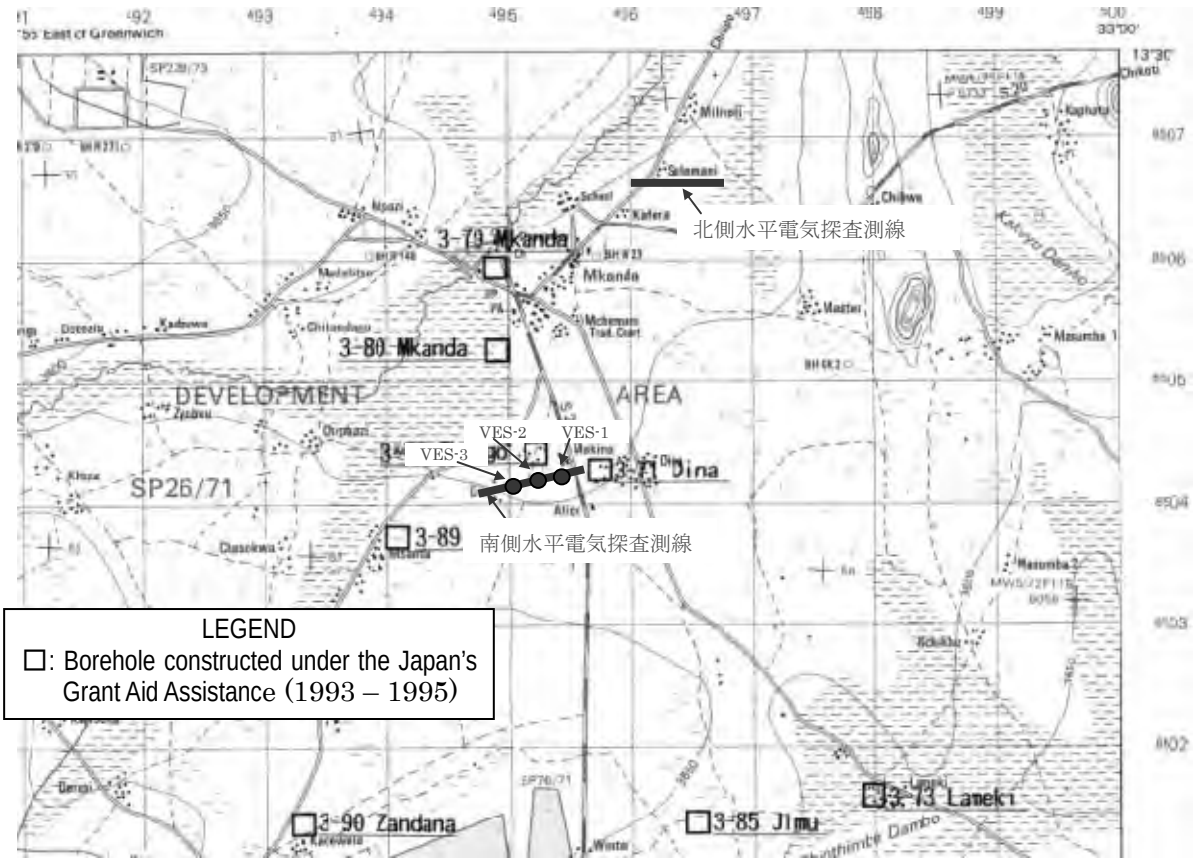
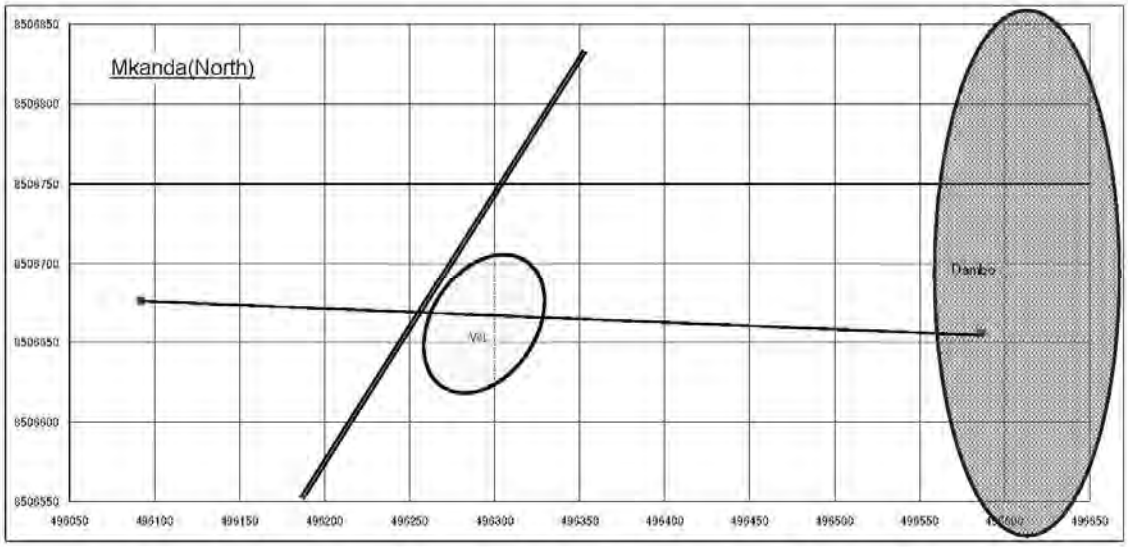



図 A7 - 1 - 20　水平電気探査位置図



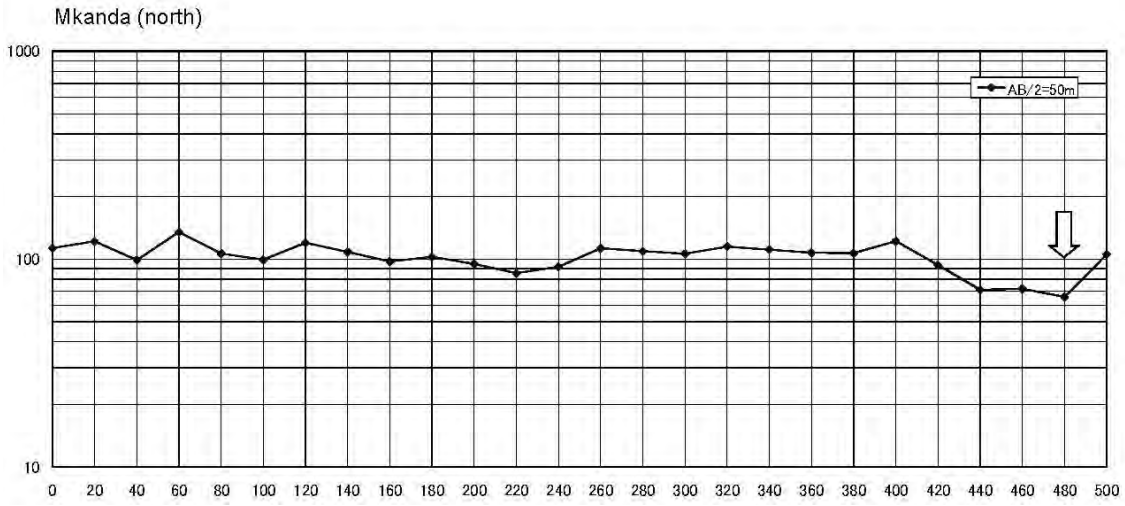
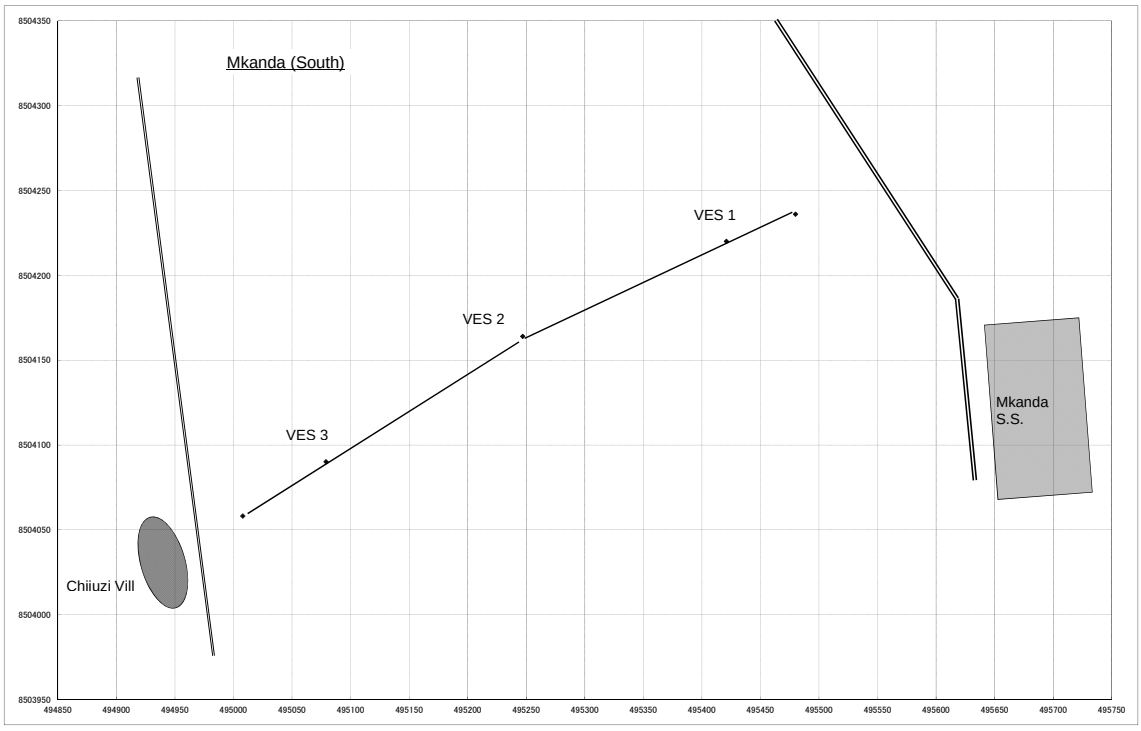




図 A7 - 1 - 21 ムカンダ地区北側の水平探査測線位置及び探査結果



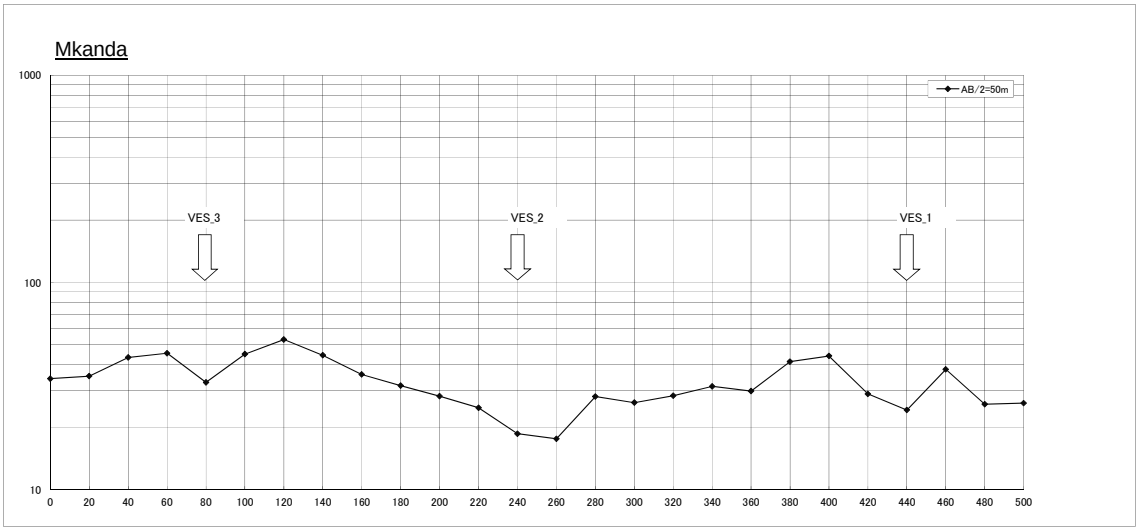




図 A7 - 1 - 22 ムカンダ地区南側の水平探査測線位置および
比抵抗分布に基づく垂直探査位置の選定

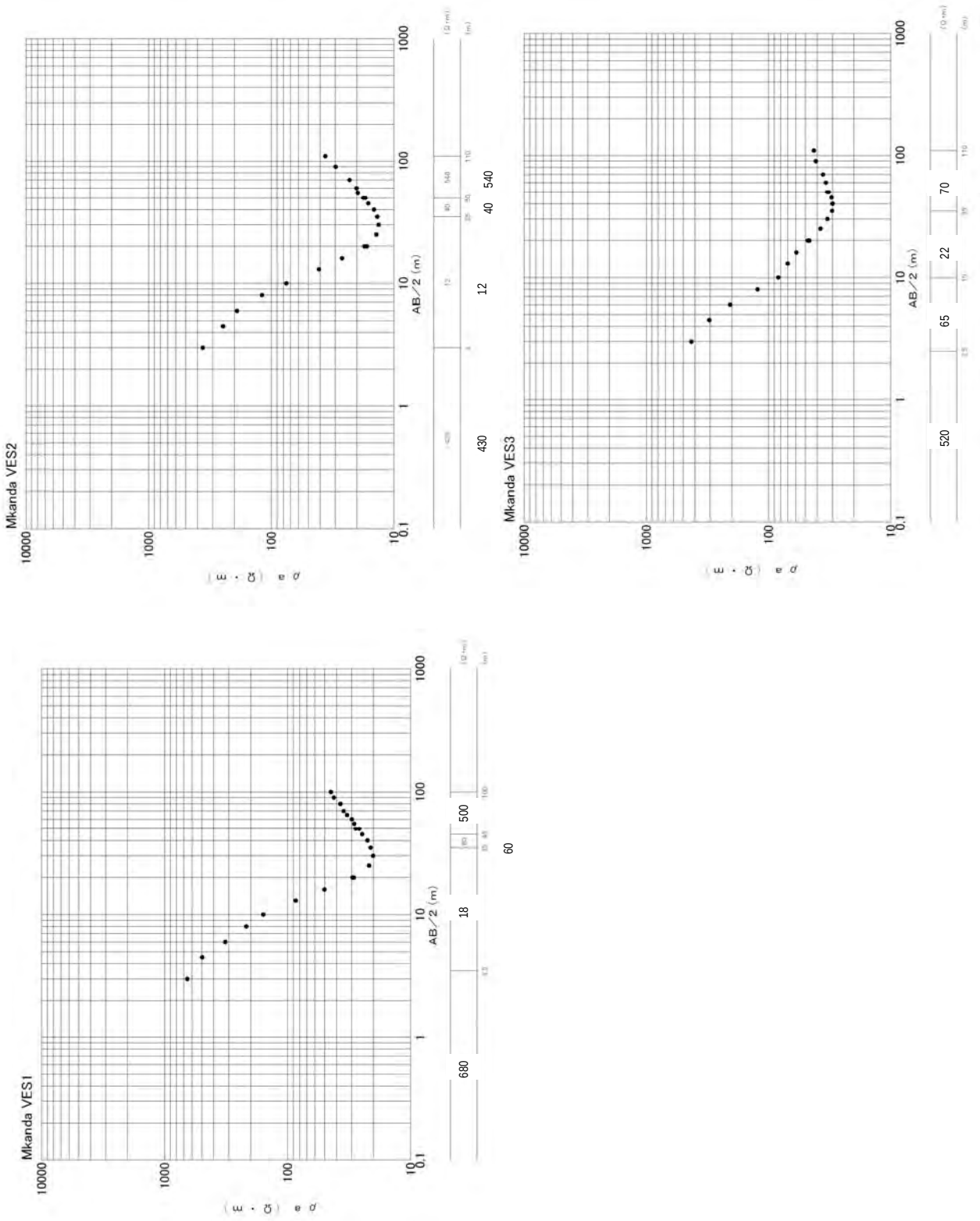



図 A7 - 1 - 23 電気探査（垂直探査）結果－ムカンダ地区－

(2) 試掘

電気探査の結果と土地所有者との掘削機械の据付可能性の協議に基づき、3 箇所の試掘井戸の位置を表 A7 – 1 – 22 および　図 A7 – 1 – 24 に示すとおり決定した。

試掘調査の結果は、地質状況、井戸構造、静水位、動水位（連続揚水試験時）を示す柱状図として図 A7 – 1 – 25 に示した。

表 A7 - 1 - 22 試掘井戸位置

| BH No. | Coordinate* | | Remarks |
|---|---|---|---|
| | Easting | Northing | |
| MK-1 | 495421 | 8504220 | Makina Village |
| MK-2 | 495247 | 8504164 | Lufina Village |
| MK-3 | 495079 | 8504090 | Chiluzi Village |

*WGS 84/ UTM

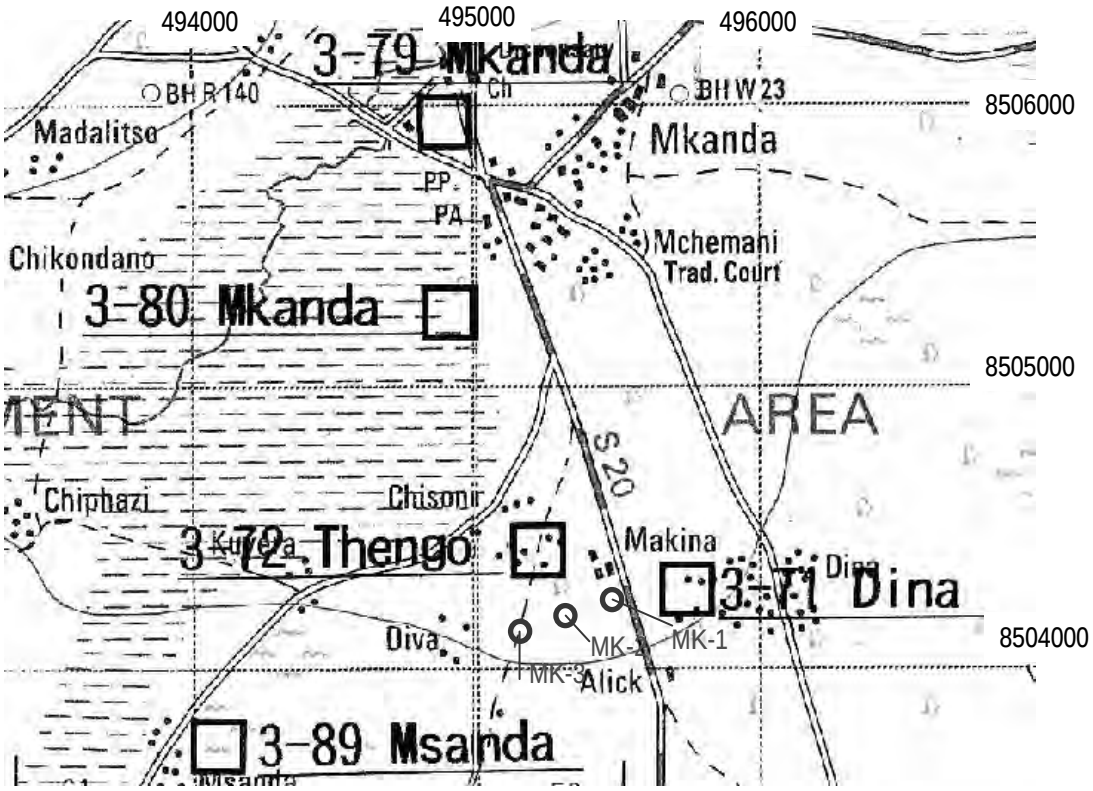
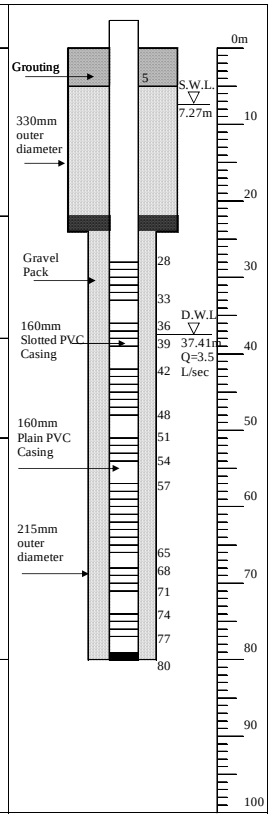



図 A7 - 1 - 24 試掘井戸位置図（ムカンダ地区）

Location : Mkanda MK1 (Makina)

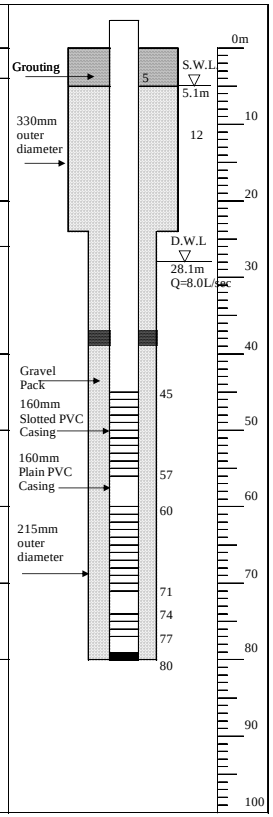
| From | To | Lithology |
|---|---|---|
| 0 | 22 | Reddish clay soil |
| 22 | 38 | brown stone with sand |
| 38 | 51 | gray metamorphic rock (hard) |
| 51 | 80 | darkish granite rock |




MK-1 (Makina)

Location : Mkanda MK2 (Rufina)

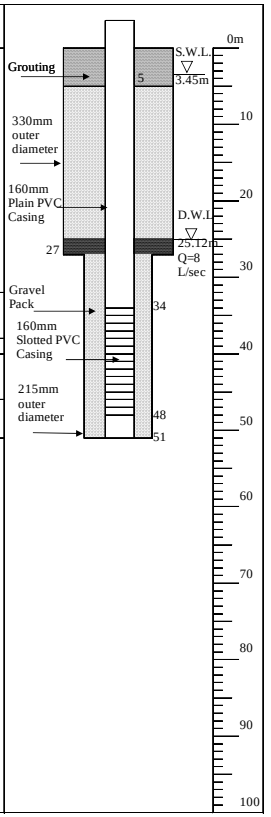
| From | To | Lithology |
|---|---|---|
| 0 | 4 | Reddish Top soil |
| 4 | 20 | brown clay soil |
| 20 | 26 | brown sand soil |
| 26 | 40 | gray metamorphic rock |
| 40 | 50 | gray metamorphic rock |
| 50 | 60 | darkish granite rock |
| 60 | 70 | darkish granite rock |
| 70 | 80 | darkish granite rock |




MK-2 (Lufina)

Location : Mkanda MK3 (Chiluzi)

| From | To | Lithology |
|---|---|---|
| 0 | 32 | Reddish clay soil |
| 32 | 38 | brown sand soil |
| 38 | 40 | brown stone with sand |
| 41 | 46 | gray stone with sand |
| 46 | 51 | darkish metamorphic rock |




MK-3 (Chiluzi)

図 A7 - 1 - 25 試掘井戸柱状図・井戸構造図（ムカンダ地区）

### (3) 揚水試験

試掘井の取水可能量を確認するため、揚水試験を実施した。揚水試験は以下に示す 2 回実施した。

・1 回目：各井戸単独の揚水試験による適切な揚水量等の確認（2010 年 10-11 月:乾期後半）

・2 回目：相互の井戸を観測井とし、井戸相互間の干渉の確認（2011 年 5 月：雨期明け）

図 A7 – 1 – 26, 27, 28 に各井戸の連続揚水試験結果（1 回目及び 2 回目）

表 A7 – 1 – 23 と図 A7 – 1 – 29,30,31 に段階揚水試験結果（1 回目）

図 A7 – 1 – 32 に段階揚水試験による揚水量(Q)-水位降下量(s)の関係（1 回目）を示す。

MK-1： Q=4.0 l/sec で急激な水位低下を示すので、限界揚水量は Qu= 3.0 ～4.0 L/sec の間にある。

MK-2： Q=8.0 l/sec で水位降下が安定しなくなり、Q=10 l/sec で急激に降下する状況から限界揚水量は Qu = 8.0 L/sec 程度である。

MK-3： Q=8.0 l/sec までは水位降下 s が揚水量に比例して増加し、比湧出量 Q/s がほぼ一定であるが、Q=10 l/sec で s が急激に増加することから、限界揚水量は Qu= 8 ～10 l/sec の間にある。

上記の結果より、連続揚水試験の揚水量は、MK-1 は 3.5 l/sec, MK-2 と MK-3 は 8.0 l/sec とした。MK-2 と MK-3 では、24 時間揚水でも安定した水位が得られたが、MK-1 では 24 時間後でも緩やかな水位低下が認められたため、限界揚水量は 3.5l/sec 以下と評価される。

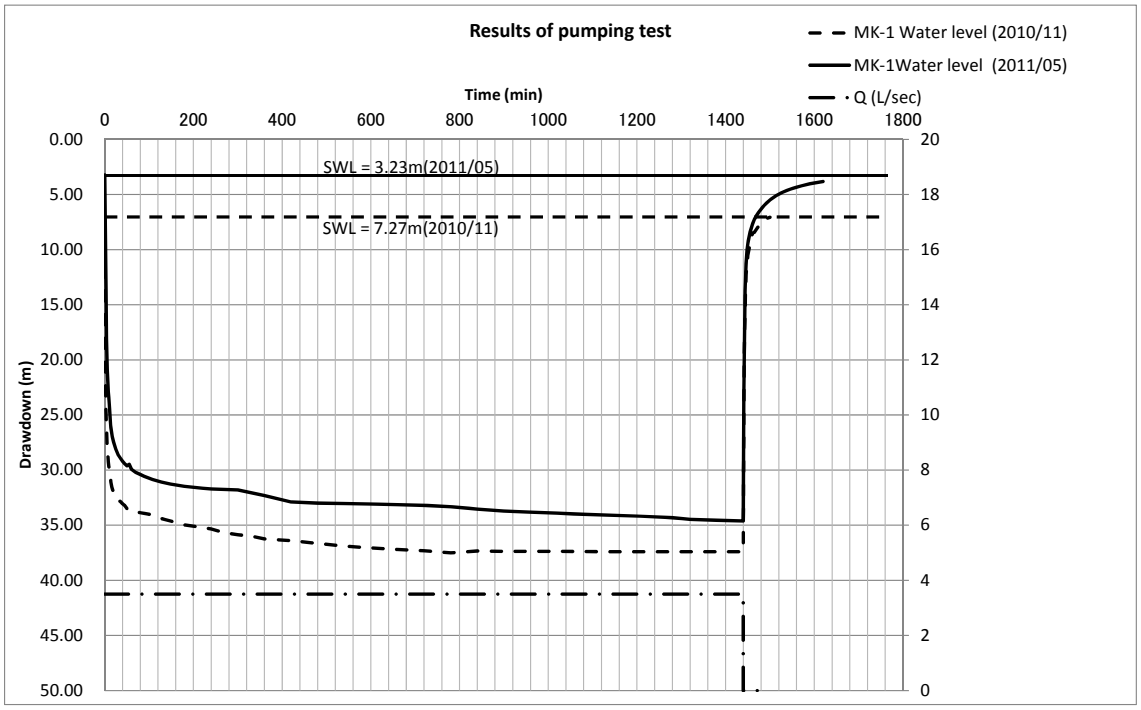



図 A7 - 1 - 26 連続揚水試験結果（MK-1）

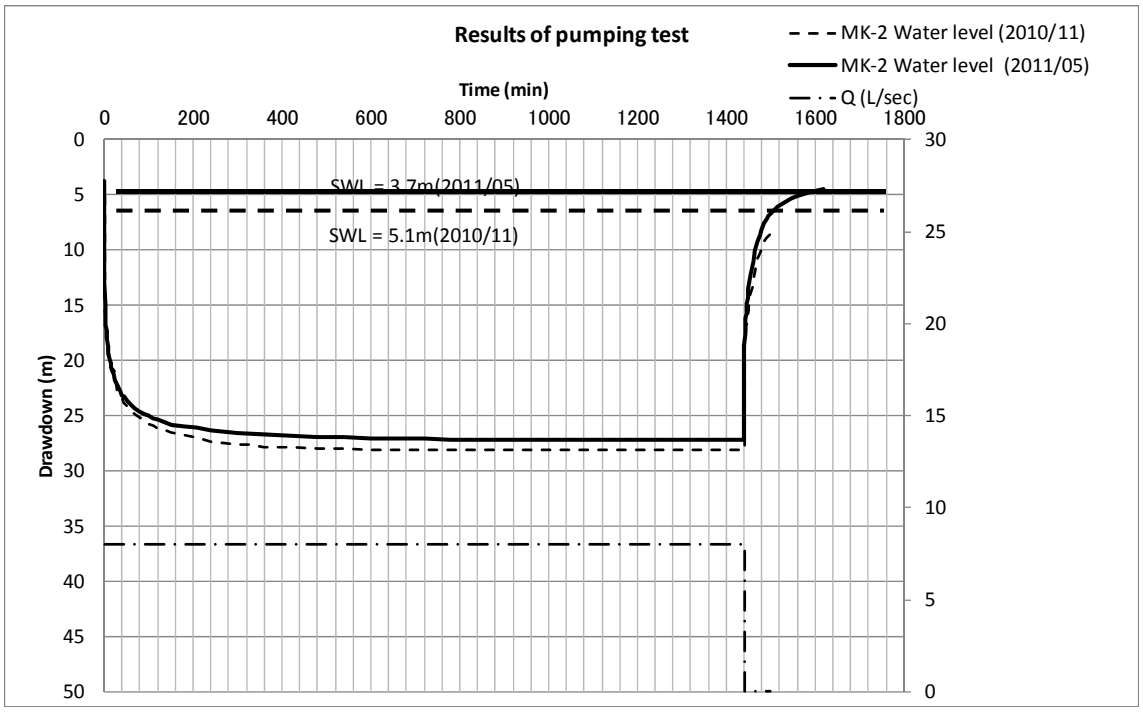



図 A7 - 1 - 27 連続揚水試験結果（MK-2）

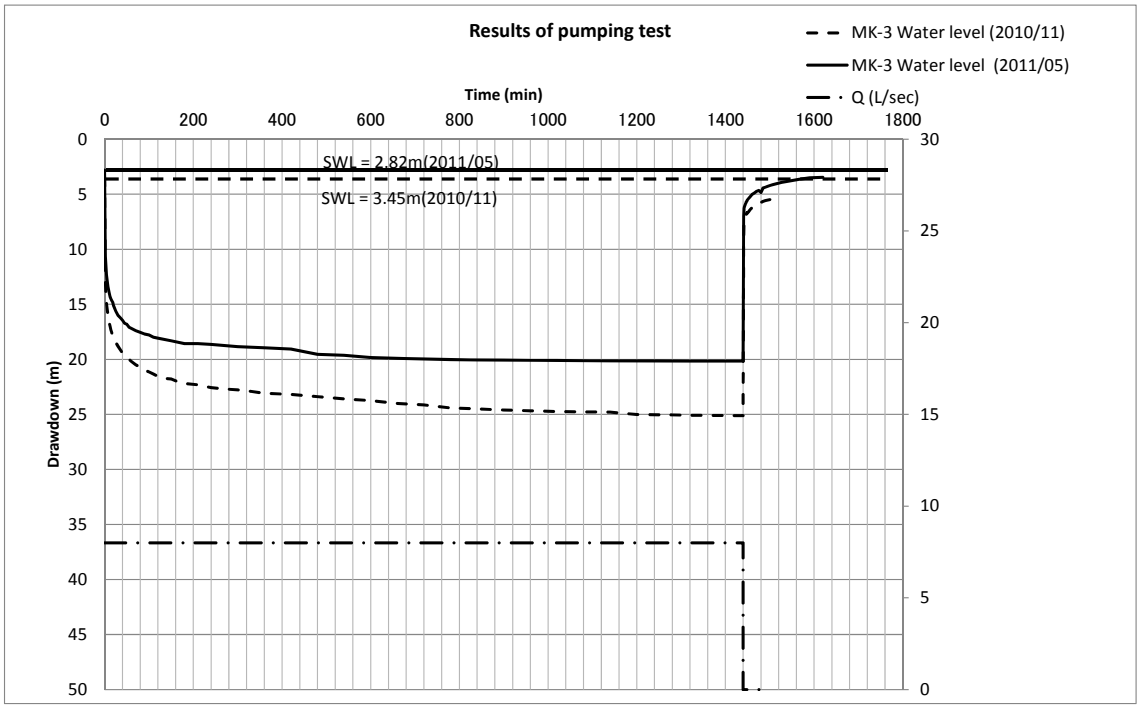



図 A7 - 1 - 28 連続揚水試験結果 (MK-3)

表 A7 - 1 - 23 段階揚水試験結果（ムカンダ地区 1回目）

Mkanda BH 1(MK-1)

| Step No | Time (Hours) | Q (L/sec) | S (m) | Q/S |
|---|---|---|---|---|
| 1 | 1.67 | 2.50 | 14.74 | 0.16 |
| 2 | 1.67 | 3.00 | 23.62 | 0.12 |
| 3 | 1.17 | 4.00 | 51.82 | 0.07 |
| 4 | 0.42 | 5.00 | 51.06 | 0.10 |

Mkanda BH 2(MK-2)

| Step No | Time (Hours) | Q (L/sec) | S (m) | Q/S |
|---|---|---|---|---|
| 1 | 1.67 | 5.00 | 7.77 | 0.64 |
| 2 | 1.67 | 6.00 | 10.70 | 0.56 |
| 3 | 1.67 | 8.00 | 20.03 | 0.40 |
| 4 | 1.33 | 10.00 | 53.71 | 0.19 |

Mkanda BH 3(MK-3)

| Step No | Time (Hours) | Q (L/sec) | S (m) | Q/S |
|---|---|---|---|---|
| 1 | 1.67 | 5.00 | 10.10 | 0.50 |
| 2 | 1.67 | 6.00 | 11.99 | 0.50 |
| 3 | 1.67 | 8.00 | 17.52 | 0.46 |
| 4 | 1.67 | 10.00 | 39.52 | 0.25 |

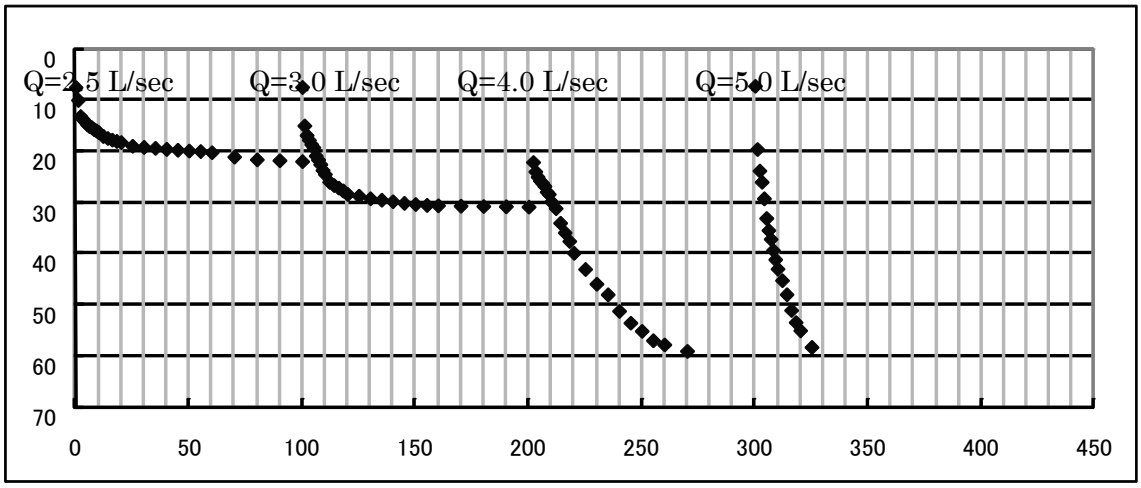



図　A7 - 1 - 29 段階揚水試験結果（MK-1 / Makina, Mkanda）

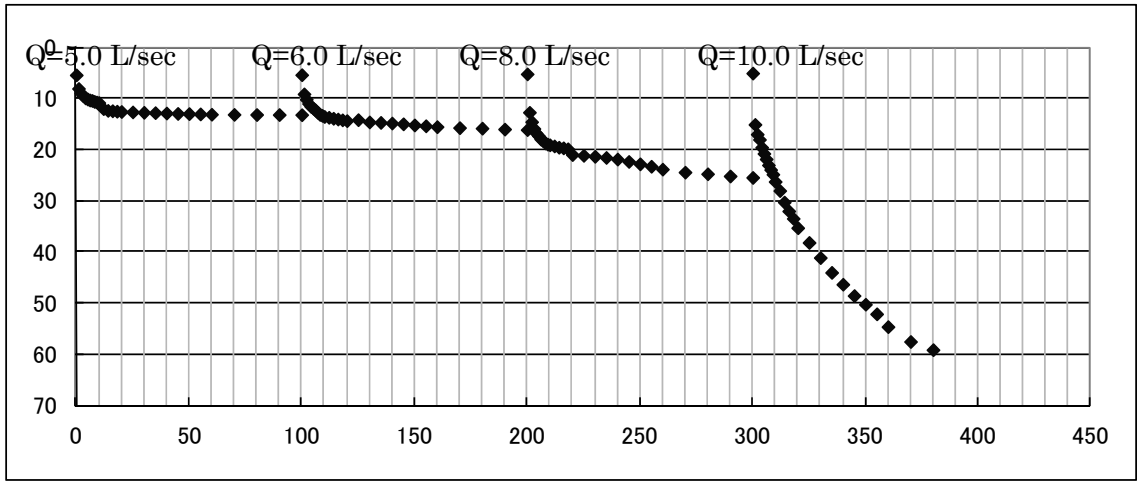



図　A7 - 1 - 30 段階揚水試験結果（MK-2 / Lufina, Mkanda）

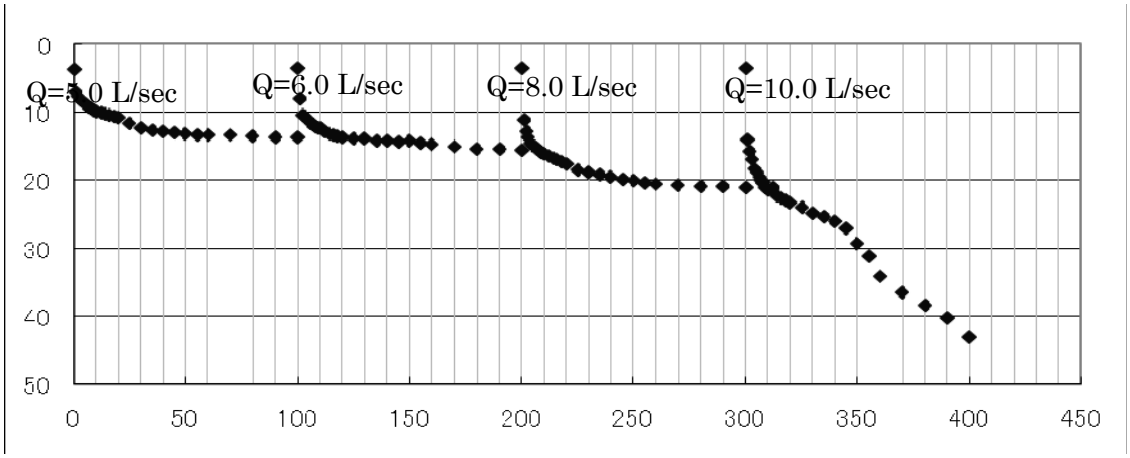



図　A7 - 1 - 31 段階揚水試験結果（MK-3 / Chiluzi, Mkanda）

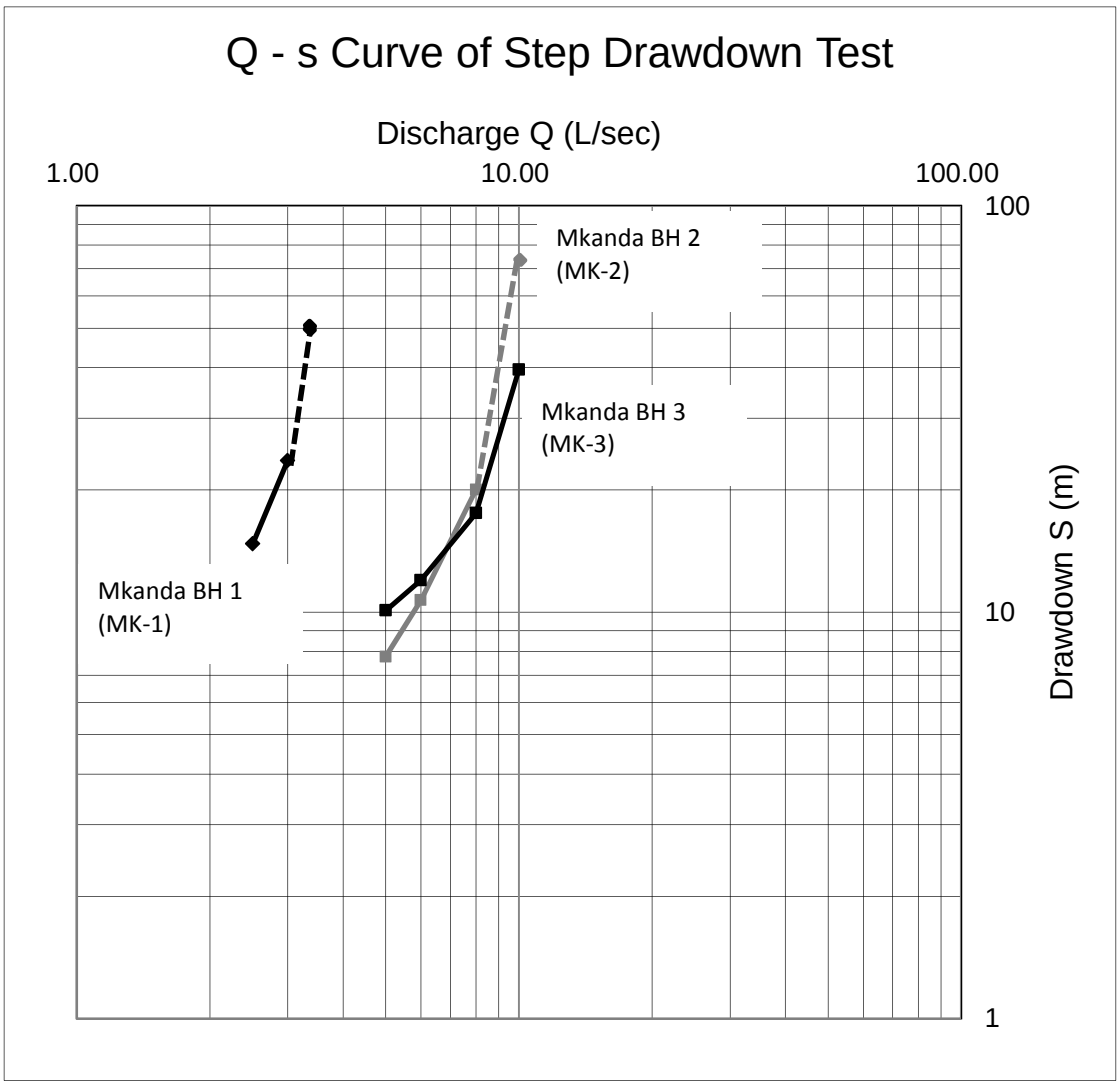



図 A7 - 1 - 32 段階揚水試験による揚水量(Q)-水位降下量(s) の関係（ムカンダ地区：第一回目）

相互の井戸への影響の確認

第 2 回の連続揚水試験時に揚水していない他の 2 孔の水位変化を観測し、水位低下と孔間距離の関係を求めた。　揚水開始 24 時間後の観測井戸の水位低下は、表 A7 – 1 – 24 に示すとおりであり、MK-1 の揚水では、その他の井戸に影響が表れないが、MK-2 および MK-3 の揚水では、相互に 49～58cm の水位低下が認められた。また、MK-2 の揚水時には、MK-3 とほぼ同じ距離にありながら、MK-1 への影響は、20cm に留まった。

**表 A7 - 1- 24 詳細揚水試験における孔間の水位低下影響（ムカンダ地区）**

| | 揚水孔 | 観測孔 | | 揚水孔 | 観測孔 | | 揚水孔 | 観測孔 | |
|---|---|---|---|---|---|---|---|---|---|
| | MK-1 | MK-3 | MK-2 | MK-2 | MK-1 | MK-3 | MK-3 | MK-1 | MK-2 |
| 揚水量 (l/sec) | 3.5 | | | 8.0 | | | 8.0 | | |
| 静水位 (m) | 3.23 | 2.28 | 3.70 | 3.70 | 3.23 | 2.83 | 2.28 | 3.32 | 3.69 |
| 動水位　(m) | 36.42 | 2.28 | 3.70 | 27.20 | 3.43 | 3.32 | 20.16 | 3.34 | 4.27 |
| 水位低下 (m) | 33.19 | 0.00 | 0.00 | 23.50 | 0.20 | 0.49 | 17.88 | 0.02 | 0.58 |
| 井戸間距離（m) | - | 366 | 183 | - | 183 | 184 | - | 366 | 184 |

### (4) 水質試験結果

表 A7 – 1 - 25 に各試掘井の水質試験検査結果を示す。水質検査は試掘工事終了直後（2010 年 10 月）に実施した。鉄分、濁度、糞便性大腸菌群、糞便性連鎖球菌群が基準値を超過している。このうち、糞便性大腸菌群、糞便性連鎖球菌群に関しては再度確認のため 2011 年 5 月に再度検査を実施した。

鉄分の基準は、鉄管の腐食、洗濯物等の着色、味覚などに基づく基準であり、健康に係る項目ではない。WHO では 0.3 mg/l を基準値としており、検査結果は WHO ガイドライン値以下である。定期的な水質試験による監視は必要であるが、MS214 に対する超過はわずかであるため、その給水に問題となる水質ではない。濁度については、掘削後の井戸洗浄で透明であることを目視で確認しているが、若干の掘削による影響が考えられる。給水前に監視が必要であるが、揚水を継続することで今回の試験結果より減少することが期待できる。また、細菌類についても監視が必要であるが、最小限の塩素滅菌で除去できる量である。

**表 A7 - 1 - 25 各試掘井の水質試験結果**

| LAB No. (Sample No.) | | MS 214:2005 | 766 (MK-1) | 765 (MK-2) | 767 (MK-3) | (MK-1) | (MK-2) | (MK-3) |
|---|---|---|---|---|---|---|---|---|
| Date Sampled | | | 14/11/‘10 | 14/11/‘10 | 14/11/‘10 | 27/05/’11 | 27/05/’11 | 27/05/’11 |
| Season | | | Dry | Dry | Dry | Early Dry | Early Dry | Early Dry |
| pH Value | | 5.0-9.5 | 7.71 | 7.63 | 7.69 | - | - | - |
| Conductivity | (µS/cm) | 700-1500 | 506 | 480 | 353 | - | - | - |
| Total Dissolved Solids | (mg/l) | 450-1000[a)] | 250 | 240 | 177 | - | - | - |
| Carbonate (as $CO3^{2-}$) | (mg/l) | - | 33 | 29 | 22 | - | - | - |
| Bicarbonate (as $HCO3^{-}$) | (mg/l) | - | 220 | 198 | 137 | - | - | - |
| Chloride (as $Cl^{-}$) | (mg/l) | 100-200 | 6.8 | 13.5 | 11.8 | - | - | - |
| Sulphate (as $SO4^{2-}$) | (mg/l) | 200-400 | 0.05 | 0.21 | 0.11 | - | - | - |
| Nitrate (as NO3-) | (mg/l) | 6.0-10.0 | 0.033 | 0.037 | 0.003 | - | - | - |
| Fluoride (as $F^{-}$) | (mg/l) | 0.7-1.0 | 0.60 | 0.60 | 0.59 | - | - | - |
| Sodium (as $Na^{+}$) | (mg/l) | 100-200 | 35.2 | 33 | 30.7 | - | - | - |
| Potassium (as $K^{+}$) | (mg/l) | 25-50 | 3.8 | 4.1 | 3.9 | - | - | - |
| Calcium (as $Ca^{++}$) | (mg/l) | 80-150 | 46 | 43 | 25 | - | - | - |
| Magnesium (as $Mg^{++}$) | (mg/l) | 30-70 | 10.6 | 9.7 | 8.1 | - | - | - |
| Iron($Fe^{++}$) | (mg/l) | 0.01-0.2 | 0.043 | 0.211 | 0.236 | - | - | - |
| Manganese ($Mn^{++}$) | (mg/l) | 0.05-0.1 | <0.001 | <0.001 | <0.001 | - | - | - |
| Total Hardness (as CaCO3) | (mg/l) | - | 158 | 147 | 96 | - | - | - |
| Total Alkalinity (as CaCO3) | (mg/l) | - | 235 | 210 | 149 | - | - | - |
| Silica (as SiO2) | (mg/l) | - | 28 | 21 | 23 | - | - | - |
| Turbidity | (NTU) | 0.1-1 | 23.9 | 16.36 | 20.6 | - | - | - |
| Suspended Solids (SS) | (mg/l) | - | 24 | 16 | 22.0 | - | - | - |
| Faecal Coliform | (/100 ml) | 0 in 100ml | 328 | 0 | 736 | 0 | 0 | 0 |
| Faecal Streptococci | (/100 ml) | 0 in 100ml | 20 | 4 | 0 | 0 | 0 | 5 |

### 3.3 給水需要と水源の評価

#### (1) 水源の評価

ムカンダ地区は「マ」国側の要請では、リウェレジ川からの取水を計画していたが、その水質から急速ろ過施設を備える浄水場が必要であり、糞便性大腸菌等の高い微生物学的汚染が認められたことから、その変化に応じて必要な多量の塩素消毒の管理、それに関連した pH の管理など高度な水質管理が必要と判断された。河川水に比して、試掘で確認された地下水は水質がよく、塩素滅菌以外の処理を必要とせず、揚水量も需要に対して十分であることから、安全性とコストの面で有利であると判断された。

#### (2) 相互干渉による井戸の水位低下

揚水試験結果 3.2 (3)より、ムカンダ地区では、観測井への水位低下の影響は最大 58cm を確認した。影響は、揚水量の少ない MK-1(東)の揚水では発生せず、揚水量の多い西側 2 本の間で大きくなっている。これは、帯水層の特性が水平方向に変化していることを示していると考えられる。

MK-2 と MK-3 を同時運転した時の水位降下の影響は、単独井戸での揚水量に対して MK-2 では 0.58m/23.50m =2.5%、MK-3 では、0.49m/17.88m = 2.7% と比較的少なく、揚水量の減少も同程度となるため、給水計画への影響は大きくない。

#### (3) 需要と取水量の関係

ムカンダ地区の計画給水人口は、7,051 人（4,666 人(2008 年)@人口増加率 3.5%/年）であり、計画給水量は表 A7－1－26 に示すとおり、日最大給水量は 544m$^3$/日である。

一方、地下水からの水源は井戸 1 本からの取水量は 691m$^3$/日（MK-2、MK-3）が期待できるので、試掘井３本のうち、MK-2 もしくは MK-3 の１本を稼働させること（うち１本は予備井）により取水量は計画給水量を満たす。

表 A7 - 1 - 26 本プロジェクトの計画給水量（試算）

| 地区名 | | ムカンダ | 備考 |
|---|---|---|---|
| 1. 人口 | （人） | 7,051 | 2020 年 |
| 2. 平均給水原単位 | (lcd) | 46.2 | 家庭用水※1 |
| 3. 家庭用水量 | (m$^3$/日) | 325.8 | 1×2÷1000 |
| 4. 公共用水量 | (m$^3$/日) | 81.5 | 3×25%※2 |
| 5. 需要水量合計 | (m$^3$/日) | 407.3 | 3+4 |
| 6. 一日平均給水量 | (m$^3$/日) | 453 | 5÷(1-0.10)※3 |
| 7. 一日最大給水量 | (m$^3$/日) | 544 | 6×1.2 |

※：平均給水原単位：36×68%＋50×16%＋80×14%＋125×2%＝46.2 lcd

表 A7 － 1 － 27 に示す住居カテゴリー別給水原単位及び人口割合に基づいて算定。

※2：25%は「マ」国の通常の家庭用水に対する水量である。

※3：0.10 は想定漏水率を示す。

**表 A7 － 1 － 27 既存調査で使用している居住形態別人口割合**

| 住居カテゴリー | 給水原単位<br>（リットル/人/日） | 人口割合 |
|---|---|---|
| 伝統的な居住地域 | 36 | 68% |
| 高密度の居住地域 | 50 | 16% |
| 中密度の居住地域 | 80 | 14% |
| 低密度の居住地域 | 125 | 2% |

## ４．サンテ地区の水源

### 4.1 表流水

サンテマーケットセンターの東側及び南側にはブア川が存在するが、要請内容には表流水を水源とする案が含まれてないことから、検討の対象としない。

なお、サンテ地区のフィージビリティ調査[2]では、ブア川は乾期に流量が 0 となる月があるため、貯水池を建設して乾期の水源とする計画を提案している。同調査では、貯水池の建設を含む表流水を水源とする計画はコスト高となるため、最終的には地下水を水源とすることを提案している。

### 4.2 地下水

#### (1) 物理探査による試掘地点の選定

フィージビリティ調査（1998 年）で図 A7 – 1- 4 に示すようにサンテマーケットセンター周辺地域の井戸掘削候補地域として 3 ヶ所を挙げている。調査団はこの案に従い、井戸掘削候補地 No.1 に試掘を行うための手続きを MoIWD 及び CRWB に依頼した。

CWRB により手配された地域で地下水開発の試掘地点を決定するため、図 A7 –1 – 33 に示すようにサンテマーケットセンター西方に 5 本の東西方向の水平探査を設定し、そのなかで 10 か所の垂直電気探査を実施した。水平探査結果と比抵抗分布に基づく垂直探査位置の選定を図 A7 – 1 – 34 , A7 – 1 – 35 に、電気探査（垂直探査）結果を図 A7 – 1 – 36 、A7 – 1 – 37 に示す。

[2] NWDP (1998), 16 New Water Supply Schemes Feasibility Study

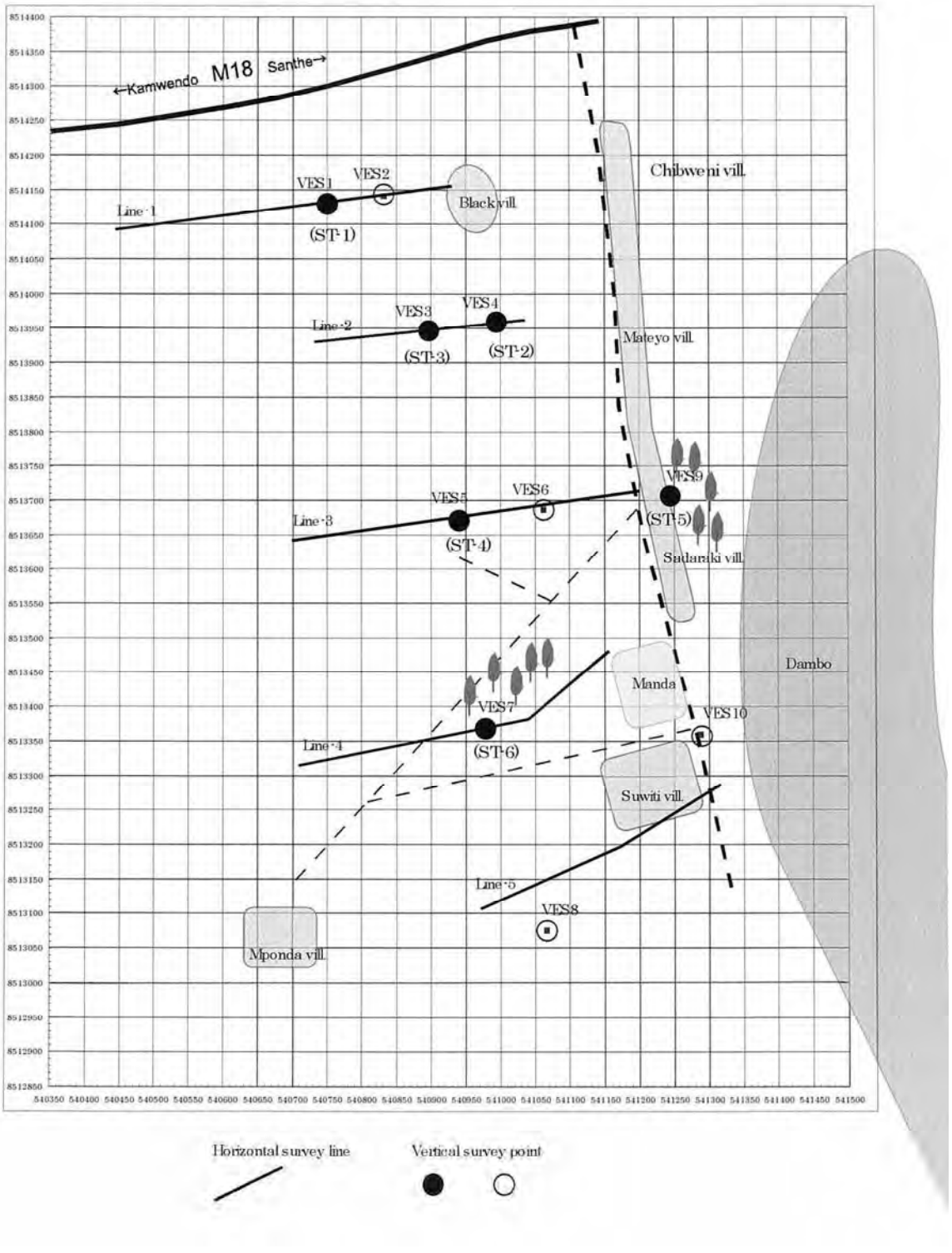
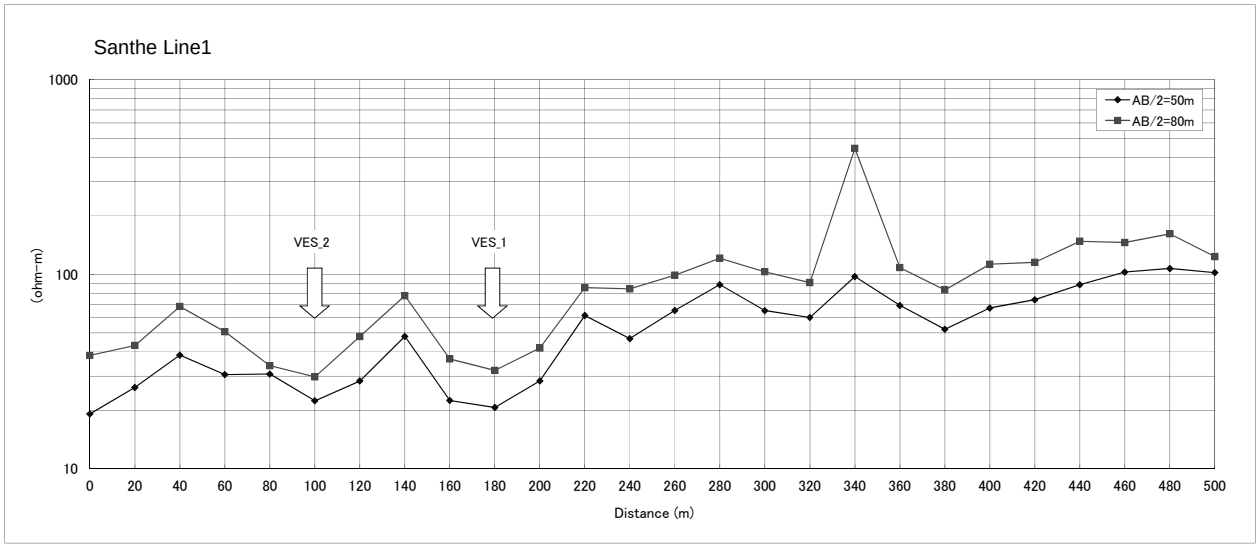



図 A7 - 1 - 33　サンテ地区水平探査測線位置および垂直探査位置



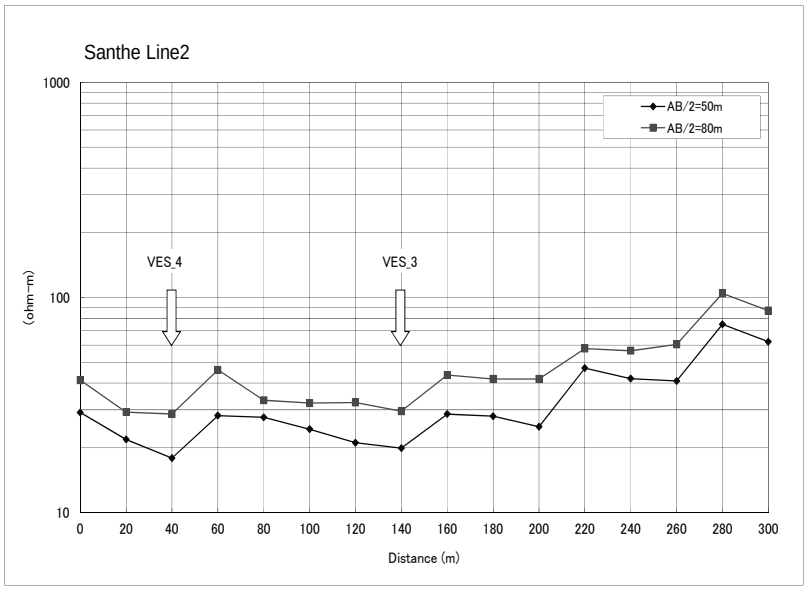
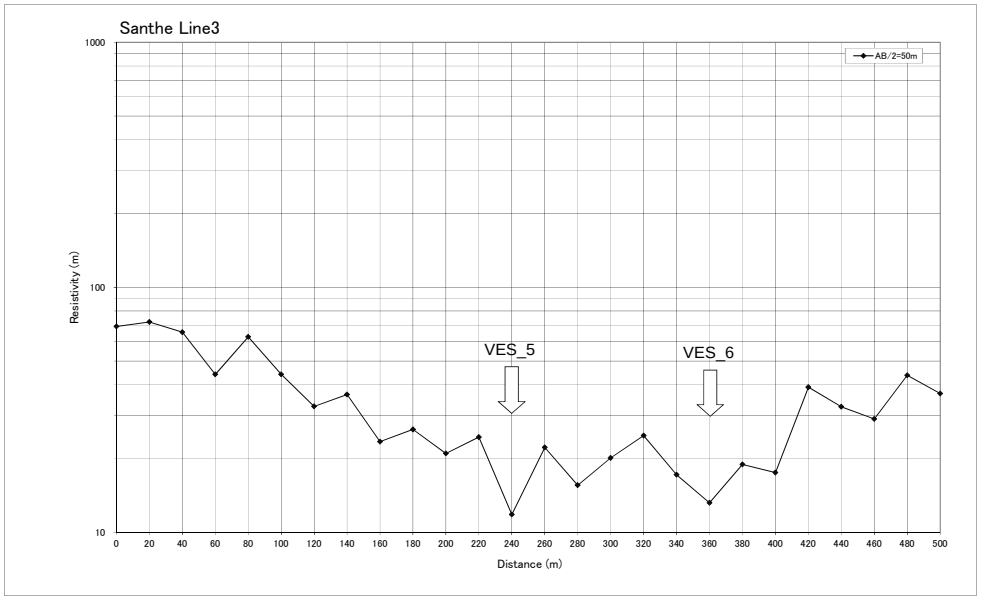
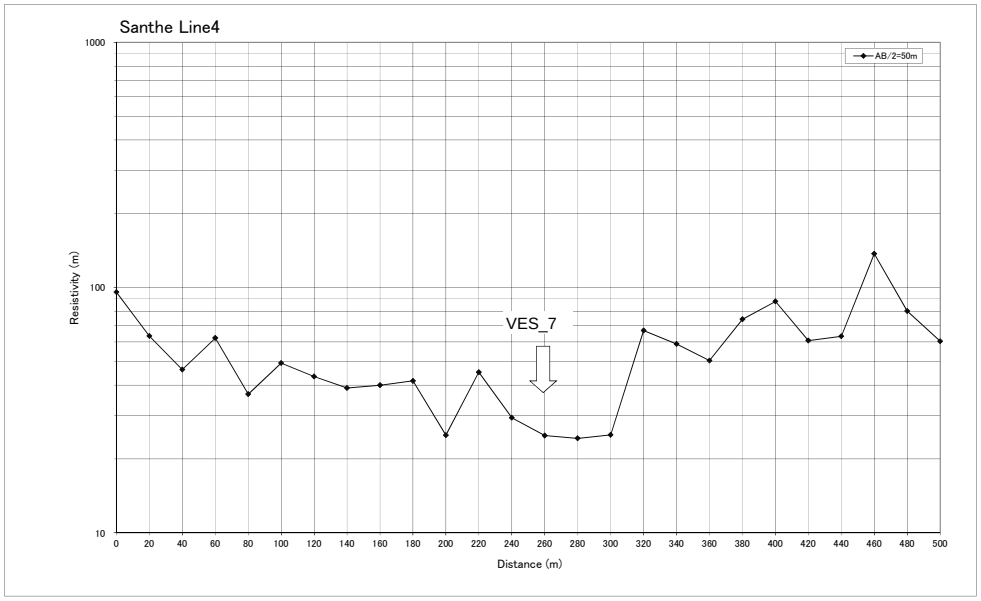




図 A7 - 1 - 34 水平探査結果と比抵抗分布に基づく垂直探査位置の選定



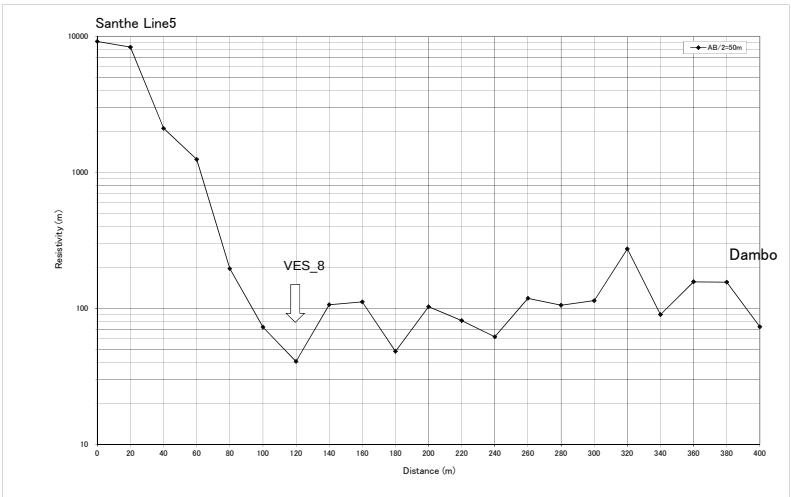




図 A7 - 1 - 35 水平探査結果と比抵抗分布に基づく垂直探査位置の選定

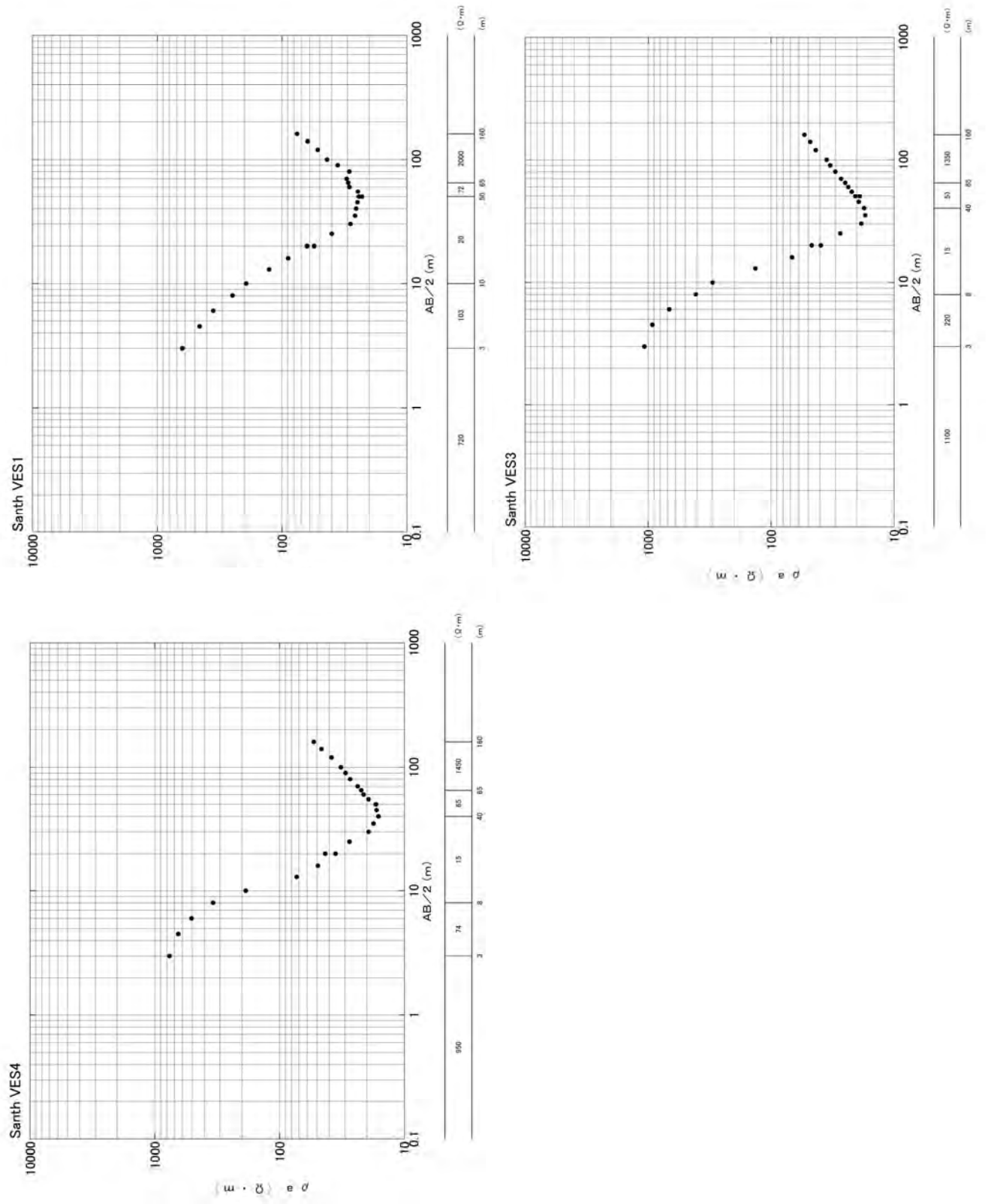



図 A7 - 1 - 36 電気探査（垂直探査）結果（VES1,3,4）

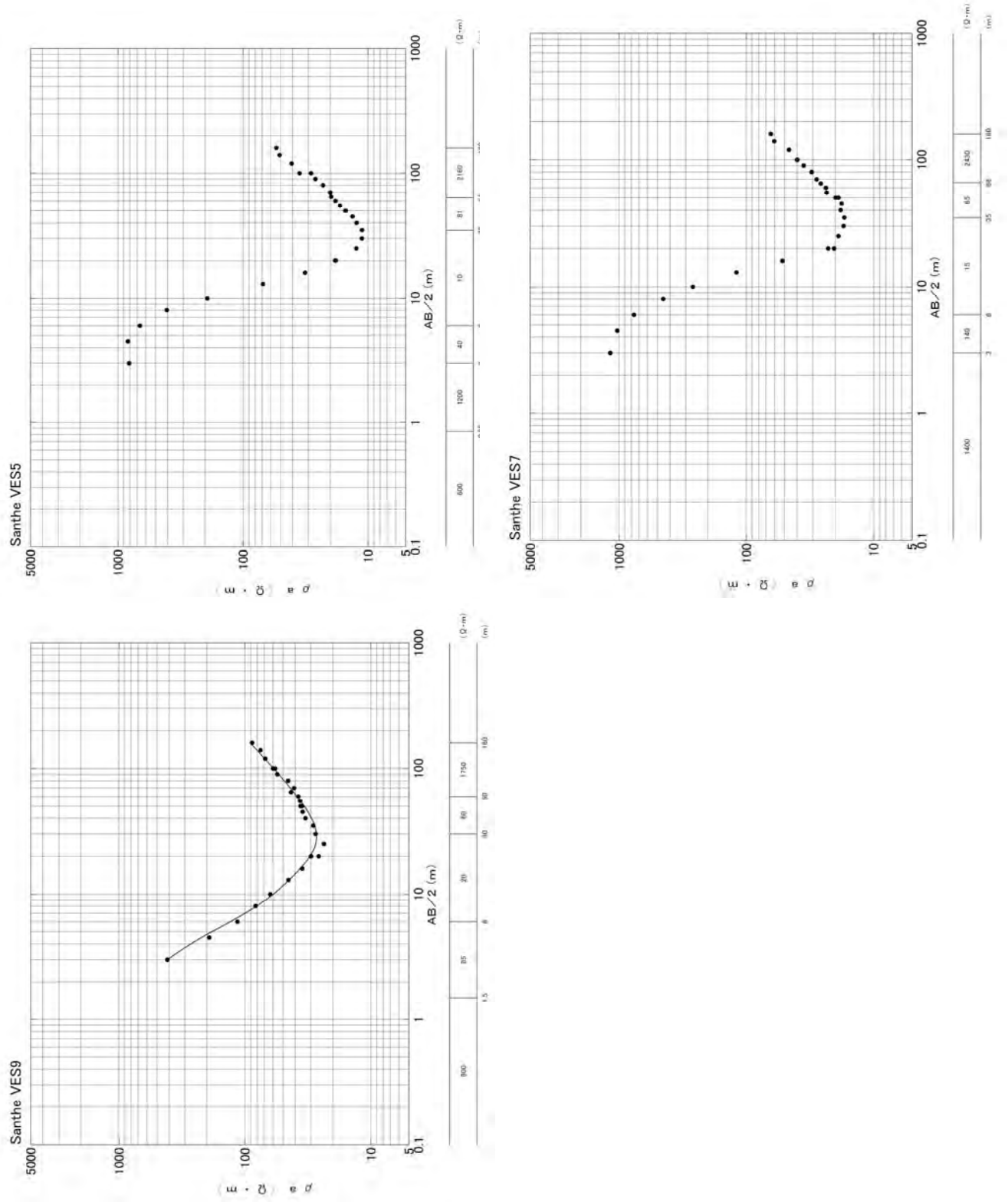



図 A7 - 1 - 37 電気探査（垂直探査）結果（VES 5,7,9）

### (2) 試掘

電気探査の結果と掘削機械の据付可能性に基づき、6 箇所の試掘井戸の位置を表 A7 – 1 – 28 および図 A7 – 1 – 38 に示すとおり決定した。

試掘調査の結果は、地質状況、井戸構造、静水位、動水位（連続揚水試験時）を示す柱状図として図 A7 – 1 – 39, 40 に示した。なお、ST-6 に関して予定掘削深度は 72m であったが掘削中の揚水量が少ないので 92m まで掘削深度を延長した。

表 A7 - 1 - 28 試掘井戸位置

| BH No. | Coordinate* | | Remarks |
|---|---|---|---|
| | Easting | Northing | |
| ST-1 | 540752 | 8514432 | VES 1 |
| ST-2 | 540994 | 8514258 | VES 4 |
| ST-3 | 540893 | 8514250 | VES 3 |
| ST-4 | 540945 | 8513678 | VES 5 |
| ST-5 | 541242 | 8513706 | VES 7 |
| ST-6 | 540980 | 8513374 | VES 9 |

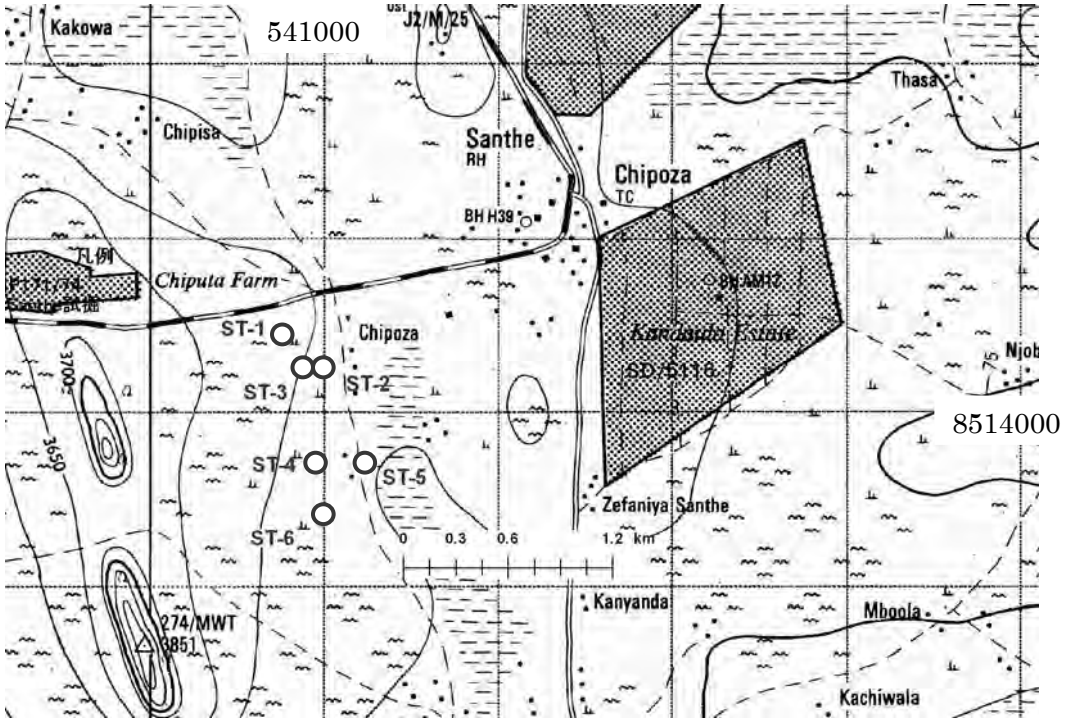
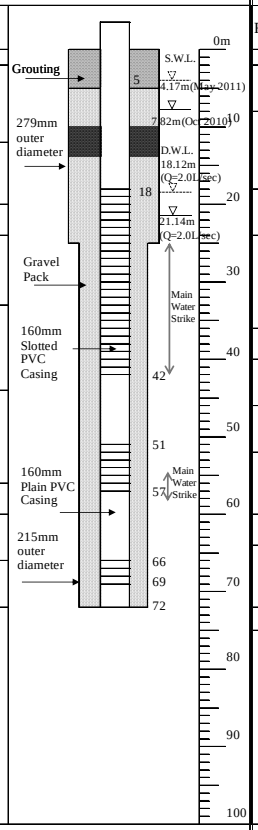



図 A7 - 1 - 38 試掘井戸位置図（サンテ地区）

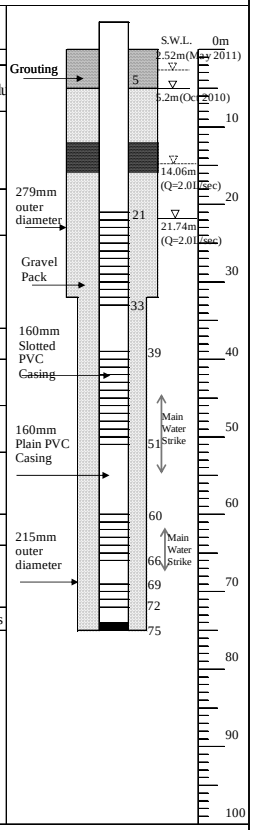
Location : Santhe BH1

| From | To | Lithology |
|---|---|---|
| 0 | 2 | Brown loose top soils |
| 2 | 12 | Brown lateritic soils ; drills into calcareous sediments |
| 12 | 20 | Gray to pale gray calcareous sediments |
| 20 | 24 | Gray medium grained schist rock sediments |
| 24 | 34 | Pale gray coarse sediment clumps ; drill into fine sediments |
| 34 | 44 | ditto as above but less and small sized clumpy sediments |
| 44 | 56 | Unsorted, coarse mottle of sandy sediments |
| 56 | 60 | Medium grained mottle of biotite gneiss rock sediments |
| 60 | 66 | Ditto as above but with micas |
| 66 | 72 | Coarse to medium grained mottle of sediments |



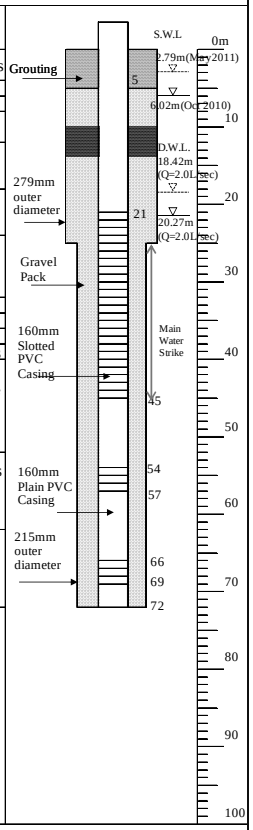

Location : Santhe BH2

| From | To | Lithology |
|---|---|---|
| 0 | 2 | Brown loose top soils |
| 2 | 8 | Brownish red clumpy soils with calcareous inclu |
| 8 | 18 | Pale gray schist rock sediments ; drills into white powdery calcareous sediments |
| 18 | 24 | Gray medium grained schist rock sediments intercalated with calcareous rock sediments |
| 24 | 36 | Wet, unsorted mottle of gray sediments; drills into very fine clayey soils |
| 36 | 40 | Unsorted medium grained mottle of sediments |
| 40 | 46 | Ditto as above but drills into gray clays |
| 46 | 52 | Dark gray, coarse micaceous rock sediments |
| 52 | 60 | Brown fine weathered sandy sediments |
| 60 | 64 | Dark gray, coarse micaceous rock sediments |
| 64 | 72 | Coarse unsorted mottle of sediments |
| 72 | 75 | Ditto as above but drills into angular rock fragments |




Location : Santhe BH3

| From | To | Lithology |
|---|---|---|
| 0 | 4 | Brown top soils with red lateritic aggregates |
| 4 | 6 | Red soils with quartzite rock aggregates |
| 6 | 8 | Red soils with calcareous rock predominating |
| 8 | 12 | Calcareous rock with gray sediments |
| 12 | 18 | Gray medium grained sediments with little calcareous sediments |
| 18 | 24 | Weathered pegmatite rock aggregates ; drills into semi-angular fragments |
| 24 | 32 | Coarse rock sediments with a lot of gray sticky clays |
| 32 | 34 | Red clay with yellow clay inclusions |
| 34 | 36 | Ditto as 24-32 above but with yellow clay |
| 36 | 38 | Well sorted, dark gray mottle of coarse |
| 38 | 40 | Unsorted coarse mottle of rocky sediments |
| 40 | 52 | Medium grained, dark gray rocky mottle of sorted sediments with few micas |
| 52 | 62 | Medium to fine grained mottle of sediments with high percentage of quartzite aggregates |
| 62 | 72 | Brown weathered mottle of coarse sediments |

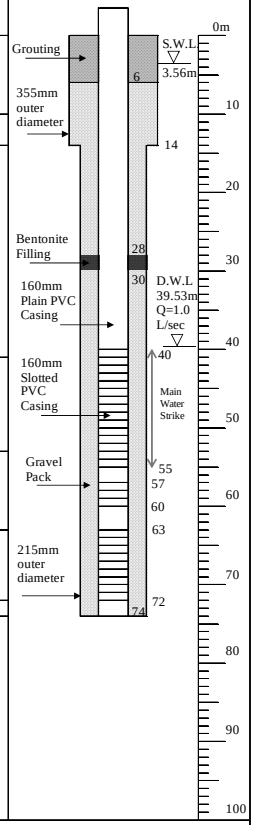



ST-1　　ST-2　　ST-3

図 A7 - 1 - 39 試掘井戸柱状図・井戸構造図(ST-1,ST-2,ST-3)

Location : Santhe BH4

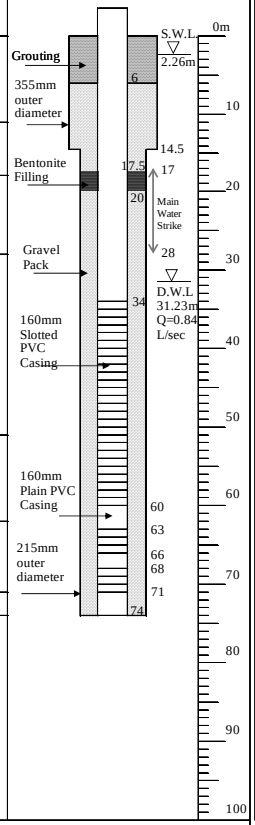
| From | To | Lithology |
|---|---|---|
| 1 | 10 | Reddish top soil |
| 10 | 14 | Gray brown weathered rock |
| 14 | 41 | Grayish wethered rock |
| 41 | 53 | Dark gray granite |
| 53 | 63 | Gray granite |
| 63 | 73 | Dark gray granite |
| 73 | 74 | Dark metamorphic rock |




ST-4

Location : Santhe BH5

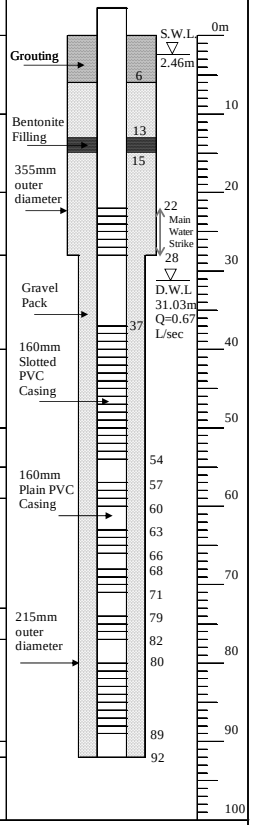
| From | To | Lithology |
|---|---|---|
| 0 | 11 | Reddish top soil |
| 11 | 18 | Brown weathered rock |
| 18 | 28 | Grey granite |
| 28 | 51 | Brown grey Gneiss |
| 51 | 62 | Dark grey sedimentary rock |
| 62 | 71 | Dark grey sedimentary rock |
| 71 | 74 | Grey sedimentary rock |




ST-5

Location : Santhe BH6

| From | To | Lithology |
|---|---|---|
| 0 | 10 | Red top soil |
| 10 | 20 | Brown weathered rock |
| 20 | 28 | Grayish weathered rock |
| 28 | 40 | Gray weathered rock |
| 40 | 50 | Dark granite |
| 50 | 55 | Dark brown metamorphic rock |
| 55 | 59 | Dark brown metamorphic rock |
| 59 | 73 | Black granite |
| 73 | 77 | Black granite |
| 77 | 90 | Dark black metamorphic rock |
| 90 | 92 | Black metamorphic rock |




ST-6

図 A7 - 1 - 40 試掘井戸柱状図・井戸構造図(ST-4,ST-5,ST-6)

(3) 揚水試験

揚水試験の水位降下曲線を図 A7－1－41 から図 A7－1－46 に示す。

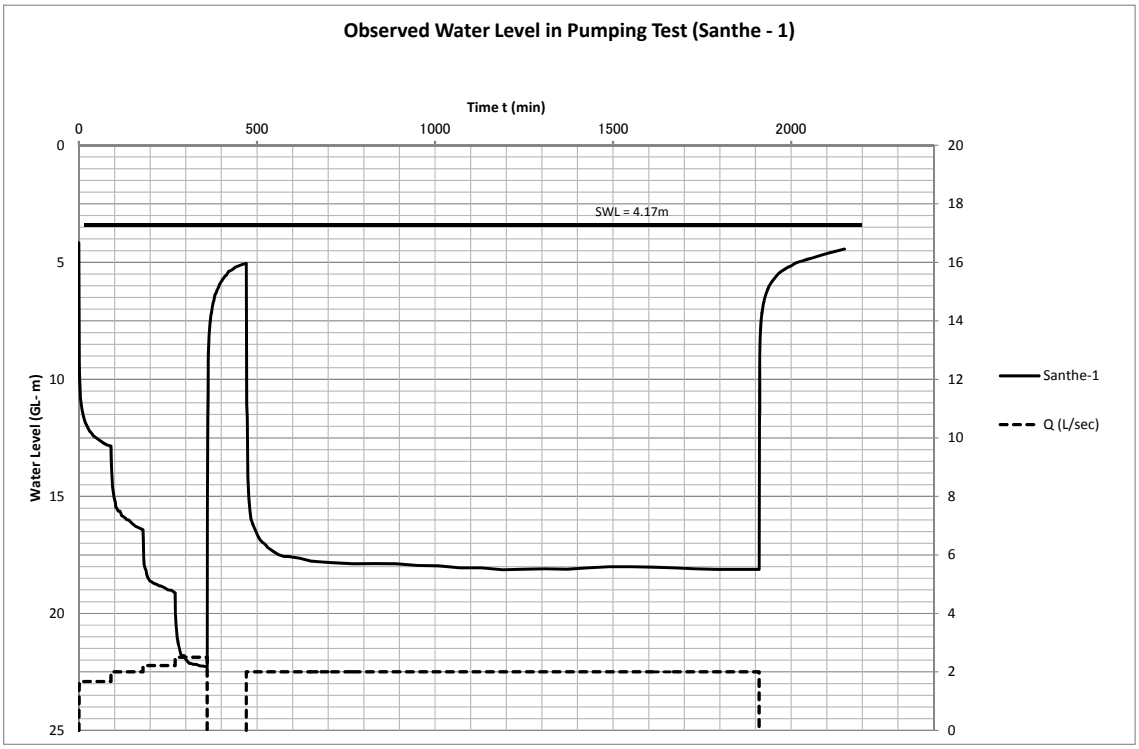



図 A7 - 1 - 41 揚水試験時の水位降下曲線（ST-1）

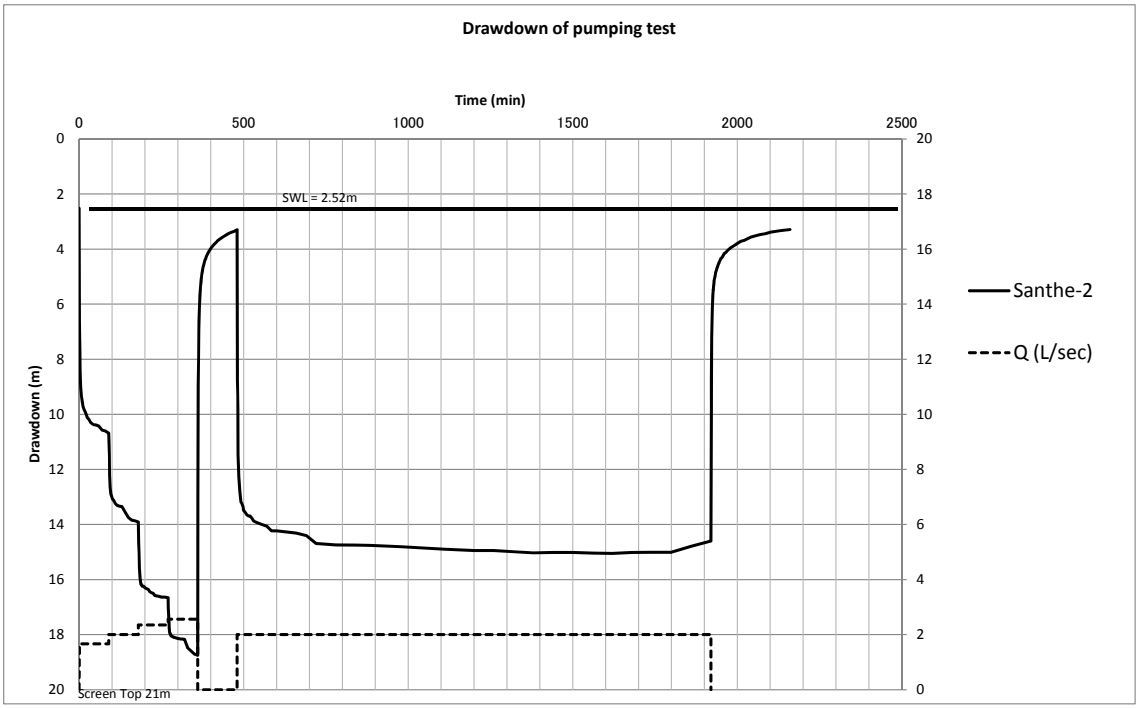



図 A7 - 1 - 42 揚水試験時の水位降下曲線（ST-2）

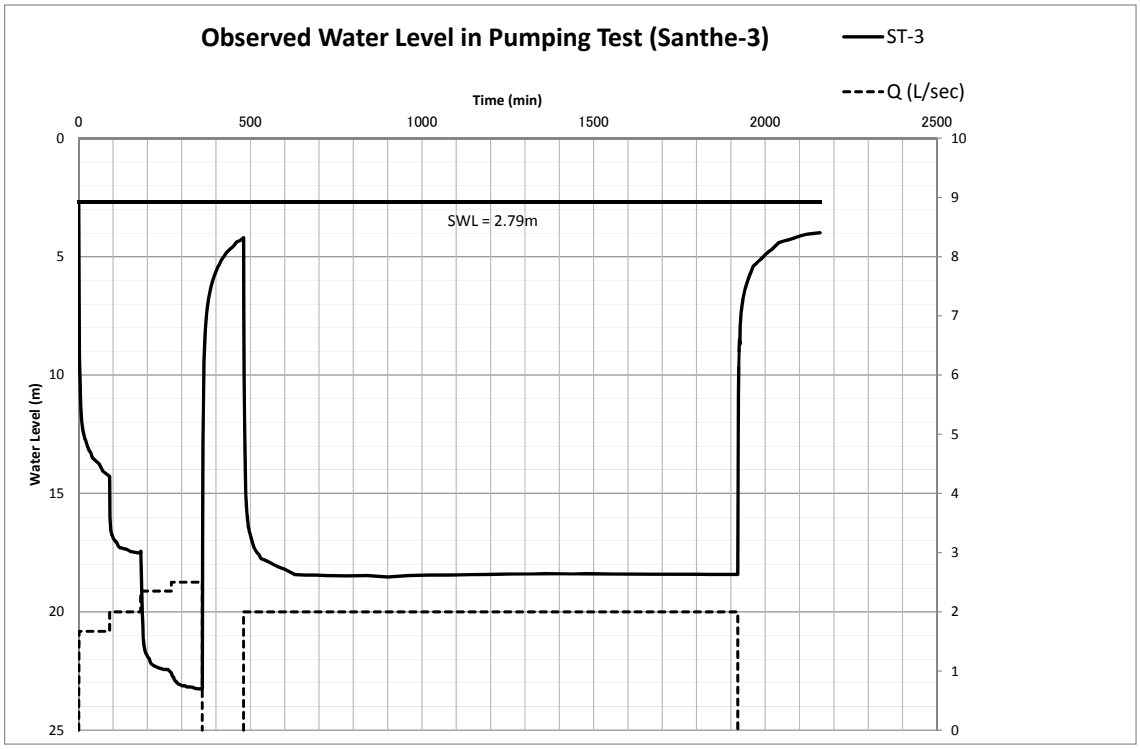



図 A7 - 1 - 43 揚水試験時の水位降下曲線（ST-3）

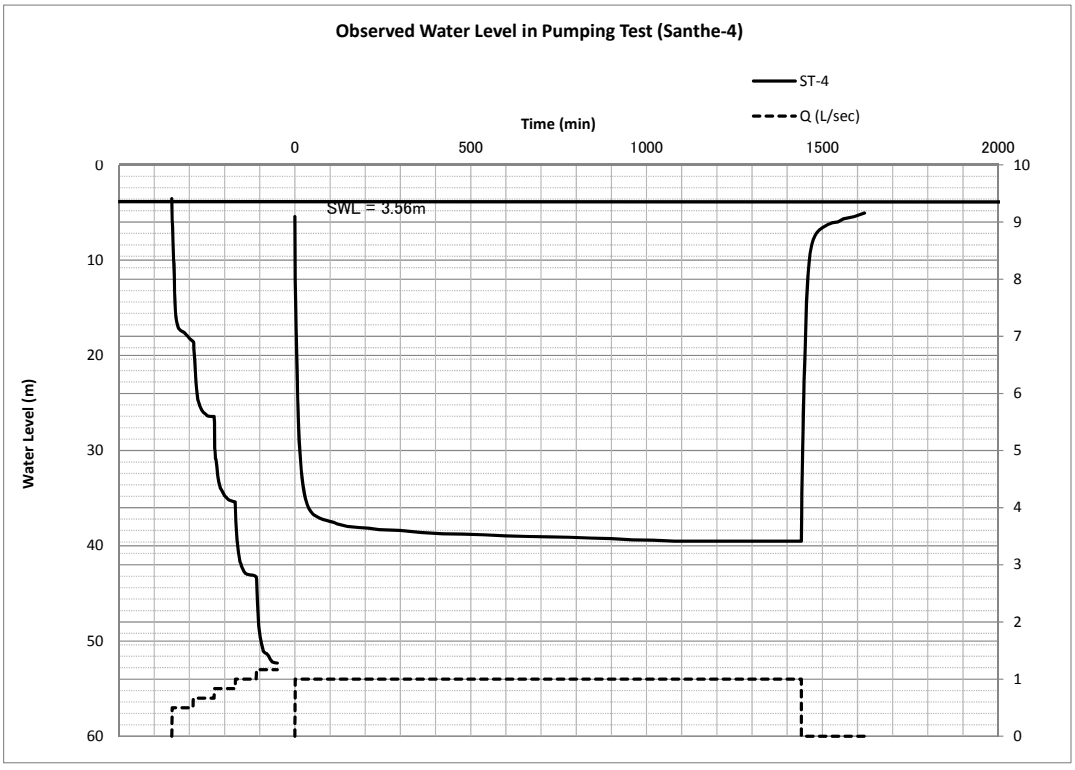



図 A7 - 1 - 44 揚水試験時の水位降下曲線（ST-4）

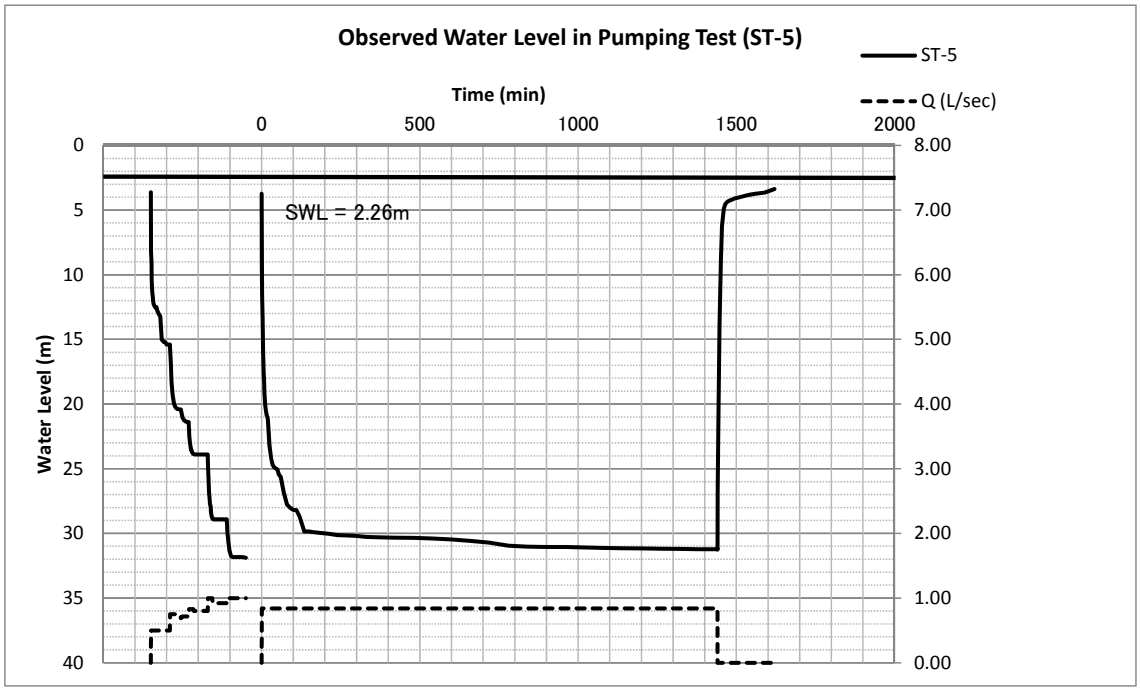



図 A7 - 1 - 45 揚水試験時の水位降下曲線（ST-5）

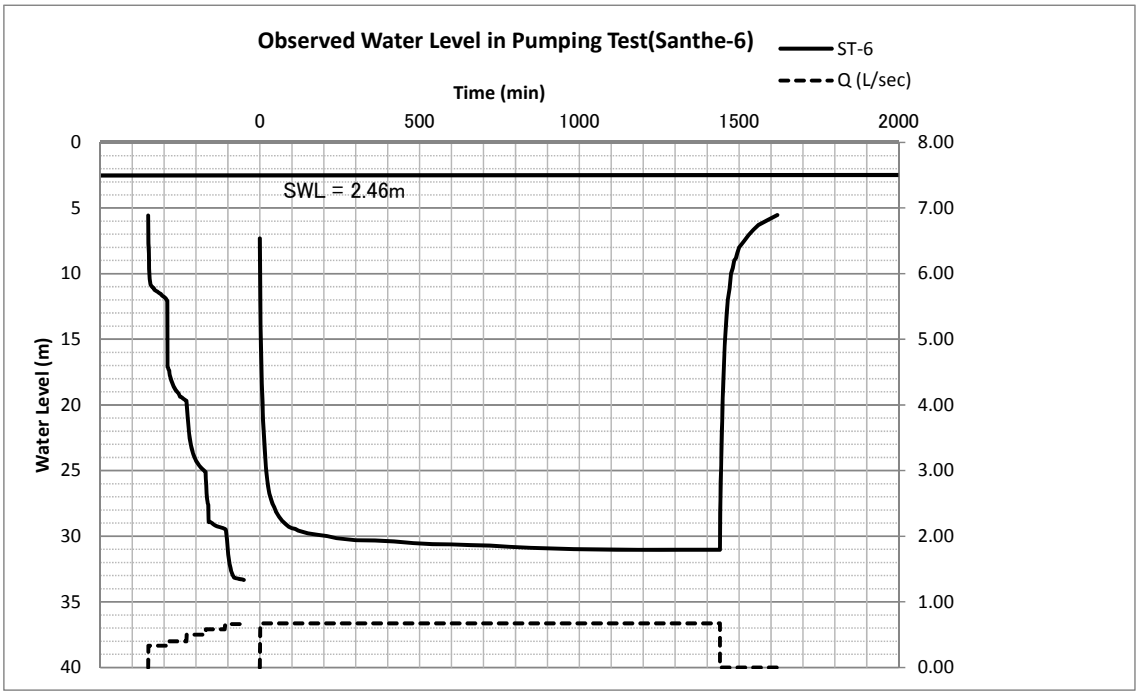



図 A7 - 1 - 46 揚水試験時の水位降下曲線（ST-6）

## 各井戸の安定的に揚水できる揚水量

段階揚水試験及び連続揚水試験結果より各井戸の安定的な揚水量を以下の通りとした。

表　A7 - 1 - 29 各井戸の安定的な揚水量（サンテ地区）

| | ST-1 | ST-2 | ST-3 | ST-4 | ST-5 | ST-6 |
|---|---|---|---|---|---|---|
| 揚水量 (L/sec) | 2.00 | 2.00 | 2.00 | 1.00 | 0.84 | 0.67 |

表　A7 - 1 - 30 段階揚水試験結果（サンテ地区）

Santhe(ST-1)　　Q: Discharge,

| Step No | Time (Hours) | Q (L/sec) | s (m) | Q/s |
|---|---|---|---|---|
| 1 | 1.50 | 1.67 | 8.68 | 0.19 |
| 2 | 1.50 | 2.00 | 12.25 | 0.16 |
| 3 | 1.50 | 2.22 | 14.95 | 0.15 |
| 4 | 1.50 | 2.50 | 18.12 | 0.14 |

Santhe(ST-2)

| Step No | Time (Hours) | Q (L/sec) | s (m) | Q/s |
|---|---|---|---|---|
| 1 | 1.50 | 1.67 | 8.16 | 0.20 |
| 2 | 1.50 | 2.00 | 11.39 | 0.18 |
| 3 | 1.50 | 2.35 | 14.14 | 0.17 |
| 4 | 1.50 | 2.56 | 16.23 | 0.16 |

Santhe(ST-3)

| Step No | Time (Hours) | Q (L/sec) | s (m) | Q/s |
|---|---|---|---|---|
| 1 | 1.50 | 1.67 | 11.49 | 0.15 |
| 2 | 1.50 | 2.00 | 14.73 | 0.14 |
| 3 | 1.50 | 2.35 | 19.79 | 0.12 |
| 4 | 1.50 | 2.50 | 20.46 | 0.12 |

Santhe(ST-4)　　Q: Discharge,

| Step No | Time (Hours) | Q (L/sec) | s (m) | Q/s |
|---|---|---|---|---|
| 1 | 1.00 | 0.500 | 14.96 | 0.0334 |
| 2 | 1.00 | 0.667 | 22.86 | 0.0292 |
| 3 | 1.00 | 0.833 | 31.84 | 0.0262 |
| 4 | 1.00 | 1.000 | 39.68 | 0.0252 |
| 5 | 1.00 | 1.167 | 48.76 | 0.0239 |

Santhe(ST-5)

| Step No | Time (Hours) | Q (L/sec) | s (m) | Q/s |
|---|---|---|---|---|
| 1 | 1.00 | 0.500 | 13.14 | 0.0381 |
| 2 | 1.00 | 0.714 | 19.14 | 0.0373 |
| 3 | 1.00 | 0.800 | 21.64 | 0.0370 |
| 4 | 1.00 | 0.909 | 26.66 | 0.0341 |
| 5 | 1.00 | 1.000 | 29.62 | 0.0338 |

Santhe(ST-6)

| Step No | Time (Hours) | Q (L/sec) | s (m) | Q/s |
|---|---|---|---|---|
| 1 | 1.00 | 0.333 | 9.62 | 0.0343 |
| 2 | 1.00 | 0.400 | 17.22 | 0.0232 |
| 3 | 1.00 | 0.500 | 22.64 | 0.0221 |
| 4 | 1.00 | 0.583 | 26.98 | 0.0215 |
| 5 | 1.00 | 0.667 | 30.87 | 0.0214 |

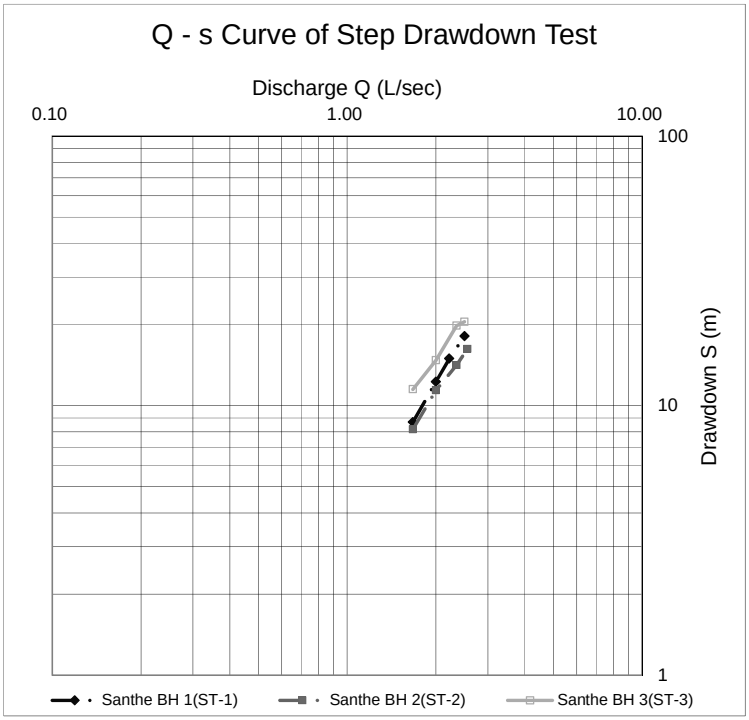



図 A7 - 1 - 47 段階揚水試験による揚水量(Q)-水位降下量(s) の関係(ST-1, ST-2, ST-3)

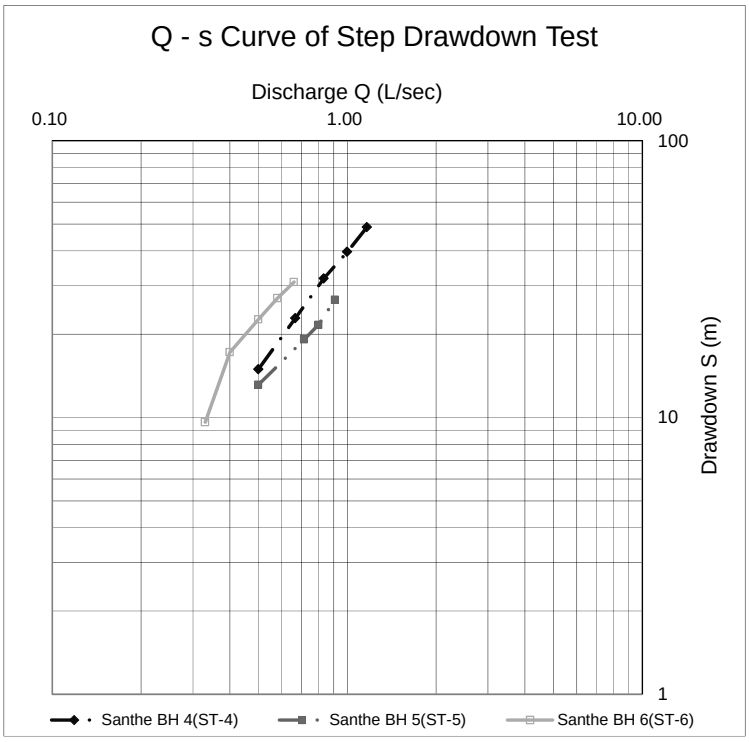



図 A7 - 1 - 48 段階揚水試験による揚水量(Q)-水位降下量(s) の関係(ST-4, ST-5, ST-6)

相互の井戸への影響の確認

揚水試験に際して確認した他井戸（観測井）への水位低下の影響を表 A7 – 1 – 31 に示す。

表 A7 - 1 - 31 追加試掘井戸の揚水試験による孔間の水位低下（サンテ地区）単位:m

| 観測井戸 / 揚水井戸 | | ST-1 | ST-2 | ST-3 | ST-4 | ST-5 | ST-6 |
|---|---|---|---|---|---|---|---|
| ST-1(Q=2.0 l/s) | *(水位低下量, m)* | 13.95 | 0.08 | 0.27 | 0.00 | 0.00 | 0.00 |
| | *(孔間距離, m)* | *0* | *298* | *230* | *778* | *876* | *1082* |
| ST-2(Q=2.0 l/s) | *(水位低下量, m)* | 0.21 | 12.18 | 0.56 | 0.01 | 0.00 | 0.00 |
| | *(孔間距離, m)* | *298* | *0* | *101* | *582* | *605* | *884* |
| ST-3(Q=2.0 l/s) | *(水位低下量, m)* | 0.27 | 0.34 | 15.63 | 0.01 | 0.00 | 0.00 |
| | *(孔間距離, m)* | *230* | *101* | *0* | *574* | *646* | *880* |
| ST-4(Q=1.0 l/s) | *(水位低下量, m)* | 0.06 | 0.08 | 0.20 | 35.97 | 0.01 | 0.21 |
| | *(孔間距離, m)* | *778* | *582* | *574* | *0* | *298* | *306* |
| ST-5(Q=0.8 l/s) | *(水位低下量, m)* | 0.06 | 0.08 | 0.06 | 0.08 | 28.80 | 0.17 |
| | *(孔間距離, m)* | *876* | *605* | *604* | *298* | *0* | *423* |
| ST-6(Q=0.67 l/s) | *(水位低下量, m)* | 0.02 | 0.04 | 0.07 | 0.35 | 0.00 | 28.57 |
| | *(孔間距離, m)* | *1082* | *884* | *880* | *306* | *423* | *0* |
| 他孔の影響による水位低下量 (si) | | 0.62 | 0.62 | 1.16 | 0.45 | 0.18 | 0.41 |
| 合計水位低下量 (dd) | | 14.57 | 12.80 | 16.79 | 36.42 | 28.98 | 28.98 |
| 他孔による影響の比 si/(dd-si) (%) | | 4.4 | 5.0 | 7.4 | 1.3 | 0.6 | 1.4 |

*網掛け 内の水位低下量(s)は、ST-1, ST-2, ST-3 の揚水試験で推定された孔間距離(r)との関係で推定した値。 $s = -0.58 \log(r) + 1.61$

### (4) 水質試験

試掘井戸の水質試験結果を表 A7 – 1 – 32 に示す。「マ」国水道水の水質基準（MS 214）に照らすとフッ素、鉄、濁度、糞便性大腸菌、糞便性連鎖球菌が超過する値を示している。

鉄分は、健康に係る基準ではなく、WHO ガイドラインでも 0.3 mg/l 以下では使用上の問題はないとしている。フッ素、鉄は、超過が 1 試料のみであることから、他の井戸と混合して給水する計画の上では、希釈されて基準値以下となる。濁度は井戸掘削直後であったため一部高い値が検出されていたが、実施の揚水を継続することにより低下が期待される。大腸菌、連鎖球菌は、一般的な塩素滅菌で十分浄化可能なレベルである。

**表 A7 - 1 - 32 各試掘井の水質試験結果　（サンテ地区）**

| LAB No. (Sample No.) | | MS 214:2005 | 764 (ST-1) | 762 (ST-2) | 763 (ST-3) | 493 (ST-4) | 494 (ST-5) | 495 (ST-6) |
|---|---|---|---|---|---|---|---|---|
| Date Sampled | | | 09/11/‘10 | 06/11/‘10 | 07/11/‘10 | 12/07/’11 | 12/07/’11 | 12/07/’11 |
| Season | | | Dry | Dry | Dry | Dry | Dry | Dry |
| pH Value | | 5.0-9.5 | 7.73 | 6.22 | 7.59 | 7.82 | 7.2 | 7.44 |
| Conductivity | (µS/cm) | 700-1500 | 430 | 340 | 410 | 480 | 460 | 485 |
| Total Dissolved Solids | (mg/l) | 450-1000[a)] | 215 | 178 | 207 | 271 | 248 | 255 |
| Carbonate (as $CO3^{2-}$) | (mg/l) | - | 18.8 | 0 | 19 | 28 | 2.0 | 4.0 |
| Bicarbonate (as $HCO3^{-}$) | (mg/l) | - | 193 | 194 | 170 | 204 | 258 | 248 |
| Chloride (as $Cl^{-}$) | (mg/l) | 100-200 | 6.8 | 10.1 | 13.5 | 9.8 | 10.0 | 14.5 |
| Sulphate (as $SO4^{2-}$) | (mg/l) | 200-400 | 4.6 | 5.0 | 6.0 | <0.10 | <0.10 | <0.10 |
| Nitrate (as NO3-) | (mg/l) | 6.0-10.0 | <0.001 | <0.001 | <0.001 | 0.165 | 0.076 | 0.058 |
| Fluoride (as $F^{-}$) | (mg/l) | 0.7-1.0 | 0.61 | 0.58 | 0.60 | 1.39 | 0.83 | 0.05 |
| Sodium (as $Na^{+}$) | (mg/l) | 100-200 | 30.7 | 17.9 | 23.7 | 12 | 7.0 | 13 |
| Potassium (as $K^{+}$) | (mg/l) | 25-50 | 5.1 | 5.0 | 5.0 | 3.1 | 5.1 | 2.6 |
| Calcium (as $Ca^{++}$) | (mg/l) | 80-150 | 40 | 34 | 40 | 52 | 96 | 52 |
| Magnesium (as $Mg^{++}$) | (mg/l) | 30-70 | 9.7 | 9.7 | 9.0 | 21 | 26 | 20 |
| Iron($Fe^{++}$) | (mg/l) | 0.01-0.2 | 0.466 | 0.003 | 0.083 | 0.276 | 0.093 | 0.265 |
| Manganese ($Mn^{++}$) | (mg/l) | 0.05-0.1 | <0.01 | <0.01 | <0.01 | - | - | - |
| Total Hardness (as CaCO3) | (mg/l) | - | 140 | 124 | 137 | 217 | 219 | 212 |
| Total Alkalinity (as CaCO3) | (mg/l) | - | 189 | 159 | 171 | 214 | 215 | 210 |
| Silica (as SiO2) | (mg/l) | - | 26 | 25 | 25 | - | - | - |
| Turbidity | (NTU) | 0.1-1 | 2.7 | <0.01 | 18.5 | 2.0 | <0.01 | <0.01 |
| Suspended Solids (SS) | (mg/l) | - | 3.0 | <0.10 | 18 | <0.10 | <0.10 | <0.10 |
| Faecal Coliform | (/100 ml) | 0 in 100ml | 2 | 0 | 0 | 0 | 0 | 0 |
| Faecal Streptococci | (/100 ml) | 0 in 100ml | 4 | 0 | 0 | 0 | 0 | 0 |

## 4.3 給水需要と水源の評価

### (1) 井戸による地下水取水の他井戸への影響

サンテ地区の揚水試験結果より、1 井の井戸が他の井戸へ与える水位低下の影響の最大値は 56cm であった。井戸間の距離に応じた水位低下であり、揚水量の低下としては約 3.6%に相当する。6 井戸同時運転による予測値として水位低下は最大 116cm（ST-3）であり、揚水井戸の水位低下の 7.5%に相当し、乾季の後半には動水位がスクリーン上部まで低下する可能性がある。乾季には、井戸の動水位の変動を観測し、水位が下がり続ける場合にはポンプの運転を調節する必要がある。

### (2) 需要と取水量の関係

調査団は当初各マーケットセンターの試掘本数を最大 3 本と設定していた。2010 年にサンテマーケットセンターで実施した 3 本の試掘井戸の揚水量合計は、計画給水量の半分しか満たさないことが確認された。調査団は、本計画の実現性を追求するため当初予定を変更し、2011 年に追加で 3 本の試掘井戸掘削を実施することとした。

サンテ地区の計画給水人口は、7,485 人（5,437 人(2008 年)@人口増加率 2.7%/年）であり、計画給水量は表 A7－1－33 に示すとおり、日最大給水量は 712 $m^3$/日である。

一方、井戸からの取水量は 714 $m^3$/日（井戸 6 本の合計）が期待できるので、取水量は全ての井戸を常に運転することにより計画給水量を満たす。ただし、この取水量は計画給水量を満たすだけの量であるため、施設建設後人口が増加して需要が計画給水量に至る過程で、ポンプの点検や突発的な故障に対する予備的な井戸を今後設ける必要がある。

**表 A7 － 1 － 33 サンテの計画給水量（試算）**

| 地区名 | ムカンダ | 備考 |
|---|---|---|
| 1. 人口 （人） | 7,485 | 2020 年 |
| 2. 平均給水原単位 （lcd） | 57.1 | 家庭用水※ |
| 3. 家庭用水量 （$m^3$/日） | 427 | 1×2÷1000 |
| 4. 公共用水量 （$m^3$/日） | 107 | 3×25% |
| 5. 需要水量合計 （$m^3$/日） | 534 | 3+4 |
| 6. 一日平均給水量 （$m^3$/日） | 593 | 5÷(1-0.10) |
| 7. 一日最大給水量 （$m^3$/日） | 712 | 6×1.2 |

※：平均給水原単位：36×30%＋50×43%＋80×20%＋125×7%＝57.1 lcd

表 A7 － 1 － 34 に示す住居カテゴリー別給水原単位及び人口割合に基づいて算定。

※2：25%は「マ」国の通常の家庭用水に対する水量である。

※3：0.10 は想定漏水率を示す。

表 A7 - 1 - 34 既存調査で使用している居住形態別人口割合

| 住居カテゴリー | 給水原単位<br>（リットル/人/日） | 人口割合 |
|---|---|---|
| 伝統的な居住地域 | 36 | 30% |
| 高密度の居住地域 | 50 | 43% |
| 中密度の居住地域 | 80 | 20% |
| 低密度の居住地域 | 125 | 7% |

# ７－２　水質検査（既存給水施設）

マーケットセンター周辺既存施設の水質検査

各マーケットセンター周辺の既存施設（井戸及び水栓）にて実施した水質検査結果を表 A7－2－1 に示す。

# 表 A7－2－1　マーケットセンター周辺の既存施設水質検査結果

| | Namitete/Chileka | | | | | Santhe | | | | | Mkanda | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LAB No. | 687 | 688 | 686 | 685 | 684 | 717 | 718 | 719 | 721 | 720 | 708 | 707 |
| DATE SAMPLED | 07/10/2010 | 07/10/2010 | 07/10/2010 | 07/10/2010 | 07/10/2010 | 10/10/2010 | 10/10/2010 | 10/10/2010 | 10/10/2010 | 10/10/2010 | 09/10/2010 | 09/10/2010 |
| LOCATION | Chileka Admarc T/A Kalolo | Chileka Market T/A Kalolo | Namitete Secondary School T/A | Namitete Secondary School in the kitchen T/A Kalolo | Namitete Market at Namitete TC T/A Kalolo | Chipoza TC T/A Santhe | Chipoza TC at Mp's House T/A Santhe | Chigodi CDSS T/A Santhe | Traditional Authority's House T/A Santhe | Santhe FP School T/A Santhe | Mkanda TC Near Post Office BH T/A Mkanda | Mkanda Secondary School BH T/A Mkanda |
| SOURCE TYPE | Tap | BH (No. LL 2006) | BH (No. LL 2653) | Tap | BH (No. N3 065) | BH | BH | BH (KB 92) | BH | BH | | |
| | Lilongwe District | Lilongwe District | Lilongwe District | Lilongwe District | Lilongwe District | Kasungu District | Kasungu District | Kasungu District | Kasungu District | Kasungu District | Mchinji District | Mchinji District |
| pH | 7.56 | 7.71 | 7.67 | 7.68 | 6.09 | 6.78 | 7.23 | 7.45 | 6.99 | 7.36 | 7.39 | 7.42 |
| 電気伝導度 | 233 | 257 | 262 | 277 | 333 | 475 | 422 | 324 | 358 | 532 | 310 | 506 |
| 全蒸発残留物 | 117 | 129 | 133 | 139 | 172 | 250 | 221 | 167 | 181 | 270 | 156 | 267 |
| 炭酸イオン | 9.6 | 14.4 | 10 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 炭酸水素イオン | 112 | 98 | 95 | 102 | 123 | 277 | 244 | 190 | 200 | 275 | 110 | 315 |
| 塩素イオン | 3 | 11.9 | 11.9 | 8.9 | 11.9 | 11.9 | 11.9 | 7.4 | 8.9 | 23.8 | 35.7 | 7.4 |
| 硫酸塩 | 0.8 | 1.01 | 5.7 | 12.7 | 38.5 | 1.1 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.2 |
| 硝酸塩 | 0.119 | 1..762 | 1.348 | 1.15 | 0.845 | 0.12 | 0.925 | 0.155 | 0.07 | 0.154 | 0.806 | 0.023 |
| フッ素 | 0.58 | 0.65 | 0.69 | 0.69 | 0.63 | 0.68 | 0.7 | 0.64 | 0.69 | 0.54 | 0.58 | 0.6 |
| ナトリウム | 14.9 | 13.4 | 16.9 | 8.4 | 21.7 | 28.6 | 30.8 | 13.8 | 18.8 | 36.5 | 16 | 36.7 |
| カリウム | 4.9 | 4.3 | 2.2 | 3.4 | 3.9 | 7.9 | 8.1 | 7.4 | 8.6 | 7.8 | 3.4 | 3.9 |
| カルシウム | 18 | 22 | 25 | 31 | 27 | 54 | 40 | 34.4 | 38.4 | 60 | 29 | 55 |
| マグネシウム | 7.8 | 6.7 | 6.8 | 7.9 | 9.7 | 8.7 | 9.7 | 10.4 | 10.4 | 9.5 | 10 | 9.7 |
| 鉄 | 0.015 | 0.178 | 0.082 | 0.051 | 0.104 | 0.039 | 0.153 | 0.267 | 0.047 | 0.121 | 0.017 | 0.105 |
| マンガン | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 全硬度 | 77 | 82 | 90 | 110 | 107 | 170 | 140 | 129 | 138 | 189 | 113 | 177 |
| 全アルカリ度 | 108 | 103 | 94 | 101 | 100 | 227 | 200 | 155 | 164 | 225 | 90 | 258 |
| 二酸化珪素 | 38 | 32 | 28 | 31 | 31 | 33 | 32 | 30 | 29 | 35 | 37 | 19 |
| 濁度 | 0.2 | 0.4 | 0.1 | 0 | 0.5 | 0 | 0.2 | 0.5 | 0 | 2 | 0.2 | 0.5 |
| 浮遊物質 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 糞便性大腸菌 | 100 | 60 | 40 | 100 | 90 | 40 | 20 | 170 | 50 | 100 | 220 | 60 |
| 糞便性連鎖球菌 | 10 | 0 | 0 | 0 | 10 | 10 | 0 | 70 | 0 | 30 | 40 | 0 |

# *７－３　社会条件調査（マーケットセンター給水計画）*

## 1. インタビュー調査の規模

表 A7 – 3 – 1 調査世帯数及び人口等

| No. | Community/Market Centre | Population/HH | Target HH | Leader of Centre |
|---|---|---|---|---|
| 1 | Santhe Market Centre | 3,210/535 | 50 | 2 |
| 2 | Mkanda Market Centre | 5,381/896 | 51 | 1 |
| 3 | Namitete Market Centre | 2,991/748 | 50 | 1 |
| 4 | Chileka Market Centre | 2,344/586 | 51 | 1 |
| TOTAL | | | 202 | 5 |

## 2. マーケットセンター長へのインタビュー結果

表 A7 – 3 – 2 調査世帯数及び人口等

| Market Centre | No. of HH | Population |
|---|---|---|
| Namitete | 1134 | 5671 |
| Chileka | 735 | 3,675 |
| Santhe | 675 | 3373 |
| Mkanda | 1153 | 5764 |

表 A7 – 3 – 3 調査施設数（学校）

| Market Centre | No. of primary schools | No. of Total Students | No. of secondary school | No.of Secondary School Day Attendance | No.of Secondary School Boarding Attendance |
|---|---|---|---|---|---|
| Namitete | 1 | 716 | 1 | 477 | 239 |
| Chileka | 1 | 591 | 1 | 591 | - |
| Santhe | 1 | 423 | 1 | 423 | - |
| Mkanda | 1 | 397 | 1 | 397 | - |

表 A7 – 3 – 4 調査施設数（ヘルスセンター）

| Market Centre | No. of Health Centre | No. of Outpatients per day | No.of Hospitals | No.of Inpatients per day |
|---|---|---|---|---|
| Namitete | 0 | N/A | 0 | N/A |
| Chileka | 1 | 103 | 0 | - |
| Santhe | 1 | 67 | 0 | N/A |
| Mkanda | 1 | 59 | 0 | N/A |

表 A7 – 3 – 5 マーケットセンター内の WPC の有無

| Market Centre | No. of WPC |
|---|---|
| Namitete | Yes |
| Chileka | Yes |
| Santhe | Yes |
| Mkanda | Yes |

表 A7 – 3 – 6 マーケットセンター内給水施設数

| Market Centre | No. of boreholes | No. of standpipes | No. of protected shallow wells |
|---|---|---|---|
| Namitete | 1 | 0 | 0 |
| Chileka | 4 | 0 | 0 |
| Santhe | 1 | 0 | 1 |
| Mkanda | 1 | 0 | 0 |

表 A7 – 3 – 7 マーケットセンター内給水施設数修理必要性及びパーツショップまでの距離

| Market Centre | Needs for rehabilitation(Yes) | Needs for rehabilitation(No) | Distance to Shop to get Spare Parts (km) |
|---|---|---|---|
| Namitete | ✓ | N/A | 0.2 |
| Chileka | ✓ | N/A | 0.2 |
| Santhe | ✓ | N/A | 0.2 |
| Mkanda | ✓ | N/A | 0.2 |

## 3. マーケットセンター住民へのインタビュー結果

表 A7 – 3 – 8 マーケットセンターの住居区分

| Market Centre | Housing Category | No. of Interviewees | Gender | |
|---|---|---|---|---|
| | | | Male | Female |
| Namitete | Low density | 5 | 3 | 2 |
| | Medium density | 6 | 2 | 4 |
| | High density (permanent) | 20 | 2 | 18 |
| | High density (traditional) | 19 | 5 | 14 |
| Chileka | Low density | 16 | 4 | 12 |
| | Medium density | 14 | 7 | 7 |
| | High density (permanent) | 9 | 4 | 5 |
| | High density (traditional) | 12 | 2 | 10 |
| Santhe | Low density | 6 | 1 | 5 |
| | Medium density | 11 | 3 | 8 |
| | High density (permanent) | 14 | 6 | 8 |
| | High density (traditional) | 19 | 3 | 16 |
| Mkanda | Low density | 13 | 3 | 10 |
| | Medium density | 4 | 1 | 3 |
| | High density (permanent) | 14 | 3 | 11 |
| | High density (traditional) | 20 | 5 | 15 |

表 A7 – 3 – 9 インタビューを受けた人の年齢

| Market Centre | 1-20 years | 21-40 | 41-60 | 61 over | child |
|---|---|---|---|---|---|
| Namitete | 0 | 35 | 13 | 2 | 0 |
| Chileka | 2 | 28 | 15 | 6 | 0 |
| Santhe | 1 | 30 | 16 | 2 | 0 |
| Mkanda | 1 | 31 | 17 | 2 | 0 |
| TOTAL | 4 | 124 | 61 | 12 | 0 |

表 A7 – 3 – 10 インタビューを受けた人の職業

| Market Centre | Employed | Pensioner | Business | Farmer | Other |
|---|---|---|---|---|---|
| Namitete | 12 | 0 | 28 | 10 | 0 |
| Chileka | 16 | 2 | 5 | 23 | 5 |
| Santhe | 21 | 0 | 23 | 5 | 1 |
| Mkanda | 9 | 0 | 22 | 17 | 3 |
| TOTAL | 58 | 2 | 78 | 55 | 9 |

表 A7 – 3 – 11 インタビューを受けた人の結婚歴

| Market Centre | Single | Married | Divorced | Orphaned |
|---|---|---|---|---|
| Namitete | 0 | 47 | 3 | 0 |
| Chileka | 4 | 38 | 9 | 0 |
| Santhe | 2 | 45 | 3 | 0 |
| Mkanda | 1 | 43 | 7 | 0 |
| TOTAL | 7 | 173 | 22 | 0 |

表 A7 – 3 – 12　1 世帯の平均人数

| Market Centre | Household Size |
|---|---|
| Namitete | 5.6 |
| Chileka | 5.0 |
| Santhe | 5.2 |
| Mkanda | 5.4 |
| TOTAL | 5.3 |

表 A7 – 3 – 13　　1 世帯の平均年収と支出

| Market Centre | Housing Category | Annual income | Annual expenditure |
|---|---|---|---|
| Namitete | Low density | 103,550.00 | 109,640.66 |
| | Medium density | 14,633.33 | 63,066.67 |
| | High density (permanent) | 148,310.00 | 136,322.65 |
| | High density (traditional) | 105,968.42 | 55,885.26 |
| | TOTAL | 111,703.00 | 94,297.53 |
| Chileka | Low density | 152,562.50 | 64,486.00 |
| | Medium density | 183,642.86 | 113,758.28 |
| | High density (permanent) | 145,111.11 | 61,982.22 |
| | High density (traditional) | 54,500.00 | 36,686.83 |
| | TOTAL | 136,705.88 | 71,028.90 |
| Santhe | Low density | 281,666.67 | 230,327.00 |
| | Medium density | 236,200.00 | 211,174.03 |
| | High density (permanent) | 118,285.71 | 76,392.85 |
| | High density (traditional) | 127,273.68 | 58,195.79 |
| | TOTAL | 167,248.00 | 117,601.93 |
| Mkanda | Low density | 83,300.00 | 56,295.77 |
| | Medium density | 38,912.50 | 25,955.00 |
| | High density (permanent) | 146,057.14 | 81,746.43 |
| | High density (traditional) | 208,520.00 | 118,653.50 |
| | TOTAL | 146,151.96 | 85,356.57 |

## 表 A7 – 3 – 14　1 世帯の平均年収（職業別）

| Market Centre | Housing Category | Employment | Agriculture | Small business | Large business | Pension | Transfer | Piece of work | Rents |
|---|---|---|---|---|---|---|---|---|---|
| Chileka | Low density | 51,687.50 | 84,687.50 | 1,875.00 | 2,187.50 | 1,875.00 | 2,812.50 | 10,812.50 | 2,562.50 |
| | Medium density | 51,428.57 | 106,071.42 | 10,642.85 | 0.00 | 3,000.00 | 6,357.14 | 5,357.14 | 0.00 |
| | High density (perm) | 71,111.11 | 39,111.11 | 26,666.67 | 0.00 | 0.00 | 555.56 | 3,222.22 | 0.00 |
| | High density (trad) | 2,500.00 | 66,916.67 | 5,750.00 | 0.00 | 0.00 | 6,416.67 | 6,416.67 | 0.00 |
| Namitete | Low density | 0.00 | 17,200.00 | 71,910.00 | 0.00 | 0.00 | 1,000.00 | 480.00 | 0.00 |
| | Medium density | 3,666.67 | 5,000.00 | 4,000.00 | 0.00 | 0.00 | 1,166.67 | 0.00 | 800.00 |
| | High density (perm) | 55,330.00 | 25,050.00 | 64,800.00 | 0.00 | 0.00 | 575.00 | 1,680.00 | 1,175.00 |
| | High density (trad) | 9,473.68 | 421.05 | 92,242.10 | 0.00 | 0.00 | 157.89 | 3,673.68 | 0.00 |
| Santhe | Low density | 26,000.00 | 333.33 | 78,666.67 | 166,666.67 | 0.00 | 0.00 | 10,000.00 | 0.00 |
| | Medium density | 111,236.36 | 85,545.45 | 18,909.09 | 3,181.81 | 0.00 | 1,272.72 | 5,818.18 | 327.27 |
| | High density (perm) | 51,428.57 | 30,000.00 | 36,857.14 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | High density (trad) | 22,578.95 | 37,368.42 | 31,905.26 | 35,789.47 | 0.00 | 263.16 | 4,210.52 | 0.00 |
| Mkanda | Low density | 6,153.85 | 32,615.38 | 31,838.46 | 0.00 | 0.00 | 4,157.54 | 153.84 | 0.00 |
| | Medium density | 0.00 | 37,500.00 | 750.00 | 0.00 | 0.00 | 0.00 | 62.50 | 600.00 |
| | High density (perm) | 38,857.14 | 35,785.71 | 65,071.43 | 0.00 | 0.00 | 0.00 | 2,057.14 | 4,285.71 |
| | High density (trad) | 14,000.00 | 86,150.00 | 58,030.00 | 10,000.00 | 0.00 | 3,350.00 | 11,500.00 | 9,840.00 |

## 表 A7 – 3 – 15　1 世帯の支出内訳（平均）

| Market Centre | Housing Category | Water | Electricity | House rent | Tax | Food | School fees | Clothing | Medical | Farming | Groceries | Others |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Namitete | Low density | 10.00 | 3,600.00 | 9,760.00 | 3,600.00 | 52,640.00 | 6,660.00 | 7,500.00 | 636.66 | 26,140.00 | 384.00 | 0.00 |
| | Medium density | 0.00 | 4,000.00 | 3,200.00 | 2,400.00 | 34,333.00 | 4,750.00 | 2,000.00 | 3,133.33 | 5,333.33 | 4,000.00 | 0.00 |
| | High density (perm) | 0.00 | 6,650.00 | 6,330.00 | 0.00 | 62,730.00 | 4,140.00 | 4,850.00 | 1,381.75 | 25,202.50 | 14,558.40 | 0.00 |
| | High density (trad) | 0.00 | 0.00 | 6,210.52 | 0.00 | 25,710.52 | 2,210.52 | 3,500.00 | 1,378.94 | 4,789.47 | 11,690.52 | 421.05 |
| | TOTAL | 10.00 | 14,250.00 | 25,500.52 | 6,000.00 | 175,413.52 | 17,760.52 | 17,850.00 | 6,530.68 | 61,465.30 | 30,632.92 | 421.05 |
| Chileka | Low density | 2,079.75 | 0.00 | 6,500.00 | 0.00 | 19,250.00 | 6,250.00 | 2,500.00 | 1,062.50 | 14,937.50 | 17,156.25 | 525.00 |
| | Medium density | 3,729.71 | 357.14 | 571.42 | 0.00 | 61,571.43 | 4,071.42 | 2,571.42 | 1,485.71 | 3,285.71 | 38,785.71 | 0.00 |
| | High density (perm) | 615.56 | 166.67 | 15,666.67 | 0.00 | 58,444.44 | 8,733.33 | 4,611.11 | 266.67 | 13,255.56 | 18,333.33 | 0.00 |
| | High density (trad) | 1,503.50 | 0.00 | 0.00 | 0.00 | 17,833.33 | 583.33 | 2,083.33 | 2,033.33 | 3,275.00 | 10,208.33 | 0.00 |
| | TOTAL | 7,928.52 | 523.81 | 22,738.09 | 0.00 | 157,099.20 | 19,638.08 | 11,765.86 | 4,848.21 | 34,753.77 | 84,483.62 | 525.00 |
| Santhe | Low density | 25.00 | 1,572.00 | 122,900.00 | 0.00 | 22,000.00 | 1,125.00 | 5,833.33 | 2,166.67 | 6,333.33 | 30,000.00 | 0.00 |
| | Medium density | 1,118.18 | 4,857.45 | 7,363.63 | 2,105.84 | 100,963.63 | 16,592.72 | 14,036.36 | 8,481.81 | 20,545.36 | 34,454.36 | 4,545.45 |
| | High density (perm) | 0.00 | 3,571.42 | 9,728.57 | 0.00 | 33,428.57 | 2,928.57 | 8,071.42 | 1,821.42 | 3,928.57 | 16,071.42 | 0.00 |
| | High density (trad) | 739.47 | 3,157.89 | 1,200.00 | 157.89 | 27,463.16 | 5,271.05 | 2,936.84 | 1,642.10 | 5,442.10 | 11,561.57 | 1,631.58 |
| | TOTAL | 1,882.65 | 13,158.76 | 141,192.20 | 2,263.73 | 156,392.20 | 25,917.34 | 30,877.95 | 14,112.00 | 36,249.36 | 92,087.35 | 6,177.03 |
| Mkanda | Low density | 1.92 | 0.00 | 2,953.84 | 900.00 | 20,944.61 | 3,076.92 | 6,761.53 | 923.07 | 8,742.30 | 12,154.61 | 0.00 |
| | Medium density | 0.00 | 0.00 | 1,250.00 | 75.00 | 2,600.00 | 2,100.00 | 3,550.00 | 750.00 | 13,750.00 | 1,880.00 | 0.00 |
| | High density (perm) | 171.42 | 0.00 | 4,390.00 | 10.00 | 25,542.85 | 8,700.00 | 4,985.71 | 4,957.85 | 11,985.71 | 20,774.28 | 0.00 |
| | High density (trad) | 1,352.50 | 0.00 | 1,665.00 | 150.00 | 50,990.00 | 11,750.00 | 7,970.00 | 1,065.00 | 10,825.00 | 20,136.00 | 12,950.00 |
| | TOTAL | 1,525.84 | 0.00 | 10,258.84 | 1,135.00 | 100,077.46 | 25,626.92 | 23,267.24 | 7,695.92 | 45,303.01 | 54,944.89 | 12,950.00 |

## 表 A7 – 3 – 16　現在の主要水源

| Market Centre | Housing Category | Boreholes | | Protected shallow well | | Unprotected shallow well | | Stream or river | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % | No. | % | No. | % |
| Namitete | Low density | 4 | 8.0 | 0 | 0 | 1 | 2.0 | 0 | 0 | 0 | 0 |
| | Medium density | 4 | 8.0 | 1 | 2.0 | 1 | 2.0 | 0 | 0 | 0 | 0 |
| | High density (perm.) | 16 | 32.0 | 3 | 6.0 | 1 | 2.0 | 0 | 0 | 0 | 0 |
| | High density (trad.) | 8 | 16.0 | 6 | 12.0 | 5 | 10.0 | 0 | 0 | 0 | 0 |
| | TOTAL | 32 | 64.0 | 10 | 20.0 | 8 | 16.0 | 0 | 0.0 | 0 | 0.0 |
| Chileka | Low density | 16 | 31.4 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| | Medium density | 14 | 27.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| | High density (perm.) | 9 | 17.6 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| | High density (trad.) | 12 | 23.5 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| | TOTAL | 51 | 100.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Santhe | Low density | 5 | 10.0 | 1 | 2.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| | Medium density | 9 | 18.0 | 0 | 0.0 | 2 | 4.0 | 0 | 0.0 | 0 | 0.0 |
| | High density (perm.) | 6 | 12.0 | 6 | 12.0 | 1 | 2.0 | 1 | 2.0 | 0 | 0.0 |
| | High density (trad.) | 13 | 26.0 | 5 | 10.0 | 0 | 0.0 | 1 | 2.0 | 0 | 0.0 |
| | TOTAL | 33 | 66.0 | 12 | 24.0 | 3 | 6.0 | 2 | 4.0 | 0 | 0.0 |
| Mkanda | Low density | 3 | 5.8 | 4 | 7.8 | 4 | 7.8 | 2 | 3.8 | 0 | 0.0 |
| | Medium density | 3 | 5.8 | 1 | 2.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| | High density (perm.) | 5 | 9.8 | 7 | 13.7 | 1 | 2.0 | 1 | 2.0 | 0 | 0.0 |
| | High density (trad.) | 8 | 15.9 | 5 | 9.8 | 6 | 11.8 | 1 | 2.0 | 0 | 0.0 |
| | TOTAL | 19 | 37.3 | 17 | 33.3 | 11 | 21.6 | 4 | 7.8 | 0 | 0.0 |

表 A7 – 3 – 17　配管給水の要望と日水使用量

| Market Centre | Housing Category | Yes | | No | | Not sure | | TOTAL | Daily Water Consumption (Buckets/day on average) |
|---|---|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % | No. | |
| Namitete | Low density | 5 | 10 | 0 | 0 | 0 | 0 | 5 | 4.6 |
| | Medium density | 6 | 12 | 0 | 0 | 0 | 0 | 6 | 7.8 |
| | High density (permanent) | 20 | 40 | 0 | 0 | 0 | 0 | 20 | 5.9 |
| | High density (traditional) | 19 | 38 | 0 | 0 | 0 | 0 | 19 | 6.8 |
| | TOTAL | 50 | 100 | 0 | 0 | 0 | 0 | 50 | 6.4 |
| Chileka | Low density | 16 | 31 | 0 | 0 | 0 | 0 | 16 | 9.4 |
| | Medium density | 14 | 27.5 | 0 | 0 | 0 | 0 | 14 | 10.1 |
| | High density (permanent) | 9 | 17.6 | 0 | 0 | 0 | 0 | 9 | 7.6 |
| | High density (traditional) | 11 | 21.6 | 1 | 1.9 | 0 | 0 | 12 | 6.4 |
| | TOTAL | 50 | 98.1 | 1 | 1.9 | 0 | 0 | 51 | 8.6 |
| Santhe | Low density | 6 | 12 | 0 | 0 | 0 | 0 | 6 | 6.8 |
| | Medium density | 11 | 22 | 0 | 0 | 0 | 0 | 11 | 8.7 |
| | High density (permanent) | 14 | 28 | 0 | 0 | 0 | 0 | 14 | 10.1 |
| | High density (traditional) | 19 | 38 | 0 | 0 | 0 | 0 | 19 | 6.6 |
| | TOTAL | 50 | 100 | 0 | 0 | 0 | 0 | 50 | 8.1 |
| Mkanda | Low density | 13 | 25.5 | 0 | 0 | 0 | 0 | 13 | 6.5 |
| | Medium density | 4 | 7.8 | 0 | 0 | 0 | 0 | 4 | 9 |
| | High density (permanent) | 14 | 27.5 | 0 | 0 | 0 | 0 | 14 | 7.9 |
| | High density (traditional) | 18 | 35.3 | 2 | 3.9 | 0 | 0 | 20 | 6.9 |
| | TOTAL | 49 | 96.1 | 2 | 3.9 | 0 | 0 | 51 | 7.2 |

表 A7 – 3 – 18　希望する給水形態

| Market Centre | Housing Category | House connection | | Standpipe | | Communal points | | TOTAL |
|---|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % | No. |
| Namitete | Low density | 1 | 2.0 | 1 | 2.0 | 3 | 6.0 | 5 |
| | Medium density | 2 | 4.0 | 1 | 2.0 | 3 | 6.0 | 6 |
| | High density (permanent) | 13 | 26.0 | 7 | 14.0 | 0 | 0.0 | 20 |
| | High density (traditional) | 4 | 8.0 | 2 | 4.0 | 13 | 26.0 | 19 |
| | TOTAL | 20 | 40.0 | 11 | 22.0 | 19 | 38.0 | 50 |
| Chileka | Low density | 2 | 3.9 | 11 | 21.5 | 3 | 5.8 | 16 |
| | Medium density | 2 | 3.9 | 12 | 23.5 | 0 | 0.0 | 14 |
| | High density (perm.) | 2 | 3.9 | 6 | 11.8 | 1 | 2.0 | 9 |
| | High density (trad.) | 0 | 0.0 | 6 | 11.8 | 6 | 11.8 | 12 |
| | TOTAL | 6 | 11.8 | 35 | 68.6 | 10 | 19.6 | 51 |
| Santhe | Low density | 3 | 6.0 | 2 | 4.0 | 1 | 2.0 | 6 |
| | Medium density | 4 | 8.0 | 7 | 14.0 | 0 | 0.0 | 11 |
| | High density (perm.) | 5 | 10.0 | 5 | 10.0 | 4 | 8.0 | 14 |
| | High density (trad.) | 4 | 8.0 | 8 | 16.0 | 7 | 14.0 | 19 |
| | TOTAL | 16 | 32.0 | 22 | 44.0 | 12 | 24.0 | 50 |
| Mkanda | Low density | 1 | 2.0 | 10 | 19.6 | 2 | 3.9 | 13 |
| | Medium density | 1 | 2.0 | 3 | 5.9 | 0 | 0.0 | 4 |
| | High density (perm.) | 6 | 11.8 | 3 | 5.9 | 5 | 9.8 | 14 |
| | High density (trad.) | 6 | 11.8 | 11 | 21.5 | 3 | 5.9 | 20 |
| | TOTAL | 14 | 27.5 | 27 | 52.9 | 10 | 19.6 | 51 |

表 A7 – 3 – 19　給水に対する利用料支払意志

| Market Centre | Housing Category | Yes | | No | | Not sure | | TOTAL |
|---|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % | No. |
| Namitete | Low density | 2 | 6.5 | 0 | 0.0 | 0 | 0.0 | 2 |
| | Medium density | 3 | 9.7 | 0 | 0.0 | 0 | 0.0 | 3 |
| | High density (permanent) | 17 | 54.8 | 1 | 3.2 | 2 | 6.5 | 20 |
| | High density (traditional) | 6 | 19.3 | 0 | 0.0 | 0 | 0.0 | 6 |
| | TOTAL | 28 | 90.3 | 1 | 3.2 | 2 | 6.5 | 31 |
| Chileka | Low density | 14 | 28.6 | 0 | 0.0 | 1 | 2.05 | 15 |
| | Medium density | 13 | 26.5 | 1 | 2.05 | 0 | 0.0 | 14 |
| | High density (permanent) | 8 | 16.3 | 0 | 0.0 | 0 | 0.0 | 8 |
| | High density (traditional) | 10 | 20.4 | 1 | 2.05 | 1 | 2.05 | 12 |
| | TOTAL | 45 | 91.8 | 2 | 4.1 | 2 | 4.1 | 49 |
| Santhe | Low density | 6 | 14.6 | 0 | 0.0 | 0 | 0.0 | 6 |
| | Medium density | 10 | 24.4 | 0 | 0.0 | 1 | 2.4 | 11 |
| | High density (permanent) | 12 | 29.3 | 0 | 0.0 | 0 | 0.0 | 12 |
| | High density (traditional) | 12 | 29.3 | 0 | 0.0 | 0 | 0.0 | 12 |
| | TOTAL | 40 | 97.6 | 0 | 0.0 | 1 | 2.4 | 41 |
| Mkanda | Low density | 11 | 26.2 | 1 | 2.4 | 1 | 2.4 | 13 |
| | Medium density | 3 | 7.1 | 0 | 0.0 | 1 | 2.4 | 4 |
| | High density (permanent) | 9 | 21.4 | 0 | 0.0 | 0 | 0.0 | 9 |
| | High density (traditional) | 11 | 26.2 | 3 | 7.1 | 2 | 4.7 | 16 |
| | TOTAL | 34 | 80.9 | 4 | 9.5 | 4 | 9.5 | 42 |

表 A7 – 3 – 20　給水に対する使用料金支払い可能性

| Market Centre | Housing Category | Yes | | No | | Not sure | | TOTAL |
|---|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % | No. |
| Namitete | Low density | 2 | 6.5 | 0 | 0.0 | 0 | 0.0 | 2 |
| | Medium density | 3 | 9.7 | 0 | 0.0 | 0 | 0.0 | 3 |
| | High density (permanent) | 18 | 58.0 | 0 | 0.0 | 2 | 6.5 | 20 |
| | High density (traditional) | 5 | 16.1 | 1 | 3.2 | 0 | 0.0 | 6 |
| | TOTAL | 28 | 90.3 | 1 | 3.2 | 2 | 6.5 | 31 |
| Chileka | Low density | 11 | 22.4 | 0 | 0.0 | 4 | 8.2 | 15 |
| | Medium density | 13 | 26.5 | 0 | 0.0 | 1 | 2.0 | 14 |
| | High density (permanent) | 7 | 14.3 | 0 | 0.0 | 1 | 2.0 | 8 |
| | High density (traditional) | 9 | 18.4 | 1 | 2.0 | 2 | 4.1 | 12 |
| | TOTAL | 40 | 81.6 | 1 | 2.0 | 8 | 16.3 | 49 |
| Santhe | Low density | 4 | 9.8 | 0 | 0.0 | 2 | 4.9 | 6 |
| | Medium density | 9 | 21.9 | 0 | 0.0 | 2 | 4.9 | 11 |
| | High density (permanent) | 12 | 29.3 | 0 | 0.0 | 0 | 0.0 | 12 |
| | High density (traditional) | 9 | 21.9 | 1 | 2.4 | 2 | 4.9 | 12 |
| | TOTAL | 34 | 82.9 | 1 | 2.4 | 6 | 14.7 | 41 |
| Mkanda | Low density | 10 | 23.8 | 2 | 4.8 | 1 | 2.4 | 13 |
| | Medium density | 4 | 9.5 | 0 | 0.0 | 0 | 0.0 | 4 |
| | High density (permanent) | 8 | 19.1 | 0 | 0.0 | 1 | 2.4 | 9 |
| | High density (traditional) | 9 | 21.4 | 4 | 9.5 | 3 | 7.1 | 16 |
| | TOTAL | 31 | 73.8 | 6 | 14.3 | 5 | 11.9 | 42 |

表 A7 – 3 – 21　各戸給水を希望しない理由

| Market Centre | Housing Category | Cannot afford | | Satisfied with current supply | | Not sure about the merits | | TOTAL |
|---|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % | No. |
| Namitete | Low density | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| | Medium density | 2 | 10.5 | 0 | 0.0 | 1 | 5.2 | 3 |
| | High density (perm.) | 3 | 15.8 | 0 | 0.0 | 2 | 10.5 | 5 |
| | High density (trad.) | 4 | 21.0 | 1 | 5.2 | 6 | 31.6 | 11 |
| | TOTAL | 9 | 47.3 | 1 | 5.2 | 9 | 47.3 | 19 |
| Chileka | Low density | 5 | 14.3 | 1 | 2.8 | 5 | 14.3 | 11 |
| | Medium density | 3 | 8.6 | 3 | 8.6 | 5 | 14.3 | 11 |
| | High density (perm.) | 4 | 11.4 | 1 | 2.8 | 2 | 5.7 | 7 |
| | High density (trad.) | 1 | 2.8 | 1 | 2.8 | 4 | 11.4 | 6 |
| | TOTAL | 13 | 37.1 | 6 | 17.1 | 16 | 45.7 | 35 |
| Santhe | Low density | 3 | 11.1 | 0 | 0.0 | 0 | 0.0 | 3 |
| | Medium density | 4 | 14.8 | 0 | 0.0 | 0 | 0.0 | 4 |
| | High density (perm.) | 4 | 14.8 | 0 | 0.0 | 2 | 7.4 | 4 |
| | High density (trad.) | 8 | 29.6 | 1 | 3.7 | 5 | 18.5 | 14 |
| | TOTAL | 19 | 70.3 | 1 | 3.7 | 7 | 25.9 | 27 |
| Mkanda | Low density | 4 | 12.9 | 0 | 0.0 | 5 | 16.1 | 9 |
| | Medium density | 3 | 9.7 | 0 | 0.0 | 0 | 0.0 | 3 |
| | High density (perm.) | 2 | 6.4 | 0 | 0.0 | 5 | 16.1 | 7 |
| | High density (trad.) | 8 | 25.8 | 1 | 3.2 | 3 | 9.7 | 12 |
| | TOTAL | 17 | 54.8 | 1 | 3.2 | 13 | 41.9 | 31 |

表 A7 – 3 – 22　トイレの所有状況

| Market Centre | Individual | | Communal | | Rented | | Not use toilet | |
|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % |
| Namitete | 35 | 70.0 | 11 | 22.0 | 4 | 8.0 | 0 | 0.0 |
| Chileka | 43 | 84.3 | 3 | 5.9 | 5 | 9.8 | 0 | 0.0 |
| Santhe | 35 | 70.0 | 11 | 22.0 | 3 | 6.0 | 1 | 2.0 |
| Mkanda | 38 | 74.5 | 7 | 13.7 | 6 | 11.8 | 0 | 0.0 |

表 A7 – 3 – 23　トイレの種類

| Market Centre | Traditional | | Pit Lat with Sanplat | | Improved Pit(VIP) | | Flush | |
|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % |
| Namitete | 43 | 86.0 | 6 | 12.0 | 1 | 2.0 | 0 | 0.0 |
| Chileka | 40 | 78.4 | 11 | 21.6 | 0 | 0.0 | 0 | 0.0 |
| Santhe | 35 | 70.0 | 12 | 24.0 | 3 | 6.0 | 0 | 0.0 |
| Mkanda | 49 | 96.1 | 2 | 3.9 | 0 | 0.0 | 0 | 0.0 |

表 A7 – 3 – 24　所有している衛生施設

| Market Centre | Dish rack | | Rubbish pit | | Clothes line | | kitchen | | Bath shelter | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Namitete | 13 | 9.0 | 31 | 21.5 | 32 | 22.2 | 33 | 23.0 | 35 | 24.3 |
| Chileka | 15 | 8.5 | 36 | 20.5 | 44 | 25.0 | 42 | 23.8 | 39 | 22.2 |
| Santhe | 12 | 7.3 | 34 | 20.7 | 36 | 22.0 | 43 | 26.2 | 39 | 23.8 |
| Mkanda | 10 | 6.6 | 29 | 19.1 | 37 | 24.3 | 38 | 25.0 | 38 | 25.0 |

表 A7 – 3 – 25　水因性疾患内訳

| Market Centre | Malaria | | cholera | | Diarrhea | | Dysentery | | Bilharzias | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Namitete | 47 | 60.3 | 1 | 1.2 | 29 | 37.3 | 1 | 1.2 | 0 | 0.0 |
| Chileka | 50 | 59.5 | 0 | 0.0 | 33 | 39.2 | 1 | 1.2 | 0 | 0.0 |
| Santhe | 46 | 57.5 | 1 | 1.3 | 28 | 35.0 | 5 | 6.2 | 0 | 0.0 |
| Mkanda | 48 | 52.2 | 7 | 7.6 | 32 | 34.8 | 5 | 5.4 | 0 | 0.0 |

# 表 A7 – 3 – 26　質問票（住民用）

| Questionnaire for | Resident in Market Centre | | | | | | | | | Market Centre |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. GENERAL | District/T.A. | | E.A No. | | Name of Market Centre | | | | | |
| | Respondent Name | | Sex | Male Female | Date | . . . /. . /2010 | Time | ..: .. | Interviewer | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2. HOUSEHOLD CHRACTERISTICS | 1 | Housing Category | [1] | Low density | [2] | Medium density | [3] | High density (permanent house) | [4] | High density (traditional house) | | | |
| | 2 | the gender of the household (HH) head | [1] | Male | [2] | Female | | | | | | | |
| | 3 | the age of the Householed head | [1] | 1-20 yrs old | [2] | 21-40 yrs old | [3] | 41-60 yrs old | [4] | 61 and above | [5] | Child | |
| | 4 | the Occupation of the HH head | [1] | Employed | [2] | Pensioner | [3] | Business | [4] | Farmer | [5] | Other (specify) | |
| | 5 | the highest education level of the HHH | [1] | Primary Standard 1-8 | [2] | Secondary Form 1-2 | [3] | Secondary Form 3-4 | [4] | Tertiary Education | | | |
| | 6 | the marital status of the HHH | [1] | Single | [2] | Married | [3] | Divorced/ Separated/ Widow(er) | [4] | Orphaned | | | |
| | 7 | Total number of people in the family | Male: | | Female: | | Total | - | | | | | |
| | 8 | Goods owned by anyone in the HH | [1] | Operational Radio | [2] | Bicycle | [3] | Television | [4] | Car | [5] | Other (specify) | |
| 3. HOUSEHOLD INCOME | 9 | How much did the Householed earn in the past 12 month? | [1] | Employment | [2] | Agriculture | [3] | Small Business | [4] | Large Business | [5] | Pensions | |
| | | | [6] | Transfers | [7] | Piece work | [8] | Rents | [9] | Other | [10] | TOTAL 0 | |
| | 10 | How much does the Household spend on the following in a year? | [1] | Water | [2] | Electricity | [3] | House Rent | [4] | Tax | [5] | Food | |
| | | | [6] | School Fees | [7] | Clothing | [8] | Medical Costs | [9] | Farming | [10] | Groceries | |
| | | | [11] | Other (specify) | | | | | | | | TOTAL 0 | |
| 4. WATER SITUATION AND REMAND | 11 | Main source of water for the Hh presently | [1] | Borehole with Handpump | [2] | Protected Shallow Well | [3] | Unprotected Shallow Well | [4] | Stream/River | [5] | Other (specify) | |
| | 12 | Water consumption per day for your family | [1] | | buckets/day | | | | | | | | |
| | 13 | Do you desire to have piped water system in the area? | [1] | Yes | [2] | No | [3] | Not sure | | | | | |
| | 14 | What type of water connection would you prefer? | [1] | House Connection | [2] | Standpipe (yard connection) | [3] | Communal Water Point | | | | | |
| | >>>>> Attention !! The following question 15 and 16 are only for the interviewees answered (1) House Connection and (2) Standpipe (Yard connection). | | | | | | | | | | | | |
| | 15* | Are you willing to pay for water services? | [1] | Yes | [2] | No | [3] | Not sure | | | | | |
| | >>>>> Attention !! For Enumerator>>> Calculate the monthly cost for water consumption for this household. Monthly Cost= (XX buckets/day--from the question 12) * 1.8 * 30 days + 67 as service charge. Then ask the next question!! | | | | | | | | | | | | |
| | 16* | In your case, you will need XXX K per month (you can get the figure from your calculation!) with initial deposit as about 1,000 K. Do you still think that you afford to pay for the amount? | [1] | Yes | [2] | No | [3] | Not sure | | | | | |
| | REFERENCE | Example of Water Tariff (other Market Centre) K. /m3 (K. /20 litres) | 92 (1.8) | House Connection (Individuals) | 148 (3.0) | Institutions, Commercial | 52 (1.0*) | Communal Water Point | | For Individual connection, the minimum monthly charge is **K. 324** if the consumption is less than 4 m3 (200 buckets of water, equivalent to 7 buckets per day in average). At Communal Water Point, the price of water selling will be more than MK 1.0 per bucket due to commission to a tap attendant and/or management cost for Water Users' Association. | | | |
| | | Service Charge K. /Month | 67 - 178 | High density - Med. / Low Density Houses | 625 | Institutions, Commercial | | | | Deposit at initial connection | 1,018 - 1,528 - 3,126 | High density - Med./ Low density - Institutions / Commercial | |
| | >>>>> Attention !! The following question 17 is only for the interviewees answered (2) or (3) on question 14 about water connection desire. | | | | | | | | | | | | |
| | 17 | Reason of no desire (or unsure) to install house connection of water system | [1] | Cannnot afford the cost | [2] | Satisfied with current water supply | [3] | Not sure about merits of house connection | [4] | Other (specify) | | | |
| | 18 | How far is (are) the water source(s) from your house in minutes (Walking, each way)? | [1] | not more than 5 min | [2] | 6-15 min | [3] | 16 - 30 min | [4] | 31 - 60 min | [5] | more than 1 hour | |
| 5. HEALTH AND HYGINE | 19 | Owner of toilet | [1] | Individual | [2] | Communal | [3] | Rents | [4] | not use toilet | | | |
| | 20 | Type of Toilet | [1] | Traditional pit latrine | [2] | Pit latrine with Sanplat | [3] | Improved pit latrine (VIP) | [4] | flush | | | |
| | 21 | Which of the following sanitary facilities do you have? | [1] | Dish rack | [2] | Rubbish pit | [3] | Clothes line | [4] | Kitchen | [5] | Bath shelter | |
| | 22 | Did you or someone else from this household visit a clinic last 3 months? | [1] | Yes | [2] | No | | | | | | | |
| | 23 | If YES, who , how many times and why visit clinic? | Who | | age | | times | | why | | | | |
| | | | Who | | age | | times | | why | | | | |
| | | | Who | | age | | times | | why | | | | |
| | 24 | In your opinion, what are the most common diseases in this market centre? | [1] | Malaria | [2] | Cholera | [3] | Diarrhoea | [4] | Dysentery | [5] | Common Cold | |
| | | | [6] | TB | [7] | HIV/AIDS | [8] | Bilharzias | [9] | Others (specify) | | | |
| | | | the 1st | | the 2nd | | the 3rd | | the 4th | | | | |

# 表 A7 –3 – 27　質問票（リーダー用）

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Questionnaire for | | Leader of Market Centre | | | | | | | | | |
| District/T.A. | | | E.A No. | | Name of Market Centre | | | | | | |
| Name | | | Title | | Date | | Interviewer | | | | |
| Market Leader / Officer in charge (District Assembly) | Population | Population & Housing| Census of 2008 | Enumeration Area at the census | Number of Households | Men | Women | Total | Change after Census 2008 | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | Evolution | Year 2000 | Year 2005 | Year 2008 | | Year 2009 | | Year 2010 ( HH) | | |
| | | Population by age | 0-9 years old | 10-19 years old | 20-49 years old | | more than 50 years old | | | | |
| | Infrastructure/ Facilities | Education | 1. Primary school (day) ☐Yes ☐No | Water source | | | Number of students | | | | |
| | | | 2. Primary school (boarding) ☐Yes ☐No | Water source | | | Number of students | | | | |
| | | | 1. Secondary school (day) ☐Yes ☐ | Water source | | | Number of students | | | | |
| | | | 2. Secondary school (boarding) ☐Yes ☐ | Water source | | | Number of students | | | | |
| | | Health services | 1. Health Centre ☐Yes ☐No | Water Source | # beds | 2. Hospital ☐Yes ☐No (Name: ) | | | Water Source | Number of bed | |
| | | Other Institutions | ADMARC | Water Source | Users | Post Office | Water | users | Police | Water | users | Other Institution |
| | | ✱ Please Draw a map of the Market Centre with institutions and house distribution. | | | | | | | | | | |
| Any Committee related to "Water and Sanitation"covering Market Centre | Water point Committee in Market Centre | Establishment | ☐No --> Plan for establishment: ☐Yes (expected date: ) ☐No (reason: ) | | | | | | | | | |
| | | | ☐Yes --> Year of establishment: | Member : Men , Women | | Way of establishment: ☐ elected ☐ designated | | | | | | |
| | | Members: ☐Chairperson, ☐Vice-CP, ☐Secretary, ☐Treasurer, ☐Pump caretaker, ☐Other ( ) | | | | Year of last member change | | | | | | |
| | | Replaced members: ☐Chairperson, ☐Vice-CP, ☐Secretary, ☐Treasurer, ☐Pump caretaker, ☐Other ( | | | | Reason: | | | | | | |
| | | Request for the construction of water facility | ☐requested (month/year ) ☐No (reason: ) | Type of requested facility: ☐ piped water, | To which institution? | ☐Regional Water Board, ☐District, ☐T.A. ,☐ Others ( ) | | | | | | |
| | | Operation and Maintenance Charge for water | Willingness to pay the fee: ☐Yes ☐No (reason: ) | | | | | | | | | |
| | | | Way of collection ☐Decided ☐Not yet | Way of payment | ☐Per volume ( MK/20 litres), ☐Fixed monthly fee ( MK/HH/month) | | | | | | | |
| | | | Willingness of preparatory contribution (10,000 MK) | ☐Yes ☐No | | | | | | | | |
| | | | Willingness to open a bank account: ☐ Yes ☐ No (Reason: ) | | | | | | | | | |
| | | | Place of safekeeping of the money collected: | ☐Treasurer (in house) ☐Bank ☐Post office ☐Church ☐Other ( ) | | | | | | | | |
| General Situation of the Market Centre | Market Organization | Name of the existing organizations | 1 | 2 | 3 | 4 | | | | | | |
| | | Active? (Yes (Y) or No (N)) | | | | | | | | | | |
| | | Collective fund management? (Yes (Y) or No (N)) | | | | | | | | | | |
| | | Management of Collective fund (saving) | ☐ in the village ☐Bank ☐Post Office ☐Church ☐Other ( ) | | | | | | | | | |
| | | Experience of working with external organizations such as NGO | ☐Yes ☐No (Name of the organization and Sector of activities: ) | | | | | | | | | |
| | Security | Security situation (robbery, theft) in the village: | ☐ Very safe ☐Safe ☐ not really ☐ bad (reason: ) | | | | | | | | | |
| Water supply facilities and others | Existing facilities | Infrastructure of water supply in the market centre under functioning: boreholes-( ) places, standpipe-( ) places, protected shallow wells- ( ) places | | | | | | | | | | |
| | | Needs of rehabilitation | ☐Yes (parts/ pump/ development/ drilling) ☐ No | Spar Parts | Available at , distance of km | available parts: | | | | | | |
| | | Failure/ Repair history | Failure (1)(cause: , month/year_____/____), Failure (2) (cause: , month/year _____/____) | | | | | | | | | |
| | | | Repair (repaired by : , month/year _____/_____, costs: MK) | | | | | | | | | |
| | | | Maintenance ( dismantled by: , times/year, recent replacement of parts: in (Month/Yr) : / ) | | | | | | | | | |
| | Hygine | Toilet utilization: _____% of residents | Number of toilets in the Market Centre: _____places in the M/C | | | | | | | | | |
| | | Garbage pits: _____places in the Market Centre | Cleanness in the M/C (observation) | ☐very clean ☐clean ☐normal ☐slightly dirty ☐dirty | | | | | | | | |

# 表 A7－3－28　調査結果一覧（住民用）

| | General | HH characteristics | | | | HH income | | Water situation and demand | | | | | | | | Health and hygine | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market centre | Housing category | Occupation HH head | Highest education level HH head | No. of family | Income per year | Expense per year | Main source of water | Water use bucket /day | desire to have piped water | type of water connection you prefer | willingness to pay | afford to pay | Reason of no desire to install house connection | water source from house | Owner of toilet | Type of toilet | most common diseases in this market center | | | |
| | | | | | | | | | | | | | | | | | | 1st | 2nd | 3rd | 4th |
| 1 | Chileka | MD | Employed | Secondary form 3-4 | 5 | 255,000 | 105,000 | BH with HP | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 2 | Chileka | HD (PH) | Employed | Tertiary education | 5 | 120,000 | 24,700 | BH with HP | 0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 3 | Chileka | MD | Employed | Secondary form 3-4 | 5 | 136,000 | 10,000 | BH with HP | 10 | Yes | SP(YC) | Yes | Yes | N/A | 16-30 min | Indivisual | PLS | Malaria | Common Cold | Diarrhoea | Dysentery |
| 4 | Chileka | HD(PH) | Farmer | Secondary form 3-4 | 5 | 97,000 | 63,000 | BH with HP | 9 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | PLS | Malaria | Diarrhoea | Common Cold | HIV/AIDS |
| 5 | Chileka | HD(PH) | Buisiness | Secondary form 3-4 | 7 | 90,000 | 43,000 | BH with HP | 7 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | PLS | Malaria | Common Cold | Diarrhoea | Bilharzias |
| 6 | Chileka | LD | Other | N/A | 3 | 10,000 | 10,000 | BH with HP | 4 | Yes | SP(YC) | Yes | not sure | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | HIV/AIDS | N/A | N/A |
| 7 | Chileka | LD | Farmer | Primary Standard 1-8 | 7 | 70,000 | 40,000 | BH with HP | 8 | Yes | CWP | Yes | not sure | N/A | 6-15 min | Indivisual | TPL | Malaria | TB | Common Cold | N/A |
| 8 | Chileka | LD | Farmer | Tertiary education | 7 | 500,000 | 400,000 | BH with HP | 10 | Yes | HC | Yes | not sure | N/A | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | N/A | N/A |
| 9 | Chileka | MD | Farmer | N/A | 8 | 80,000 | 35,000 | BH with HP | 8 | Yes | HC | Yes | not sure | N/A | 16-30 min | Indivisual | TPL | Malaria | Common Cold | N/A | N/A |
| 10 | Chileka | LD | Farmer | Secondary form 1-2 | 6 | 25,000 | 50,000 | BH with HP | 8 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 16-30 min | Indivisual | TPL | Malaria | HIV/AIDS | Common Cold | N/A |
| 11 | Chileka | LD | Farmer | Primary Standard 1-8 | 3 | 54,000 | 10,000 | BH with HP | 5 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 16-30 min | Indivisual | TPL | Common Cold | Malaria | Diarrhoea | N/A |
| 12 | Chileka | LD | Farmer | Secondary form 1-2 | 4 | 5,000 | - | BH with HP | 4 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 16-30 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 13 | Chileka | LD | Employed | Secondary form 3-4 | 2 | 130,000 | 30,000 | BH with HP | 12 | Yes | CWP | Yes | not sure | Not sure about merits of house | not more than 5 min | Communal | TPL | Malaria | Common Cold | N/A | N/A |
| 14 | Chileka | MD | Employed | Secondary form 3-4 | 2 | - | - | BH with HP | 8 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 16-30 min | Indivisual | TPL | Malaria | Common Cold | N/A | N/A |
| 15 | Chileka | HD(TH) | Other | Primary Standard 1-8 | 4 | - | - | BH with HP | 8 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 31-60 min | Indivisual | TPL | Malaria | Common Cold | HIV/AIDS | N/A |
| 16 | Chileka | LD | Employed | Tertiary education | 3 | 180,000 | 21,000 | BH with HP | 5 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | PLS | Common Cold | Malaria | Diarrhoea | N/A |
| 17 | Chileka | HD(TH) | Farmer | Secondary form 1-2 | 5 | 30,000 | 10,000 | BH with HP | 7 | Yes | HC | Yes | Yes | Not sure about merits of house | 16-30 min | Indivisual | TPL | Malaria | Common Cold | HIV/AIDS | N/A |
| 18 | Chileka | LD | Employed | Secondary form 3-4 | 5 | 23,000 | 16,000 | BH with HP | 5 | Yes | SP(YC) | Yes | Yes | N/A | 31-60 min | Rents | TPL | Diarrhoea | Common Cold | Malaria | N/A |
| 19 | Chileka | LD | Employed | Secondary form 3-4 | 7 | 435,000 | 30,000 | BH with HP | 7 | Yes | SP(YC) | Yes | Yes | N/A | not more than 5 min | Rents | TPL | Common Cold | Malaria | HIV/AIDS | N/A |
| 20 | Chileka | HD(PH) | Buisiness | Secondary form 3-4 | 6 | 120,000 | 15,000 | BH with HP | 10 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | PLS | Malaria | HIV/AIDS | Common Cold | N/A |
| 21 | Chileka | HD(TH) | Employed | Secondary form 3-4 | 5 | 30,000 | 15,000 | BH with HP | 4 | No | SP(YC) | No | No | Cannot afford the cost | not more than 5 min | Rents | TPL | Malaria | Common Cold | HIV/AIDS | N/A |
| 22 | Chileka | HD(TH) | Buisiness | Secondary form 3-4 | 6 | 80,000 | 8,000 | BH with HP | 6 | Yes | HC | Yes | Yes | Not sure about merits of house | 6-15 min | Indivisual | TPL | Malaria | Common Cold | N/A | N/A |
| 23 | Chileka | HD(TH) | Employed | Secondary form 3-4 | 4 | 70,000 | 20,000 | BH with HP | 6 | Yes | HC | Yes | Yes | N/A | 31-60 min | Rents | TPL | Malaria | Common Cold | HIV/AIDS | N/A |
| 24 | Chileka | HD(PH) | Employed | Secondary form 3-4 | 3 | 100,000 | 30,000 | BH with HP | 5 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | TB | N/A |
| 25 | Chileka | HD(TH) | Farmer | Primary Standard 1-8 | 5 | 55,000 | 54,988 | BH with HP | 8 | Yes | SP(YC) | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Common Cold | Malaria | Diarrhoea | N/A |
| 26 | Chileka | HD(TH) | Farmer | Primary Standard 1-8 | 4 | 144,000 | 118,390 | BH with HP | 4 | Yes | SP(YC) | Yes | not sure | N/A | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | Others |
| 27 | Chileka | HD(TH) | Farmer | Primary Standard 1-8 | 4 | 65,000 | 61,324 | BH with HP | 4 | Yes | HC | Yes | Yes | N/A | 31-60 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | Others |
| 28 | Chileka | MD | Farmer | Primary Standard 1-8 | 3 | 129,000 | 135,200 | BH with HP | 10 | Yes | SP(YC) | No | Yes | Cannot afford the cost | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | Others |
| 29 | Chileka | MD | Employed | Secondary form 3-4 | 7 | 400,000 | 296,000 | BH with HP | 8 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | Others |
| 30 | Chileka | MD | Pensioner | Primary Standard 1-8 | 5 | 193,000 | 137,276 | BH with HP | 12 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | Others |

| | General | HH characteristics | | | | HH income | | Water situation and demand | | | | | | | | Health and hygine | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market centre | Housing category | Occupation HH head | Highest education level HH head | No. of family | Income per year | Expense per year | Main source of water | Water use bucket /day | desire to have piped water | type of water connection you prefer | willingness to pay | afford to pay | Reason of no desire to install house connection | water source from house | Owner of toilet | Type of toilet | most common diseases in this market center | | | |
| | | | | | | | | | | | | | | | | | | 1st | 2nd | 3rd | 4th |
| 31 | Chileka | MD | Farmer | Primary Standard 1-8 | 7 | 170,000 | 156,340 | BH with HP | 7 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | Others | Diarrhoea |
| 32 | Chileka | HD(TH) | Other | Primary Standard 1-8 | 2 | 119,000 | 109,840 | BH with HP | 5 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Communal | TPL | Common Cold | Malaria | Diarrhoea | Others |
| 33 | Chileka | MD | Farmer | Primary Standard 1-8 | 11 | 280,000 | 220,200 | BH with HP | 10 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 34 | Chileka | HD(TH) | Farmer | Primary Standard 1-8 | 3 | 20,000 | 14,700 | BH with HP | 5 | Yes | SP(YC) | Yes | not sure | Satisfied with current water | 6-15 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 35 | Chileka | HD(PH) | Employed | Tertiary education | 5 | 500,000 | 124,000 | BH with HP | 6 | Yes | CWP | N/A | N/A | Not sure about merits of house | 16-30 min | Indivisual | PLS | Malaria | HIV/AIDS | Diarrhoea | N/A |
| 36 | Chileka | MD | Pensioner | Secondary form 1-2 | 7 | 84,000 | 60,000 | BH with HP | 9 | Yes | SP(YC) | Yes | Yes | Satisfied with current water | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 37 | Chileka | LD | Farmer | Tertiary education | 6 | 130,000 | 61,000 | BH with HP | 20 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Others | Common Cold | N/A |
| 38 | Chileka | LD | Farmer | Primary Standard 1-8 | 4 | 26,000 | 15,500 | BH with HP | 10 | Yes | SP(YC) | Not Sure | Yes | Not sure about merits of house | more than 1 hour | Indivisual | PLS | Malaria | HIV/AIDS | Diarrhoea | N/A |
| 39 | Chileka | MD | Farmer | Primary Standard 1-8 | 6 | 30,000 | 26,000 | BH with HP | 15 | Yes | SP(YC) | Yes | Yes | Satisfied with current water | not more than 5 min | Indivisual | TPL | Malaria | Others | N/A | N/A |
| 40 | Chileka | MD | Farmer | Primary Standard 1-8 | 8 | 90,000 | 55,600 | BH with HP | 20 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 6-15 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 41 | Chileka | MD | Other | Primary Standard 1-8 | 3 | 24,000 | 296,000 | BH with HP | 8 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | Others |
| 42 | Chileka | LD | Employed | Tertiary education | 4 | 193,000 | 137,276 | BH with HP | 12 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | Others |
| 43 | Chileka | HD(PH) | Employed | Secondary form 3-4 | 11 | 140,000 | 133,600 | BH with HP | 7 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | Others | Diarrhoea |
| 44 | Chileka | HD(PH) | Employed | Secondary form 3-4 | 4 | 119,000 | 109,840 | BH with HP | 5 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Communal | TPL | Common Cold | Malaria | Diarrhoea | Others |
| 45 | Chileka | HD(TH) | Other | Primary Standard 1-8 | 5 | 15,000 | 12,500 | BH with HP | 10 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 46 | Chileka | HD(PH) | Farmer | Secondary form 3-4 | 5 | 20,000 | 14,700 | BH with HP | 5 | Yes | SP(YC) | Yes | not sure | Satisfied with current water | 6-15 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 47 | Chileka | LD | Farmer | Primary Standard 1-8 | 2 | 500,000 | 124,000 | BH with HP | 6 | Yes | CWP | N/A | N/A | Not sure about merits of house | 16-30 min | Indivisual | PLS | Malaria | HIV/AIDS | Diarrhoea | N/A |
| 48 | Chileka | MD | Farmer | Secondary form 3-4 | 7 | 700,000 | 60,000 | BH with HP | 9 | Yes | SP(YC) | Yes | Yes | Satisfied with current water | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 49 | Chileka | LD | Buisiness | Secondary form 3-4 | 3 | 130,000 | 61,000 | BH with HP | 20 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Others | Common Cold | N/A |
| 50 | Chileka | HD(TH) | Buisiness | Primary Standard 1-8 | 4 | 26,000 | 15,500 | BH with HP | 10 | Yes | SP(YC) | Not Sure | Yes | Not sure about merits of house | more than 1 hour | Indivisual | PLS | Malaria | HIV/AIDS | Diarrhoea | N/A |
| 51 | Chileka | LD | Farmer | Secondary form 3-4 | 5 | 30,000 | 26,000 | BH with HP | 15 | Yes | SP(YC) | Yes | Yes | Satisfied with current water | not more than 5 min | Indivisual | TPL | Malaria | Others | N/A | N/A |
| 52 | mkanda | HD(TH) | Employed | Secondary form 3-4 | 5 | 415,000 | 408,200 | P SW | 5 | Yes | CWP | N/A | N/A | Satisfied with current water | not more than 5 min | Communal | TPL | Malaria | Others | Diarrhoea | N/A |
| 53 | mkanda | HD(TH) | Buisiness | Primary Standard 1-8 | 14 | 255,000 | 215,500 | UP SW | 20 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 6-15 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 54 | mkanda | HD(TH) | Farmer | Primary Standard 1-8 | 6 | 240,000 | 202,000 | UP SW | 6 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 55 | mkanda | HD(TH) | Farmer | Primary Standard 1-8 | 3 | 145,000 | 94,000 | UP SW | 5 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 56 | mkanda | HD(PH) | Buisiness | Primary Standard 1-8 | 7 | 350,000 | 125,200 | BH with HP | 12 | Yes | HC | Yes | Yes | N/A | 31-60 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | Dysentery |
| 57 | mkanda | HD(PH) | Employed | Tertiary education | 7 | 216,000 | 93,700 | P SW | 10 | Yes | HC | Yes | Yes | N/A | 31-60 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 58 | mkanda | HD(TH) | Buisiness | Primary Standard 1-8 | 6 | 216,000 | 221,400 | UP SW | 8 | Yes | SP(YC) | Not Sure | not sure | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 59 | mkanda | LD | Farmer | Primary Standard 1-8 | 3 | 80,000 | 38,000 | P SW | 6 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 6-15 min | Indivisual | TPL | Malaria | Others | N/A | N/A |
| 60 | mkanda | LD | Employed | Secondary form 1-2 | 5 | 80,000 | 37,000 | P SW | 2 | Yes | SP(YC) | Yes | Yes | Other | not more than 5 min | Indivisual | TPL | Malaria | Others | Cholera | Dysentery |

| | General | HH characteristics | | | | HH income | | Water situation and demand | | | | | | | | Health and hygine | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market centre | Housing category | Occupation HH head | Highest education level HH head | No. of family | Income per year | Expense per year | Main source of water | Water use bucket /day | desire to have piped water | type of water connection you prefer | willingness to pay | afford to pay | Reason of no desire to install house connection | water source from house | Owner of toilet | Type of toilet | most common diseases in this market center | | | |
| | | | | | | | | | | | | | | | | | | 1st | 2nd | 3rd | 4th |
| 61 | mkanda | LD | Farmer | Primary Standard 1-8 | 4 | 90,000 | 64,000 | UP SW | 6 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | HIV/AIDS | N/A |
| 62 | mkanda | LD | Farmer | Secondary form 1-2 | 6 | 50,000 | 35,000 | P SW | 10 | Yes | SP(YC) | Yes | No | Cannot afford the cost | 6-15 min | Indivisual | TPL | Malaria | Others | Cholera | N/A |
| 63 | mkanda | LD | Farmer | Secondary form 1-2 | 5 | 50,000 | 32,000 | UP SW | 6 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 6-15 min | Indivisual | TPL | Malaria | Others | Diarrhoea | Dysentery |
| 64 | mkanda | MD | Farmer | Primary Standard 1-8 | 5 | 150,000 | - | BH with HP | 10 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | HIV/AIDS | N/A |
| 65 | mkanda | LD | Buisiness | Tertiary education | 7 | 300,000 | 121,000 | BH with HP | 12 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | HIV/AIDS | N/A |
| 66 | mkanda | MD | Employed | Secondary form 3-4 | 7 | - | 31,300 | BH with HP | 7 | Yes | HC | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | Cholera | Common Cold | N/A |
| 67 | mkanda | MD | Buisiness | Secondary form 1-2 | 3 | - | - | BH with HP | 10 | Yes | SP(YC) | Not Sure | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | HIV/AIDS | N/A |
| 68 | mkanda | LD | Farmer | Primary Standard 1-8 | 3 | 40,000 | 25,000 | Stream/River | 5 | Yes | CWP | No | No | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Diarrhoea | Cholera | HIV/AIDS | N/A |
| 69 | mkanda | HD(TH) | Buisiness | Secondary form 1-2 | 3 | 15,000 | - | BH with HP | 8 | No | SP(YC) | No | No | Cannot afford the cost | 6-15 min | Indivisual | TPL | Cholera | HIV/AIDS | Malaria | N/A |
| 70 | mkanda | HD(TH) | Other | Primary Standard 1-8 | 7 | - | - | Stream/River | 4 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | HIV/AIDS | Cholera | TB | N/A |
| 71 | mkanda | LD | Farmer | Primary Standard 1-8 | 6 | 50,000 | 8,000 | Stream/River | 8 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Rents | TPL | Malaria | HIV/AIDS | Diarrhoea | N/A |
| 72 | mkanda | HD(PH) | Buisiness | Primary Standard 1-8 | 3 | 20,000 | 4,000 | Stream/River | 6 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 6-15 min | Indivisual | TPL | Diarrhoea | HIV/AIDS | Malaria | N/A |
| 73 | mkanda | LD | Buisiness | Primary Standard 1-8 | 4 | 180,000 | 17,000 | BH with HP | 6 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | HIV/AIDS | HIV/AIDS | Malaria | Diarrhoea |
| 74 | mkanda | HD(TH) | Buisiness | Primary Standard 1-8 | 4 | 72,000 | 56,000 | BH with HP | 9 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 31-60 min | Communal | TPL | Malaria | Common Cold | Diarrhoea | Dysentery |
| 75 | mkanda | HD(TH) | Other | Secondary form 3-4 | 2 | - | 12,500 | UP SW | 2 | Yes | SP(YC) | No | No | Cannot afford the cost | not more than 5 min | Communal | TPL | Malaria | Common Cold | Dysentery | N/A |
| 76 | mkanda | HD(TH) | Farmer | Primary Standard 1-8 | 10 | 40,000 | 66,000 | BH with HP | 16 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 6-15 min | Communal | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 77 | mkanda | HD(TH) | Farmer | Primary Standard 1-8 | 10 | 75,000 | 76,800 | UP SW | 10 | Yes | SP(YC) | No | No | Cannot afford the cost | 16-30 min | Indivisual | TPL | Malaria | Common Cold | Cholera | Diarrhoea |
| 78 | mkanda | HD(PH) | Employed | Primary Standard 1-8 | 6 | 100,000 | 19,000 | BH with HP | 9 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | Others | N/A |
| 79 | mkanda | HD(TH) | Other | Primary Standard 1-8 | 2 | - | - | BH with HP | 6 | Yes | HC | Not Sure | No | N/A | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | N/A | N/A |
| 80 | mkanda | HD(TH) | Buisiness | Secondary form 1-2 | 6 | 100,000 | 39,000 | P SW | 3 | Yes | HC | Yes | not sure | N/A | not more than 5 min | Indivisual | PLS | Others | Malaria | N/A | N/A |
| 81 | mkanda | HD(TH) | Buisiness | Primary Standard 1-8 | 4 | - | - | BH with HP | 10 | No | N/A | N/A | N/A | N/A | not more than 5 min | Indivisual | TPL | Malaria | Others | N/A | N/A |
| 82 | mkanda | HD(PH) | Buisiness | Secondary form 1-2 | 4 | 40,000 | 45,000 | P SW | 5 | Yes | CWP | N/A | N/A | Cannot afford the cost | not more than 5 min | Rents | PLS | Malaria | Diarrhoea | Others | N/A |
| 83 | mkanda | MD | Farmer | Primary Standard 1-8 | 6 | 5,650 | 72,520 | P SW | | Yes | SP(YC) | Yes | Yes | Other | not more than 5 min | Indivisual | TPL | HIV/AIDS | Malaria | N/A | N/A |
| 84 | mkanda | LD | Buisiness | Secondary form 1-2 | 6 | 80,000 | 101,185 | P SW | 6 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | TPL | HIV/AIDS | Common Cold | N/A | N/A |
| 85 | mkanda | LD | Buisiness | Primary Standard 1-8 | 6 | 20,500 | 40,560 | UP SW | 8 | Yes | SP(YC) | Not Sure | not sure | Other | not more than 5 min | Indivisual | TPL | Malaria | HIV/AIDS | Others | N/A |
| 86 | mkanda | LD | Buisiness | Primary Standard 1-8 | 5 | 60,000 | 164,100 | UP SW | 5 | Yes | CWP | Yes | Yes | Other | not more than 5 min | Communal | TPL | Malaria | Common Cold | Others | N/A |
| 87 | mkanda | LD | Buisiness | Primary Standard 1-8 | 4 | 2,400 | 49,000 | BH with HP | 5 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Diarrhoea | Malaria | Others | N/A |
| 88 | mkanda | HD(PH) | Buisiness | Primary Standard 1-8 | 6 | 432,000 | 81,370 | BH with HP | 8 | Yes | HC | Yes | Yes | N/A | 16-30 min | Rents | TPL | Others | Malaria | HIV/AIDS | N/A |
| 89 | mkanda | HD(PH) | Employed | Secondary form 3-4 | 4 | 145,000 | 177,480 | P SW | 15 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Malaria | Others | HIV/AIDS | Diarrhoea |
| 90 | mkanda | HD(TH) | Employed | Secondary form 3-4 | 3 | 350,000 | 225,660 | P SW | 5 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Malaria | Others | HIV/AIDS | Diarrhoea |

| | General | HH characteristics | | | | HH income | | Water situation and demand | | | | | | | | Health and hygine | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market centre | Housing category | Occupation HH head | Highest education level HH head | No. of family | Income per year | Expense per year | Main source of water | Water use bucket /day | desire to have piped water | type of water connection you prefer | willingness to pay | afford to pay | Reason of no desire to install house connection | water source from house | Owner of toilet | Type of toilet | most common diseases in this market center | | | |
| | | | | | | | | | | | | | | | | | | 1st | 2nd | 3rd | 4th |
| 91 | mkanda | HD(TH) | Buisiness | Primary Standard 1-8 | 4 | 379,600 | 161,010 | BH with HP | 6 | Yes | CWP | N/A | N/A | Other | 16-30 min | Rents | TPL | Others | Diarrhoea | Malaria | N/A |
| 92 | mkanda | HD(PH) | Buisiness | Primary Standard 1-8 | 3 | - | 155,440 | P SW | 8 | Yes | HC | Yes | Yes | N/A | 6-15 min | Rents | TPL | Malaria | HIV/AIDS | Diarrhoea | Others |
| 93 | mkanda | HD(PH) | Farmer | Primary Standard 1-8 | 9 | 37,800 | 53,760 | P SW | 10 | Yes | CWP | N/A | N/A | Cannot afford the cost | 6-15 min | Indivisual | TPL | Malaria | TB | N/A | N/A |
| 94 | mkanda | HD(TH) | Farmer | Secondary form 3-4 | 4 | 772,800 | 48,000 | P SW | 1 | Yes | CWP | N/A | N/A | Not sure about merits of house | 16-30 min | Communal | TPL | Malaria | TB | Diarrhoea | N/A |
| 95 | mkanda | HD(PH) | Farmer | Primary Standard 1-8 | 7 | 124,000 | 110,000 | P SW | 5 | Yes | CWP | N/A | N/A | Not sure about merits of house | not more than 5 min | Communal | TPL | Malaria | Diarrhoea | N/A | N/A |
| 96 | mkanda | HD(TH) | Farmer | Primary Standard 1-8 | 9 | 600,000 | 500,000 | P SW | 5 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Malaria | TB | Diarrhoea | N/A |
| 97 | mkanda | HD(PH) | Buisiness | Primary Standard 1-8 | 5 | - | 56,000 | P SW | 6 | Yes | CWP | N/A | N/A | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Diarrhoea | Malaria | N/A | N/A |
| 98 | mkanda | HD(PH) | Employed | Primary Standard 1-8 | 4 | 260,000 | 50,500 | BH with HP | 3 | Yes | CWP | N/A | N/A | Other | 6-15 min | Rents | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 99 | mkanda | HD(PH) | Employed | Secondary form 1-2 | 5 | 145,000 | 33,000 | BH with HP | 4 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 6-15 min | Indivisual | TPL | Malaria | Common Cold | HIV/AIDS | Diarrhoea |
| 100 | mkanda | HD(TH) | Buisiness | Primary Standard 1-8 | 5 | 125,000 | 31,500 | BH with HP | 4 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 6-15 min | Indivisual | TPL | Malaria | Common Cold | N/A | N/A |
| 101 | mkanda | HD(TH) | Buisiness | Primary Standard 1-8 | 5 | 370,000 | 15,500 | BH with HP | 6 | Yes | SP(YC) | Yes | not sure | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | HIV/AIDS | Others |
| 102 | mkanda | HD(PH) | Farmer | Primary Standard 1-8 | 7 | 175,000 | 140,000 | UP SW | 10 | Yes | SP(YC) | Yes | not sure | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | HIV/AIDS | Others |
| 103 | Namitete | HD(PH) | Employed | Secondary form 3-4 | 6 | 480,000 | 165,000 | BH with HP | 8 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | PLS | Malaria | Diarrhoea | Cholera | N/A |
| 104 | Namitete | HD(PH) | Farmer | Secondary form 1-2 | 6 | 50,000 | 44,000 | BH with HP | 6 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | PLS | Malaria | Common Cold | Diarrhoea | N/A |
| 105 | Namitete | HD(PH) | Employed | Secondary form 1-2 | 4 | 180,000 | 59,000 | BH with HP | 8 | Yes | HC | Not Sure | not sure | N/A | 6-15 min | Rents | PLS | Malaria | N/A | N/A | N/A |
| 106 | Namitete | HD(TH) | Buisiness | Secondary form 1-2 | 3 | 70,000 | 14,000 | BH with HP | 7 | Yes | CWP | N/A | N/A | Not sure about merits of house | 6-15 min | Rents | TPL | Malaria | Diarrhoea | N/A | N/A |
| 107 | Namitete | HD(PH) | Buisiness | Primary Standard 1-8 | 7 | 100,000 | 27,200 | BH with HP | 10 | Yes | HC | No | Yes | N/A | 6-15 min | Rents | PLS | Malaria | Diarrhoea | Others | N/A |
| 108 | Namitete | HD(PH) | Employed | Secondary form 1-2 | 6 | 180,500 | 15,200 | P SW | 4 | Yes | HC | Not Sure | Yes | N/A | not more than 5 min | Indivisual | TPL | Diarrhoea | Malaria | N/A | N/A |
| 109 | Namitete | HD(TH) | Farmer | Primary Standard 1-8 | 8 | 80,000 | 90,000 | P SW | 12 | Yes | HC | Yes | No | N/A | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | Others | N/A |
| 110 | Namitete | HD(TH) | Farmer | Primary Standard 1-8 | 8 | - | - | UP SW | 15 | Yes | CWP | N/A | N/A | Other | not more than 5 min | Indivisual | TPL | Diarrhoea | Malaria | Others | N/A |
| 111 | Namitete | HD(TH) | Buisiness | Secondary form 1-2 | 5 | 130,000 | 48,000 | P SW | 4 | Yes | CWP | N/A | N/A | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | N/A | N/A |
| 112 | Namitete | HD(TH) | Buisiness | Primary Standard 1-8 | 5 | 80,000 | 39,000 | P SW | 7 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | N/A | N/A |
| 113 | Namitete | HD(PH) | Farmer | Primary Standard 1-8 | 7 | 11,000 | 390,000 | BH with HP | 6 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 31-60 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 114 | Namitete | HD(PH) | Buisiness | Secondary form 1-2 | 5 | 800,000 | 211,000 | BH with HP | 5 | Yes | HC | Yes | Yes | N/A | 16-30 min | Communal | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 115 | Namitete | HD(TH) | Employed | Primary Standard 1-8 | 5 | 90,000 | 32,000 | P SW | 4 | Yes | CWP | N/A | N/A | Other | 31-60 min | Indivisual | TPL | Malaria | Common Cold | N/A | N/A |
| 116 | Namitete | HD(PH) | Buisiness | Secondary form 3-4 | 6 | 46,000 | 42,700 | BH with HP | 5 | Yes | SP(YC) | Yes | Yes | N/A | 6-15 min | Communal | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 117 | Namitete | HD(TH) | Buisiness | Secondary form 1-2 | 3 | 71,000 | 18,700 | BH with HP | 4 | Yes | CWP | N/A | N/A | Cannot afford the cost | 16-30 min | Communal | TPL | Malaria | Common Cold | HIV/AIDS | N/A |
| 118 | Namitete | HD(TH) | Employed | Primary Standard 1-8 | 6 | 91,800 | 14,000 | P SW | 6 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Communal | TPL | Malaria | Common Cold | Others | N/A |
| 119 | Namitete | HD(PH) | Buisiness | Primary Standard 1-8 | 6 | 105,000 | 39,000 | UP SW | 7 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 6-15 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 120 | Namitete | HD(PH) | Buisiness | Primary Standard 1-8 | 5 | 85,000 | 57,000 | P SW | 5 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | HIV/AIDS | Malaria | Others | Diarrhoea |

| | General | HH characteristics | | | | HH income | | Water situation and demand | | | | | | | | Health and hygine | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market centre | Housing category | Occupation HH head | Highest education level HH head | No. of family | Income per year | Expense per year | Main source of water | Water use bucket /day | desire to have piped water | type of water connection you prefer | willingness to pay | afford to pay | Reason of no desire to install house connection | water source from house | Owner of toilet | Type of toilet | most common diseases in this market center | | | |
| | | | | | | | | | | | | | | | | | | 1st | 2nd | 3rd | 4th |
| 121 | Namitete | HD(TH) | Buisiness | Primary Standard 1-8 | 7 | 20,000 | 10,300 | P SW | 5 | Yes | CWP | N/A | N/A | Other | 6-15 min | Indivisual | TPL | Malaria | HIV/AIDS | Common Cold | N/A |
| 122 | Namitete | HD(TH) | Farmer | Primary Standard 1-8 | 5 | 15,000 | 8,300 | UP SW | 8 | Yes | SP(YC) | Yes | Yes | Other | not more than 5 min | Indivisual | TPL | Malaria | HIV/AIDS | Common Cold | Diarrhoea |
| 123 | Namitete | LD | Buisiness | Secondary form 3-4 | 2 | 155,600 | 404,500 | BH with HP | 5 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | PLS | Common Cold | Malaria | TB | N/A |
| 124 | Namitete | HD(PH) | Employed | Secondary form 1-2 | 2 | 30,000 | 308,400 | BH with HP | 3 | Yes | HC | Yes | Yes | N/A | 16-30 min | Communal | TPL | Others | Diarrhoea | N/A | N/A |
| 125 | Namitete | LD | Buisiness | Primary Standard 1-8 | 2 | 8,000 | 10,060 | BH with HP | 2 | Yes | SP(YC) | Yes | Yes | Other | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | N/A | N/A |
| 126 | Namitete | MD | Employed | Primary Standard 1-8 | 6 | 68,000 | 142,200 | BH with HP | 5 | Yes | SP(YC) | Yes | Yes | Other | not more than 5 min | Indivisual | TPL | HIV/AIDS | Common Cold | N/A | N/A |
| 127 | Namitete | HD(PH) | Buisiness | Secondary form 3-4 | 5 | - | 260,700 | P SW | 6 | Yes | SP(YC) | Yes | Yes | Other | not more than 5 min | Indivisual | TPL | Malaria | N/A | N/A | N/A |
| 128 | Namitete | HD(PH) | Farmer | N/A | 6 | - | - | BH with HP | 6 | Yes | HC | Yes | Yes | N/A | 16-30 min | Indivisual | TPL | Malaria | N/A | N/A | N/A |
| 129 | Namitete | LD | Farmer | Primary Standard 1-8 | 8 | 79,400 | 13,000 | BH with HP | 4 | Yes | CWP | N/A | N/A | Other | not more than 5 min | Indivisual | TPL | Malaria | N/A | N/A | N/A |
| 130 | Namitete | LD | Buisiness | Primary Standard 1-8 | 10 | 34,750 | 105,083 | BH with HP | 7 | Yes | CWP | N/A | N/A | Other | 16-30 min | Indivisual | TPL | Malaria | Diarrhoea | N/A | N/A |
| 131 | Namitete | LD | Buisiness | Primary Standard 1-8 | 4 | 240,000 | 15,560 | UP SW | 5 | Yes | CWP | N/A | N/A | Other | not more than 5 min | Communal | TPL | Malaria | Others | Diarrhoea | N/A |
| 132 | Namitete | MD | Buisiness | Primary Standard 1-8 | 4 | 19,800 | 101,900 | UP SW | 7 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | Common Cold | Malaria | N/A | N/A |
| 133 | Namitete | HD(TH) | Buisiness | Secondary form 1-2 | 7 | 12,000 | 31,000 | BH with HP | 10 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 16-30 min | Indivisual | TPL | Malaria | N/A | N/A | N/A |
| 134 | Namitete | MD | Buisiness | Primary Standard 1-8 | 4 | - | 13,900 | BH with HP | 5 | Yes | CWP | N/A | N/A | Cannot afford the cost | 6-15 min | Indivisual | -9 | Malaria | Diarrhoea | TB | N/A |
| 135 | Namitete | HD(TH) | Buisiness | Primary Standard 1-8 | 8 | 24,000 | 7,200 | BH with HP | 7 | Yes | CWP | N/A | N/A | Not sure about merits of house | 6-15 min | Communal | TPL | Malaria | N/A | N/A | N/A |
| 136 | Namitete | MD | Buisiness | Primary Standard 1-8 | 4 | - | 24,000 | BH with HP | 10 | Yes | CWP | N/A | N/A | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Diarrhoea | Malaria | HIV/AIDS | N/A |
| 137 | Namitete | HD(TH) | Farmer | N/A | 6 | 12,000 | 60,000 | BH with HP | 5 | Yes | CWP | N/A | N/A | Satisfied with current water | 6-15 min | Indivisual | TPL | Malaria | HIV/AIDS | N/A | N/A |
| 138 | Namitete | HD(TH) | Buisiness | N/A | 12 | 117,600 | 10,000 | UP SW | 10 | Yes | CWP | N/A | N/A | Cannot afford the cost | 31-60 min | Indivisual | TPL | Malaria | Diarrhoea | N/A | N/A |
| 139 | Namitete | HD(TH) | Buisiness | Secondary form 3-4 | 5 | - | 31,200 | UP SW | 6 | Yes | CWP | N/A | N/A | Not sure about merits of house | 16-30 min | Communal | TPL | Diarrhoea | Malaria | TB | N/A |
| 140 | Namitete | MD | Buisiness | Primary Standard 1-8 | 9 | - | 20,400 | P SW | 10 | Yes | CWP | N/A | N/A | Not sure about merits of house | not more than 5 min | Communal | TPL | Malaria | Diarrhoea | N/A | N/A |
| 141 | Namitete | HD(TH) | Employed | Primary Standard 1-8 | 6 | 84,000 | 324,000 | UP SW | 10 | Yes | CWP | N/A | N/A | Cannot afford the cost | 31-60 min | Indivisual | TPL | Malaria | TB | HIV/AIDS | N/A |
| 142 | Namitete | HD(TH) | Buisiness | Primary Standard 1-8 | 3 | 108,000 | 6,000 | BH with HP | 3 | Yes | CWP | N/A | N/A | Not sure about merits of house | 16-30 min | Communal | TPL | Malaria | Diarrhoea | N/A | N/A |
| 143 | Namitete | MD | Employed | Secondary form 3-4 | 5 | - | 76,000 | BH with HP | 10 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | VIP | Malaria | Others | Diarrhoea | N/A |
| 144 | Namitete | HD(PH) | Buisiness | Primary Standard 1-8 | 8 | 160,000 | 28,600 | BH with HP | 9 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 6-15 min | Indivisual | TPL | Malaria | Others | N/A | N/A |
| 145 | Namitete | HD(PH) | Farmer | Primary Standard 1-8 | 5 | 120,000 | 129,025 | BH with HP | 6 | Yes | HC | Yes | Yes | N/A | 16-30 min | Rents | PLS | Others | Malaria | Diarrhoea | N/A |
| 146 | Namitete | HD(PH) | Employed | Primary Standard 1-8 | 3 | 130,200 | 215,650 | BH with HP | 5 | Yes | HC | Yes | Yes | N/A | 6-15 min | Communal | TPL | Malaria | HIV/AIDS | Diarrhoea | Others |
| 147 | Namitete | HD(PH) | Buisiness | N/A | 4 | 337,500 | 139,808 | BH with HP | 7 | Yes | SP(YC) | Yes | not sure | Not sure about merits of house | 6-15 min | Indivisual | TPL | Others | HIV/AIDS | Malaria | N/A |
| 148 | Namitete | HD(PH) | Employed | Secondary form 3-4 | 8 | 118,000 | 412,260 | BH with HP | 6 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | Malaria | Dysentery | HIV/AIDS | Others |
| 149 | Namitete | HD(TH) | Buisiness | N/A | 4 | 336,000 | 82,920 | BH with HP | 3 | Yes | CWP | N/A | N/A | Cannot afford the cost | 16-30 min | Indivisual | TPL | HIV/AIDS | Malaria | Diarrhoea | Others |
| 150 | Namitete | HD(TH) | Buisiness | Primary Standard 1-8 | 5 | 672,000 | 235,200 | BH with HP | 3 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | Others | Malaria | HIV/AIDS | N/A |

| | General | HH characteristics | | | | HH income | | Water situation and demand | | | | | | | | Health and hygine | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market centre | Housing category | Occupation HH head | Highest education level HH head | No. of family | Income per year | Expense per year | Main source of water | Water use bucket /day | desire to have piped water | type of water connection you prefer | willingness to pay | afford to pay | Reason of no desire to install house connection | water source from house | Owner of toilet | Type of toilet | most common diseases in this market center | | | |
| | | | | | | | | | | | | | | | | | | 1st | 2nd | 3rd | 4th |
| 151 | Namitete | HD(PH) | Farmer | N/A | 3 | 20,000 | 98,110 | BH with HP | 3 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | N/A | N/A | N/A | N/A |
| 152 | Namitete | HD(PH) | Employed | Secondary form 1-2 | 8 | 13,000 | 83,800 | BH with HP | 4 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | Others | Malaria | N/A | N/A |
| 153 | santhe | MD | Employed | Secondary form 3-4 | 4 | 168,000 | 146,000 | BH with HP | 5 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Communal | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 154 | santhe | MD | Buisiness | Primary Standard 1-8 | 3 | 117,000 | 49,800 | UP SW | 5 | Yes | SP(YC) | Yes | Yes | N/A | not more than 5 min | Communal | PLS | Malaria | Common Cold | Diarrhoea | N/A |
| 155 | santhe | HD(TH) | Buisiness | Primary Standard 1-8 | 6 | 170,000 | 162,000 | BH with HP | 12 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | Common Cold | N/A |
| 156 | santhe | HD(TH) | Employed | Secondary form 1-2 | 5 | 250,000 | 171,000 | BH with HP | 6 | Yes | HC | Yes | not sure | N/A | not more than 5 min | Communal | TPL | Malaria | Others | Common Cold | N/A |
| 157 | santhe | MD | Employed | Secondary form 1-2 | 7 | 296,000 | 189,000 | UP SW | 10 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Diarrhoea | Malaria | N/A | N/A |
| 158 | santhe | LD | Buisiness | Secondary form 3-4 | 10 | 1,000,000 | 720,000 | BH with HP | 15 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | VIP | Malaria | Diarrhoea | Common Cold | N/A |
| 159 | santhe | LD | Buisiness | Primary Standard 1-8 | 5 | 360,000 | 108,000 | BH with HP | 5 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | HIV/AIDS | Common Cold | N/A |
| 160 | santhe | MD | Buisiness | Primary Standard 1-8 | 5 | 180,000 | 167,650 | BH with HP | 7 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | TB | Common Cold | Malaria | N/A |
| 161 | santhe | LD | Other | N/A | 5 | 60,000 | 72,150 | BH with HP | 6 | Yes | CWP | Yes | not sure | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | HIV/AIDS | Common Cold | N/A |
| 162 | santhe | LD | Buisiness | Primary Standard 1-8 | 7 | 112,000 | 181,000 | P SW | 6 | Yes | SP(YC) | Yes | not sure | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | Diarrhoea | N/A |
| 163 | santhe | MD | Buisiness | Primary Standard 1-8 | 7 | 144,000 | 152,000 | BH with HP | 5 | Yes | HC | Yes | not sure | N/A | 6-15 min | Not use toilet | TPL | Malaria | TB | Diarrhoea | N/A |
| 164 | santhe | HD(PH) | Employed | Secondary form 3-4 | 6 | 500,000 | 230,000 | P SW | 25 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | PLS | Malaria | Diarrhoea | N/A | N/A |
| 165 | santhe | HD(PH) | Farmer | Secondary form 3-4 | 5 | 200,000 | 150,000 | P SW | 15 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | PLS | Malaria | Diarrhoea | N/A | N/A |
| 166 | santhe | HD(PH) | Employed | Secondary form 3-4 | 7 | 90,000 | 90,000 | P SW | 20 | Yes | SP(YC) | Yes | Yes | Other | not more than 5 min | Indivisual | PLS | Malaria | Common Cold | HIV/AIDS | N/A |
| 167 | santhe | HD(PH) | Employed | Secondary form 3-4 | 1 | 80,000 | 32,000 | UP SW | 1 | Yes | CWP | Yes | Yes | Other | not more than 5 min | Indivisual | PLS | Dysentery | Diarrhoea | Malaria | N/A |
| 168 | santhe | HD(PH) | Buisiness | Secondary form 3-4 | 7 | 300,000 | 42,000 | P SW | 10 | Yes | CWP | Yes | Yes | Other | not more than 5 min | Indivisual | TPL | Others | Malaria | N/A | N/A |
| 169 | santhe | HD(PH) | Employed | Secondary form 3-4 | 4 | 50,000 | 78,500 | Stream/River | 8 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Rents | PLS | Diarrhoea | Malaria | Common Cold | N/A |
| 170 | santhe | HD(PH) | Employed | Primary Standard 1-8 | 3 | 40,000 | 7,000 | BH with HP | 4 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 16-30 min | Rents | VIP | HIV/AIDS | Malaria | Diarrhoea | N/A |
| 171 | santhe | HD(TH) | Employed | Primary Standard 1-8 | 4 | 25,000 | 8,000 | Stream/River | 3 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | PLS | Malaria | Common Cold | Diarrhoea | N/A |
| 172 | santhe | HD(TH) | Buisiness | Primary Standard 1-8 | 6 | 20,000 | 6,000 | BH with HP | 8 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | PLS | Malaria | Diarrhoea | TB | N/A |
| 173 | santhe | MD | Employed | Tertiary education | 6 | 376,000 | 120,000 | BH with HP | 15 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | PLS | Malaria | Diarrhoea | Common Cold | Bilharzias |
| 174 | santhe | MD | Farmer | Primary Standard 1-8 | 7 | 100,000 | 195,000 | BH with HP | 15 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 6-15 min | Indivisual | PLS | Common Cold | Others | Cholera | Dysentery |
| 175 | santhe | HD(PH) | Employed | Secondary form 3-4 | 7 | 126,000 | 124,000 | BH with HP | 10 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | 16-30 min | Indivisual | PLS | Malaria | Diarrhoea | Common Cold | Dysentery |
| 176 | santhe | HD(PH) | Buisiness | Primary Standard 1-8 | 5 | 40,000 | 19,000 | BH with HP | 7 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Rents | TPL | Diarrhoea | Malaria | HIV/AIDS | N/A |
| 177 | santhe | HD(TH) | Employed | N/A | 7 | 70,000 | 75,000 | BH with HP | 7 | Yes | SP(YC) | Yes | Yes | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | Diarrhoea | Dysentery | Others |
| 178 | santhe | HD(PH) | Buisiness | Secondary form 3-4 | 7 | 80,000 | 20,000 | BH with HP | 12 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Malaria | Others | N/A | N/A |
| 179 | santhe | HD(PH) | Buisiness | Primary Standard 1-8 | 7 | - | - | BH with HP | 10 | Yes | CWP | N/A | N/A | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | N/A | N/A | N/A |
| 180 | santhe | HD(TH) | Farmer | Primary Standard 1-8 | 2 | 100,000 | 6,000 | BH with HP | 7 | Yes | CWP | N/A | N/A | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Malaria | N/A | N/A | N/A |

| | General | HH characteristics | | | | HH income | | Water situation and demand | | | | | | | | Health and hygine | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market centre | Housing category | Occupation HH head | Highest education level HH head | No. of family | Income per year | Expense per year | Main source of water | Water use bucket /day | desire to have piped water | type of water connection you prefer | willingness to pay | afford to pay | Reason of no desire to install house connection | water source from house | Owner of toilet | Type of toilet | most common diseases in this market center | | | |
| | | | | | | | | | | | | | | | | | | 1st | 2nd | 3rd | 4th |
| 181 | santhe | HD(TH) | Farmer | Primary Standard 1-8 | 9 | 50,000 | 16,000 | BH with HP | 10 | Yes | CWP | N/A | N/A | Cannot afford the cost | not more than 5 min | Indivisual | TPL | Others | Malaria | N/A | N/A |
| 182 | santhe | HD(PH) | Buisiness | Secondary form 1-2 | 4 | 30,000 | 28,000 | BH with HP | 6 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Others | Malaria | Diarrhoea | N/A |
| 183 | santhe | MD | Farmer | Primary Standard 1-8 | 5 | 78,600 | 108,000 | BH with HP | 6 | Yes | SP(YC) | Not Sure | not sure | Other | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | Others | N/A |
| 184 | santhe | LD | Employed | Secondary form 3-4 | 4 | 158,000 | 49,000 | BH with HP | 4 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | HIV/AIDS | Malaria | Diarrhoea | N/A |
| 185 | santhe | MD | Employed | Tertiary education | 7 | 858,600 | 621,458 | BH with HP | 12 | Yes | SP(YC) | Yes | Yes | N/A | not more than 5 min | Indivisual | TPL | Common Cold | Malaria | N/A | N/A |
| 186 | santhe | MD | Employed | Primary Standard 1-8 | 4 | 120,000 | 310,816 | BH with HP | 6 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | PLS | Diarrhoea | N/A | N/A | N/A |
| 187 | santhe | LD | Employed | Secondary form 3-4 | 6 | - | 251,812 | BH with HP | 5 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | HIV/AIDS | Others | N/A | N/A |
| 188 | santhe | HD(PH) | Employed | Secondary form 1-2 | 6 | - | 189,000 | P SW | 10 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Communal | TPL | Malaria | TB | Diarrhoea | N/A |
| 189 | santhe | HD(TH) | Buisiness | Primary Standard 1-8 | 1 | 40,000 | 51,000 | P SW | 10 | Yes | CWP | N/A | N/A | Cannot afford the cost | not more than 5 min | Indivisual | TPL | TB | Malaria | Diarrhoea | N/A |
| 190 | santhe | HD(TH) | Buisiness | N/A | 3 | 660,000 | 75,000 | P SW | 10 | Yes | CWP | N/A | N/A | Cannot afford the cost | not more than 5 min | Communal | VIP | Malaria | HIV/AIDS | N/A | N/A |
| 191 | santhe | HD(TH) | Buisiness | Primary Standard 1-8 | 9 | - | 60,300 | BH with HP | 10 | Yes | CWP | N/A | N/A | Not sure about merits of house | 16-30 min | Communal | TPL | Diarrhoea | Malaria | N/A | N/A |
| 192 | santhe | HD(PH) | Employed | Secondary form 3-4 | 4 | 120,000 | 60,000 | P SW | 4 | Yes | CWP | N/A | N/A | Cannot afford the cost | not more than 5 min | Communal | TPL | Malaria | TB | N/A | N/A |
| 193 | santhe | HD(TH) | Employed | Primary Standard 1-8 | 3 | 87,000 | 10,300 | P SW | 2 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | not more than 5 min | Indivisual | TPL | Malaria | Common Cold | Others | HIV/AIDS |
| 194 | santhe | HD(TH) | Buisiness | Secondary form 1-2 | 5 | 300,000 | 52,300 | BH with HP | 6 | Yes | SP(YC) | Yes | No | Cannot afford the cost | 16-30 min | Indivisual | TPL | Diarrhoea | Malaria | HIV/AIDS | N/A |
| 195 | santhe | HD(TH) | Buisiness | Secondary form 3-4 | 5 | 110,000 | 21,700 | BH with HP | 6 | Yes | SP(YC) | Yes | Yes | Not sure about merits of house | 6-15 min | Communal | TPL | Malaria | Others | Common Cold | HIV/AIDS |
| 196 | santhe | HD(TH) | Buisiness | Primary Standard 1-8 | 3 | 165,000 | 26,550 | BH with HP | 5 | Yes | CWP | N/A | N/A | Other | not more than 5 min | Indivisual | TPL | Others | Malaria | N/A | N/A |
| 197 | santhe | HD(TH) | Employed | Primary Standard 1-8 | 8 | 168,000 | 84,200 | BH with HP | 8 | Yes | SP(YC) | Yes | not sure | Satisfied with current water | not more than 5 min | Indivisual | TPL | Common Cold | Malaria | Diarrhoea | N/A |
| 198 | santhe | HD(TH) | Buisiness | Primary Standard 1-8 | 3 | 67,200 | 31,370 | BH with HP | 3 | Yes | HC | Yes | Yes | N/A | 6-15 min | Communal | TPL | Malaria | Common Cold | Others | N/A |
| 199 | santhe | HD(TH) | Buisiness | N/A | 3 | - | 50,050 | P SW | 2 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | Malaria | Diarrhoea | HIV/AIDS | N/A |
| 200 | santhe | HD(TH) | Employed | Primary Standard 1-8 | 5 | 52,000 | 85,170 | P SW | 6 | Yes | HC | Yes | Yes | N/A | not more than 5 min | Communal | TPL | Others | HIV/AIDS | N/A | N/A |
| 201 | santhe | HD(TH) | Buisiness | Primary Standard 1-8 | 4 | 84,000 | 113,780 | BH with HP | 5 | Yes | CWP | N/A | N/A | Cannot afford the cost | 16-30 min | Communal | TPL | Others | Malaria | Diarrhoea | N/A |
| 202 | santhe | MD | Buisiness | Secondary form 3-4 | 6 | 160,000 | 263,190 | BH with HP | 10 | Yes | HC | Yes | Yes | N/A | 6-15 min | Indivisual | TPL | Others | Dysentery | Malaria | N/A |

略語

[Housing Category] HD(PH):High Density (Permanent House) HD(TH):High Density (Traditional House) MD: Medium Density LD:Low Density

[Highest education level HH head] BH with HP: Bore Hole with Handpump PSW:Protected Shallow Well UPSW:Unprotected Shallow Well

[Type of water connection you prefer] SP(YC):Stand Pipe(Yard Connenction) CWP:Communal Water Point HC:House Connection

[Type of Toilet] PLS:Pit latrine with sanplat TPL: Traditional Pit Latrine VIP: Improved Pit Latrine

# 表 A7 – 3 – 29　調査結果一覧（リーダー用）

| General | | | | Population | | | Infrastructure/Facilities | | | | Water point Committee in Market Centre | | | | | | | | | General situation | | Water supply facilities and others | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | District | Market | Title | No. of HH | Total | 2010 | Type of facility | Exist | Water source | No.of users | Established_WPC | Year establishment | Members_Men | Members_women | Way of establishment | Request for construction of water facility | Type of request facility | To which institution request made | Willingness to pay | Security situation in the village | Reason | Functioning infrastructure | Spar parts available at distance (km) | repair date | repair cost | dismantled by | data of replacement of parts | No. of toilet |
| 1 | Lilongwe | Namitete | Chairman | 220 | | 336 | Primary school (day) | Yes | BH | | No | | | | N/A | Requested | BH | 4 | Yes | Very safe | | BH | | | | | | 4 |
| | | | | | | | Primary school (boarding) | Yes | BH | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Secondary school (day) | Yes | BH | | | | | | | | | | | | | | | | | | | |
| | | | | | | | (boarding) | Yes | BH | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Health centre | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Hospital | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | ADMARC | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Post Office | Yes | BH | | | | | | | | | | | | | | | | | | |
| | | | | | | | Police | Yes | BH | | | | | | | | | | | | | | | | | | |
| 2 | Lilongwe | Chileka | G.V.H | | | | Primary school (day) | Yes | BH | 1700 | Yes | | 3 | 3 | Elected | Requested | BH | 4 | Yes | Safe | | BH | | | | | | |
| | | | | | | | Primary school (boarding) | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Secondary school day | Yes | BH | 1400 | | | | | | | | | | | | | | | | | |
| | | | | | | | school boarding | No | BH | | | | | | | | | | | | | | | | | | |
| | | | | | | | Health centre | Yes | BH | 10 | | | | | | | | | | | | | | | | | |
| | | | | | | | Hospital | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | ADMARC | Yes | BH | | | | | | | | | | | | | | | | | | |
| | | | | | | | Post Office | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Police | No | | | | | | | | | | | | | | | | | | | |
| 3 | Kasungu | Chiposa (New Santhe) | Chairman | 5425 | 30229 | 35622 | Primary school (day) | Yes | SW | | Yes | 01.01.09 | 9 | 6 | Designated | Requested | BH | 5 | Yes | Safe | | BH | 0.2 | 01.09.09 | 2500 | area mechanic | 01.08.10 | 2 |
| | | | | | | | Primary school (boarding) | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Secondary school day | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | school boarding | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Health centre | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Hospital | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | ADMARC | Yes | BH | | | | | | | | | | | | | | | | | | |
| | | | | | | | Post Office | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Police | Yes | BH | | | | | | | | | | | | | | | | | | |
| 4 | Kasungu | Old Santhe | Chairman | 5425 | 30229 | 35622 | Primary school (day) | Yes | SW | | No | | | | N/A | Requested | BH | 3 | Yes | Bad | no police in area | PSW | | | | | | 0 |
| | | | | | | | Primary school (boarding) | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Secondary school day | Yes | SW | | | | | | | | | | | | | | | | | | | |
| | | | | | | | school boarding | Yes | water | | | | | | | | | | | | | | | | | | |
| | | | | | | | Health centre | Yes | well | | | | | | | | | | | | | | | | | | |
| | | | | | | | Hospital | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | ADMARC | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Post Office | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Police | No | | | | | | | | | | | | | | | | | | | |
| 5 | Mchinji | Mkanda | Committee Member | | | 45572 | Primary school (day) | Yes | BH | 11000 | Yes | 01.01.84 | 6 | 3 | Elected | Requested | BH | 6 | Yes | Safe | | BH | 0.2 | 01.01.06 | | area mechanic | 01.01.06 | 4 |
| | | | | | | | Primary school (boarding) | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Secondary school day | Yes | BH | | | | | | | | | | | | | | | | | | | |
| | | | | | | | school boarding | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | Health centre | Yes | BH | | | | | | | | | | | | | | | | | | |
| | | | | | | | Hospital | No | | | | | | | | | | | | | | | | | | | |
| | | | | | | | ADMARC | Yes | BH | | | | | | | | | | | | | | | | | | |
| | | | | | | | Post Office | Yes | BH | | | | | | | | | | | | | | | | | | |
| | | | | | | | Police | Yes | SW | | | | | | | | | | | | | | | | | | |

略語　[Population] HH:Household
[Functioning infrastructure] BH: Borehole　PSW:Protected Shallow Well

# *７－４ 取水ポンプ設備の検討*

## 取水ポンプ設備の検討

マーケットセンター給水計画でムカンダ及びサンテ地区に建設する取水施設の取水ポンプの設計条件及びその施設規模等は以下のとおり。

### （１）ムカンダ地区

#### １）MK-2井戸

＜設計条件＞

| | | |
|---|---|---|
| ・標高 | 高架水槽 HWL＝ | 1108.80m |
| | 井戸地盤高（GL）＝ | 1095.55m |
| | 乾期動水位（DL）＝ | GL-28.68m |
| | ポンプ設置位置＝ | GL-38.68m（DL-10m） |
| ・距離（L） | 場内配管（井戸内）＝ | 38.68m |
| | 場内配管（地上部）＝ | 30m |
| | 送水管＝ | 223m（井戸～高架水槽） |
| ・流速係数（C） | 110（GSP 管及び DCIP 管） | |
| ・管径（D） | 場内配管 | φ75mm |
| | 送水管 | φ100mm |
| ・計画取水量（Q） | $0.378m^3$/分 | |
| ・実揚程 | 41.93m（1108.80m-1095.55m+28.68m） | |
| ・損失水頭 | $Hf＝10.666×C^{-1.85}×D^{-4.87}×Q^{1.85}×L$ | |
| | 場内配管（Hf1）＝ | 3.130m |
| | 送水管（Hf2）＝ | 2.503m |
| ・全揚程 | 47.563m（＝41.93m＋3.130m＋2.503m） | |

＜施設規模＞

| | |
|---|---|
| ・取水ポンプ | $0.38m^3$/分×48m×5.5kW×1台（深井戸用水中ポンプ） |
| ・付属品 | 空気弁、仕切り弁、逆止弁、圧力計、流量計、操作盤 |

#### ２）MK-3井戸

＜設計条件＞

| | | |
|---|---|---|
| ・標高 | 高架水槽 HWL＝ | 1108.80m |
| | 井戸地盤高（GL）＝ | 1095.25m |
| | 乾期動水位（DL）＝ | GL-25.61m |
| | ポンプ設置位置＝ | GL-35.61m（DL-10m） |
| ・距離（L） | 場内配管（井戸内）＝ | 35.61m |
| | 場内配管（地上部）＝ | 15m |
| | 送水管＝ | 403m（井戸～高架水槽） |

・流速係数（C）　110（GSP 管及び DCIP 管）
・管径（D）　場内配管　φ75mm
送水管　φ100mm
・計画取水量（Q）　0.378$m^3$/分
・実揚程　39.16m（1108.80m-1095.25m+25.61m）
・損失水頭　$Hf=10.666\times C^{-1.85}\times D^{-4.87}\times Q^{1.85}\times L$
場内配管（Hf1）＝　2.306m
送水管（Hf2）＝　4.535m
・全揚程　46.001m（＝39.16m＋2.306m＋4.535m）
＜施設規模＞
・取水ポンプ　0.38$m^3$/分×48m×5.5kW×1台（深井戸用水中ポンプ）
・付属品　空気弁、仕切り弁、逆止弁、圧力計、流量計、操作盤

**（２）サンテ地区**

**１）ST-1井戸**

＜設計条件＞
・標高　配水池 HWL＝　1127.43m
井戸地盤高（GL）＝　1091.77m
乾期動水位（DL）＝　GL-21.57m
ポンプ設置位置＝　GL-31.57m（DL-10m）
・距離（L）　場内配管（井戸内）＝ 31.57m
場内配管（地上部）＝ 10m
送水管＝　1,044m（井戸～配水池）
・流速係数（C）　110（GSP 管及び DCIP 管）
・管径（D）　場内配管　φ50mm
送水管　φ150mm、φ100mm
・計画取水量（Q）　0.120$m^3$/分
・実揚程　57.23m（1127.43m-1091.77m+21.57m）
・損失水頭　$Hf=10.666\times C^{-1.85}\times D^{-4.87}\times Q^{1.85}\times L$
場内配管（Hf1）＝　1.634m
送水管（Hf2）＝　2.853m（＝2.627m+0.226m）
・全揚程　61.717m（＝57.23m＋1.634m＋2.853m）
＜施設規模＞
・取水ポンプ　0.120$m^3$/分×66m×4.0kW×1台（深井戸用水中ポンプ）
・付属品　空気弁、仕切り弁、逆止弁、圧力計、流量計、操作盤

### ２）ST-2井戸

＜設計条件＞

| | | |
|---|---|---|
| ・標高 | 配水池 HWL＝ | 1127.43m |
| | 井戸地盤高（GL）＝ | 1089.14m |
| | 乾期動水位（DL）＝ | GL-22.52m |
| | ポンプ設置位置＝ | GL-32.52m（DL-10m） |
| ・距離（L） | 場内配管（井戸内）＝ | 32.52m |
| | 場内配管（地上部）＝ | 10m |
| | 送水管＝ | 1,280m（井戸～配水池） |
| ・流速係数（C） | 110（GSP 管及び DCIP 管） | |
| ・管径（D） | 場内配管 | φ50mm |
| | 送水管 | φ150mm、φ100mm |
| ・計画取水量（Q） | $0.120m^3$/分 | |
| ・実揚程 | 60.81m（1127.43m-1089.14m+22.52m） | |
| ・損失水頭 | $Hf=10.666\times C^{-1.85}\times D^{-4.87}\times Q^{1.85}\times L$ | |
| | 場内配管（Hf1）＝ | 1.671m |
| | 送水管（Hf2）＝ | 4.066m（＝2.627m+0.226m+1.153m） |
| ・全揚程 | 66.487m（＝60.81m＋1.671m＋4.006m） | |

＜施設規模＞

| | |
|---|---|
| ・取水ポンプ | $0.120m^3$/分×66m×4.0kW×1台（深井戸用水中ポンプ） |
| ・付属品 | 空気弁、仕切り弁、逆止弁、圧力計、流量計、操作盤 |

### ３）ST-3井戸

＜設計条件＞

| | | |
|---|---|---|
| ・標高 | 配水池 HWL＝ | 1127.43m |
| | 井戸地盤高（GL）＝ | 1088.51m |
| | 乾期動水位（DL）＝ | GL-20.95m |
| | ポンプ設置位置＝ | GL-30.95m（DL-10m） |
| ・距離（L） | 場内配管（井戸内）＝ | 30.95m |
| | 場内配管（地上部）＝ | 10m |
| | 送水管＝ | 1,380m（井戸～配水池） |
| ・流速係数（C） | 110（GSP 管及び DCIP 管） | |
| ・管径（D） | 場内配管 | φ50mm |
| | 送水管 | φ150mm、φ100mm、φ75mm |
| ・計画取水量（Q） | $0.120m^3$/分 | |
| ・実揚程 | 59.87m（1127.43m-1088.51m+20.95m） | |
| ・損失水頭 | $Hf=10.666\times C^{-1.85}\times D^{-4.87}\times Q^{1.85}\times L$ | |

場内配管（Hf1）＝　1.609m
送水管（Hf2）＝　4.551m（＝2.627m+0.226m+1.153m+0.545m）

・全揚程　66.030m（＝59.87m＋1.609m＋4.551m）

＜施設規模＞

・取水ポンプ　0.120m$^3$/分×66m×4.0kW×1台（深井戸用水中ポンプ）

・付属品　空気弁、仕切り弁、逆止弁、圧力計、流量計、操作盤

**４）ST-4井戸**

＜設計条件＞

・標高　配水池 HWL＝　1127.43m
井戸地盤高（GL）＝　1087.63m
乾期動水位（DL）＝　GL-43.59m
ポンプ設置位置＝　GL-53.59m（DL-10m）

・距離（L）　場内配管（井戸内）＝ 53.59m
場内配管（地上部）＝ 10m
送水管＝　1,517m（井戸～配水池）

・流速係数（C）　110（GSP 管及び DCIP 管）

・管径（D）　場内配管　φ32mm
送水管　φ150mm、φ100mm

・計画取水量（Q）　0.054m$^3$/分

・実揚程　83.39m（1127.43m-1087.63m+43.59m）

・損失水頭　$Hf＝10.666×C^{-1.85}×D^{-4.87}×Q^{1.85}×L$
場内配管（Hf1）＝　5.013m
送水管（Hf2）＝　3.469m（＝2.627m+0.842m）

・全揚程　91.872m（＝83.39m＋5.013m＋3.469m）

＜施設規模＞

・取水ポンプ　0.054m$^3$/分×92m×1.5kW×1台（深井戸用水中ポンプ）

・付属品　空気弁、仕切り弁、逆止弁、圧力計、流量計、操作盤

**５）ST-5井戸**

＜設計条件＞

・標高　配水池 HWL＝　1127.43m
井戸地盤高（GL）＝　1082.48m
乾期動水位（DL）＝　GL-34.71m
ポンプ設置位置＝　GL-44.71m（DL-10m）

・距離（L）　場内配管（井戸内）＝ 44.71m

場内配管（地上部）＝ 10m
送水管＝ 1,817m（井戸～配水池）

・流速係数（C） 110（GSP 管及び DCIP 管）

・管径（D） 場内配管 φ32mm
送水管 φ150mm、φ100mm、φ75mm

・計画取水量（Q） 0.046$m^3$/分

・実揚程 79.66m（1127.43m-1082.48m+34.71m）

・損失水頭 $Hf=10.666\times C^{-1.85}\times D^{-4.87}\times Q^{1.85}\times L$
場内配管（Hf1）＝ 3.206m
送水管（Hf2）＝ 3.747m（＝2.627m+0.842m+0.278m）

・全揚程 86.613m（＝79.66m＋3.206m＋3.747m）

＜施設規模＞

・取水ポンプ 0.046$m^3$/分×87m×1.1kW×1台（深井戸用水中ポンプ）

・付属品 空気弁、仕切り弁、逆止弁、圧力計、流量計、操作盤

### ６）ST-6井戸

＜設計条件＞

・標高 配水池 HWL＝ 1127.43m
井戸地盤高（GL）＝ 1084.84m
乾期動水位（DL）＝ GL-34.74m
ポンプ設置位置＝ GL-44.74m（DL-10m）

・距離（L） 場内配管（井戸内）＝ 44.74m
場内配管（地上部）＝ 10m
送水管＝ 1,824m（井戸～配水池）

・流速係数（C） 110（GSP 管及び DCIP 管）

・管径（D） 場内配管 φ32mm
送水管 φ150mm、φ100mm、φ75mm

・計画取水量（Q） 0.036$m^3$/分

・実揚程 77.33m（1127.43m-1084.84m+34.74m）

・損失水頭 $Hf=10.666\times C^{-1.85}\times D^{-4.87}\times Q^{1.85}\times L$
場内配管（Hf1）＝ 2.038m
送水管（Hf2）＝ 3.650m（＝2.627m+0.842m+0.181m）

・全揚程 83.018m（＝77.33m＋2.038m＋3.650m）

＜施設規模＞

・取水ポンプ 0.036$m^3$/分×83m×1.1kW×1台（深井戸用水中ポンプ）

・付属品 空気弁、仕切り弁、逆止弁、圧力計、流量計、操作盤

# ７－５　水理計算書

# 表 A7 – 5 – 1 水理計算書（ムカンダ地区）

## Hydraulic Calculation on Water Pressure in Mkanda

Mkanda East

| | Node No. | C | D (mm) | Q (m3/min) | L (m) | V (m/sec) | Hf (m) | ΣHf (m) | Elevation (EL-m) | Pressure (m) |
|---|---|---|---|---|---|---|---|---|---|---|
| | EL Tank | | | | | | | | 1106.50 | |
| | | 130 | 150 | 0.754 | 170 | 0.711 | 0.70 | | | |
| M16 | M1 | | | | | | | 0.70 | 1097.00 | 8.80 |
| | | 130 | 150 | 0.725 | 722 | 0.684 | 2.76 | | | |
| M17 | M2 | | | | | | | 3.46 | 1089.86 | 13.18 |
| | | 130 | 100 | 0.337 | 274 | 0.715 | 1.83 | | | |
| M11 | M3 | | | | | | | 5.29 | 1088.98 | 12.23 |
| | | 130 | 100 | 0.169 | 775 | 0.359 | 1.44 | | | |
| | M4 | | | | | | | 6.73 | 1090.64 | 9.13 |
| | | 130 | 100 | 0.116 | 417 | 0.246 | 0.39 | | | |
| | M5 | | | | | | | 7.12 | 1088.42 | 10.96 |
| | | 130 | 100 | 0.088 | 175 | 0.187 | 0.10 | | | |
| | M6 | | | | | | | 7.22 | 1088.02 | 11.26 |
| | | 130 | 100 | 0.076 | 168 | 0.161 | 0.07 | | | |
| | M7 | | | | | | | 7.29 | 1087.28 | 11.93 |
| | | 130 | 100 | 0.065 | 360 | 0.138 | 0.11 | | | |
| M10 | M8 | | | | | | | 7.40 | 1086.73 | 12.37 |
| | | 130 | 75 | 0.020 | 300 | 0.075 | 0.04 | | | |
| | M9 | | | | | | | 7.44 | 1085.60 | 13.46 |
| | M3 | | | | | | | 5.29 | | |
| | | 130 | 100 | 0.149 | 139 | 0.316 | 0.20 | | | |
| M15, M4 | M11 | | | | | | | 5.49 | 1088.48 | 12.53 |
| | | 130 | 100 | 0.113 | 278 | 0.240 | 0.25 | | | |
| M15 | M12 | | | | | | | 5.74 | 1087.80 | 12.96 |
| | | 130 | 100 | 0.061 | 80 | 0.130 | 0.02 | | | |
| M5 | M13 | | | | | | | 5.76 | 1087.97 | 12.77 |
| | | 130 | 100 | 0.037 | 260 | 0.079 | 0.03 | | | |
| M6 | M14 | | | | | | | 5.79 | 1087.28 | 13.43 |
| | | 130 | 100 | 0.011 | 160 | 0.023 | 0.00 | | | |
| | M7 | | | | | | | 5.79 | 1087.28 | 13.43 |
| | M1 | | | | | | | 0.70 | | |
| | | 130 | 100 | 0.029 | 428 | 0.062 | 0.03 | | | |
| | M16 | | | | | | | 0.73 | 1100.76 | 5.01 |
| | M11 | | | | | | | 5.49 | | |
| | | 130 | 100 | 0.027 | 272 | 0.057 | 0.02 | | | |
| | M15 | | | | | | | 5.51 | 1089.61 | 11.38 |
| | | 130 | 100 | 0.008 | 113 | 0.017 | 0.00 | | | |
| | M4 | | | | | | | 5.51 | 1090.64 | 10.35 |
| | M12 | | | | | | | 5.74 | | |
| | | 130 | 100 | 0.033 | 478 | 0.070 | 0.04 | | | |
| | M15 | | | | | | | 5.78 | 1089.61 | 11.11 |
| | | 130 | 100 | 0.033 | 478 | 0.070 | 0.04 | | | |
| | M13 | | | | | | | 5.76 | | |
| | | 130 | 100 | 0.019 | 281 | 0.040 | 0.01 | | | |
| | M5 | | | | | | | 5.77 | 1088.42 | 12.31 |
| | M14 | | | | | | | 5.79 | | |
| | | 130 | 100 | 0.008 | 122 | 0.017 | 0.00 | | | |
| | M6 | | | | | | | 5.79 | 1088.02 | 12.69 |
| | M8 | | | | | | | 7.40 | | |
| | | 130 | 75 | 0.020 | 300 | 0.075 | 0.04 | | | |
| | M10 | | | | | | | 7.44 | 1087.47 | 11.59 |

Mkanda West

| | Node No. | C | D (mm) | Q (m3/min) | L (m) | V (m/sec) | Hf (m) | ΣHf (m) | Elevation (EL-m) | Pressure (m) |
|---|---|---|---|---|---|---|---|---|---|---|
| | M2 | | | | | | | 3.46 | | |
| | | 130 | 100 | 0.339 | 258 | 0.720 | 1.74 | | | |
| M25 | M17 | | | | | | | 5.20 | 1088.89 | 12.41 |
| | | 130 | 100 | 0.203 | 379 | 0.431 | 0.99 | | | |
| M22 | M18 | | | | | | | 6.19 | 1087.19 | 13.12 |
| | | 130 | 100 | 0.168 | 385 | 0.357 | 0.71 | | | |
| M23, M24 | M19 | | | | | | | 6.90 | 1085.72 | 13.88 |
| | | 130 | 100 | 0.100 | 279 | 0.212 | 0.20 | | | |
| M23 | M20 | | | | | | | 7.10 | 1085.10 | 14.30 |
| | | 130 | 100 | 0.043 | 626 | 0.091 | 0.09 | | | |
| | M21 | | | | | | | 7.19 | 1084.33 | 14.98 |
| | M17 | | | | | | | 5.20 | | |
| | | 130 | 100 | 0.118 | 500 | 0.251 | 0.48 | | | |
| M19 | M25 | | | | | | | 5.68 | 1088.04 | 12.78 |
| | | 130 | 100 | 0.073 | 810 | 0.155 | 0.32 | | | |
| | M26 | | | | | | | 6.00 | 1086.42 | 14.08 |
| | | 130 | 100 | 0.018 | 270 | 0.038 | 0.01 | | | |
| | M21 | | | | | | | 6.01 | 1084.33 | 16.16 |
| | M18 | | | | | | | 6.19 | | |
| | | 130 | 75 | 0.009 | 135 | 0.034 | 0.00 | | | |
| | M22 | | | | | | | 6.19 | 1086.94 | 13.37 |
| | M19 | | | | | | | 6.90 | | |
| | | 130 | 100 | 0.042 | 334 | 0.089 | 0.05 | | | |
| | M23 | | | | | | | 6.95 | 1083.75 | 15.80 |
| | | 130 | 75 | 0.019 | 280 | 0.072 | 0.04 | | | |
| | M24 | | | | | | | 6.99 | 1083.14 | 16.37 |
| | M20 | | | | | | | 7.10 | | |
| | | 130 | 100 | 0.038 | 560 | 0.081 | 0.07 | | | |
| | M23 | | | | | | | 7.17 | 1083.75 | 15.58 |
| | M25 | | | | | | | 5.68 | | |
| | | 130 | 100 | 0.011 | 158 | 0.023 | 0.00 | | | |
| | M19 | | | | | | | 5.68 | 1085.72 | 15.10 |

# 表 A7 – 5 – 2 水理計算書（サンテ地区）

## Hydraulic Calculation on Water Pressure in Santhe

Santhe South

| | Node No. | C | D (mm) | Q (m3/min) | L (m) | V (m/sec) | Hf (m) | ΣHf (m) | Elevation (EL-m) | Pressure (m) |
|---|---|---|---|---|---|---|---|---|---|---|
| | Reservoir | | | | | | | | 1125.00 | |
| | | 130 | 150 | 0.988 | 1420 | 0.932 | 9.61 | | | |
| S12 | S1 | | | | | | | 9.61 | 1089.18 | 26.21 |
| | | 130 | 150 | 0.977 | 220 | 0.922 | 1.46 | | | |
| S13, S24 | S2 | | | | | | | 11.07 | 1088.52 | 25.41 |
| | | 130 | 150 | 0.597 | 312 | 0.563 | 0.83 | | | |
| S4 | S3 | | | | | | | 11.90 | 1086.82 | 26.28 |
| | | 130 | 100 | 0.532 | 447 | 1.130 | 6.93 | | | |
| | S4 | | | | | | | 18.83 | 1085.77 | 20.40 |
| | | 130 | 100 | 0.502 | 380 | 1.066 | 5.29 | | | |
| S14 | S5 | | | | | | | 24.12 | 1081.28 | 19.60 |
| | | 130 | 100 | 0.383 | 240 | 0.813 | 2.03 | | | |
| S18 | S6 | | | | | | | 26.15 | 1079.32 | 19.53 |
| | | 130 | 100 | 0.351 | 500 | 0.745 | 3.59 | | | |
| | S7 | | | | | | | 29.74 | 1082.36 | 12.90 |
| | | 130 | 100 | 0.317 | 940 | 0.673 | 5.59 | | | |
| S21 | S8 | | | | | | | 35.33 | 1079.35 | 10.32 |
| | | 130 | 100 | 0.247 | 1260 | 0.524 | 4.73 | | | |
| S22 | S9 | | | | | | | 40.06 | 1068.57 | 16.37 |
| | | 130 | 100 | 0.142 | 921 | 0.301 | 1.24 | | | |
| S23 | S10 | | | | | | | 41.30 | 1065.13 | 18.57 |
| | | 130 | 75 | 0.015 | 220 | 0.057 | 0.02 | | | |
| | S11 | | | | | | | 41.32 | 1064.17 | 19.51 |
| | S1 | | | | | | | 9.61 | | |
| | | 130 | 75 | 0.011 | 160 | 0.042 | 0.01 | | | |
| | S12 | | | | | | | 9.62 | 1088.74 | 26.64 |
| | S2 | | | | | | | 11.07 | | |
| | | 130 | 75 | 0.053 | 781 | 0.200 | 0.69 | | | |
| | S13 | | | | | | | 11.76 | 1082.51 | 30.73 |
| | S3 | | | | | | | 11.90 | | |
| | | 130 | 100 | 0.044 | 659 | 0.093 | 0.10 | | | |
| | S4 | | | | | | | 12.00 | 1085.77 | 27.23 |
| | S5 | | | | | | | 24.12 | | |
| | | 130 | 100 | 0.093 | 170 | 0.197 | 0.10 | | | |
| S17 | S14 | | | | | | | 24.22 | 1083.52 | 17.26 |
| | | 130 | 100 | 0.047 | 415 | 0.100 | 0.07 | | | |
| | S15 | | | | | | | 24.29 | 1085.57 | 15.14 |
| | | 130 | 100 | 0.019 | 120 | 0.040 | 0.00 | | | |
| | S16 | | | | | | | 24.29 | 1084.52 | 16.19 |
| | | 130 | 100 | 0.011 | 160 | 0.023 | 0.00 | | | |
| | S7 | | | | | | | 24.29 | 1082.36 | 18.35 |
| | S14 | | | | | | | 24.22 | | |
| | | 130 | 100 | 0.035 | 229 | 0.074 | 0.02 | | | |
| S15 | S17 | | | | | | | 24.24 | 1084.17 | 16.59 |
| | | 130 | 100 | 0.008 | 120 | 0.017 | 0.00 | | | |
| | S16 | | | | | | | 24.24 | 1084.52 | 16.24 |
| | S17 | | | | | | | 24.24 | | |
| | | 130 | 100 | 0.012 | 179 | 0.025 | 0.00 | | | |
| | S15 | | | | | | | 24.24 | 1085.57 | 15.19 |
| | S6 | | | | | | | 26.15 | | |
| | | 130 | 75 | 0.016 | 17 | 0.060 | 0.00 | | | |
| S20 | S18 | | | | | | | 26.15 | 1079.00 | 19.85 |
| | | 130 | 75 | 0.007 | 103 | 0.026 | 0.00 | | | |
| | S19 | | | | | | | 26.15 | 1077.85 | 21.00 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | S18 | | | | | | | 26.15 | | |
| | | 130 | 75 | 0.008 | 120 | 0.030 | 0.00 | | | |
| | S20 | | | | | | | 26.15 | 1077.75 | 21.10 |
| | S8 | | | | | | | 35.33 | | |
| | | 130 | 75 | 0.007 | 100 | 0.026 | 0.00 | | | |
| | S21 | | | | | | | 35.33 | 1077.61 | 12.06 |
| | S9 | | | | | | | 40.06 | | |
| | | 130 | 75 | 0.020 | 300 | 0.075 | 0.04 | | | |
| | S22 | | | | | | | 40.10 | 1067.71 | 17.19 |
| | S10 | | | | | | | 41.30 | | |
| | | 130 | 75 | 0.065 | 960 | 0.245 | 1.24 | | | |
| | S23 | | | | | | | 42.54 | 1064.86 | 17.60 |

Santhe North

| | Node No. | C | D (mm) | Q (m3/min) | L (m) | V (m/sec) | Hf (m) | ΣHf (m) | Elevation (EL-m) | Pressure (m) |
|---|---|---|---|---|---|---|---|---|---|---|
| | S2 | | | | | | | 11.07 | | |
| | | 130 | 100 | 0.312 | 1100 | 0.662 | 6.36 | | | |
| S29 | S24 | | | | | | | 17.43 | 1088.22 | 19.35 |
| | | 130 | 100 | 0.125 | 493 | 0.265 | 0.52 | | | |
| | S25 | | | | | | | 17.95 | 1086.00 | 21.05 |
| | | 130 | 100 | 0.092 | 40 | 0.195 | 0.02 | | | |
| | S26 | | | | | | | 17.97 | 1086.00 | 21.03 |
| | | 130 | 100 | 0.089 | 420 | 0.189 | 0.24 | | | |
| | S27 | | | | | | | 18.21 | 1081.19 | 25.60 |
| | | 130 | 100 | 0.061 | 900 | 0.130 | 0.25 | | | |
| | S28 | | | | | | | 18.46 | 1100.98 | 5.56 |
| | S24 | | | | | | | 17.43 | | |
| | | 130 | 100 | 0.113 | 380 | 0.240 | 0.34 | | | |
| S25 | S29 | | | | | | | 17.77 | 1077.96 | 29.27 |
| | | 130 | 100 | 0.056 | 200 | 0.119 | 0.05 | | | |
| S26 | S30 | | | | | | | 17.82 | 1078.38 | 28.80 |
| | | 130 | 100 | 0.018 | 260 | 0.038 | 0.01 | | | |
| | S27 | | | | | | | 17.83 | 1081.19 | 25.98 |
| | S29 | | | | | | | 17.77 | | |
| | | 130 | 100 | 0.031 | 459 | 0.066 | 0.04 | | | |
| | S25 | | | | | | | 17.81 | 1086.00 | 21.19 |
| | S30 | | | | | | | 17.82 | | |
| | | 130 | 100 | 0.025 | 365 | 0.053 | 0.02 | | | |
| | S26 | | | | | | | 17.84 | 1086.00 | 21.16 |

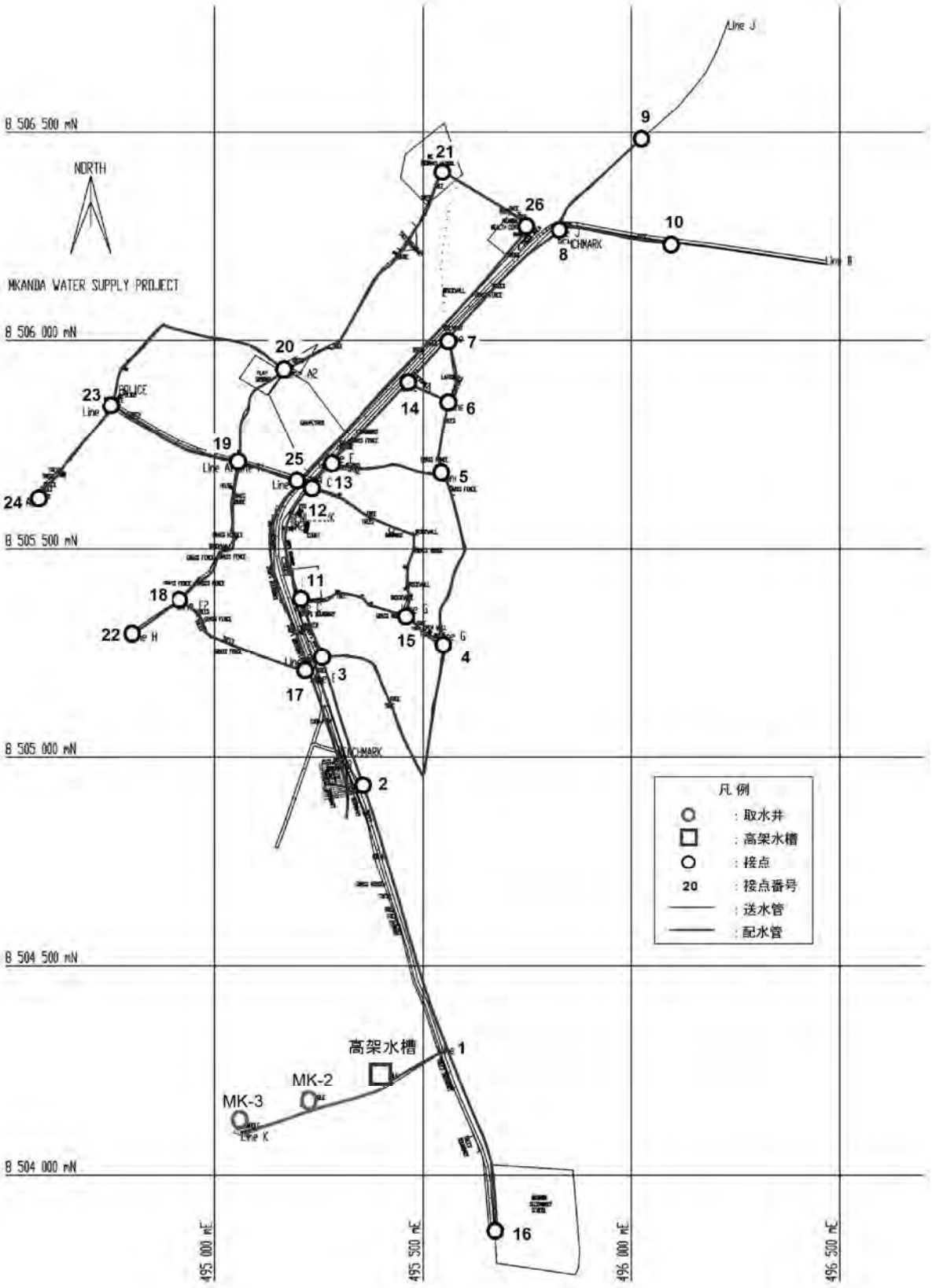



図 A7－5－1 ムカンダ地区水理計算接点図

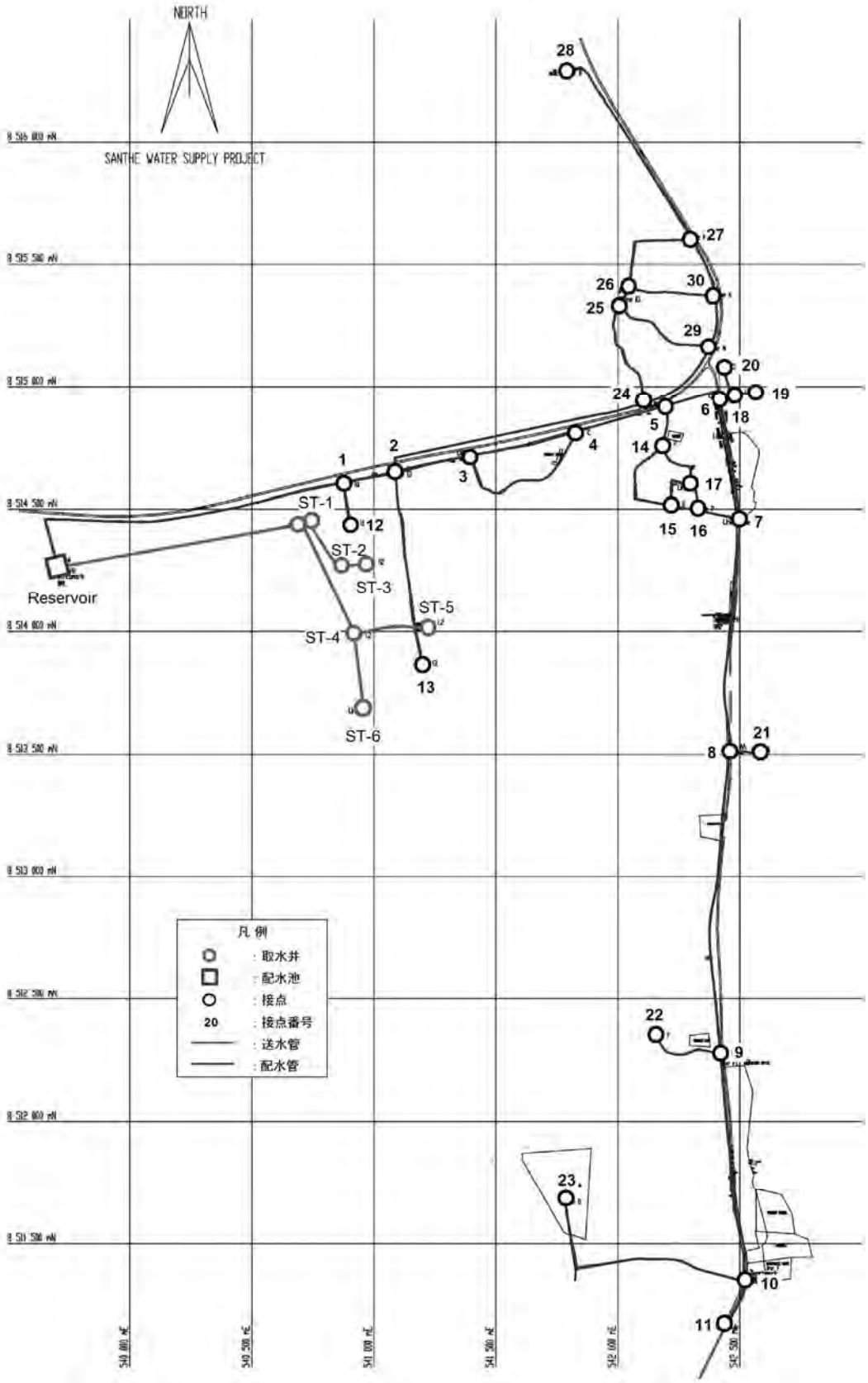



図 A7－5－2 サンテ地区水理計算接点図

# ７－６　井戸調査

本調査で行った 300 ヶ所既存井戸に関して、施工完了年と経過年数を表 A7－6－1　に示す。

表 A7－6－1　ムチンジ地下水開発計画建設井戸の施工完了年と経過年数

| | 井戸本数 | 施工完了年 | 経過年数 |
|---|---|---|---|
| Phase I | 80 | 1993 年 | 17 年 |
| Phase II | 110 | 1994 年 | 16 年 |
| Phase III | 110 | 1995 年 | 15 年 |

また、本調査を通して判明した井戸の稼働状況の概要を表 A 7－6－2 に示す。

表 A7－6－2　井戸の状況概要

| 井戸の状態 | 数量 | 判定 | 数量 | % |
|---|---|---|---|---|
| 稼動（付帯施設健全） | 185 | 稼動 | 211 | 70 |
| 稼動（付帯施設排水不良） | 16 | | | |
| 稼働だが、水量減少(10L/min 以下) | 10 | | | |
| 不稼動（ポンプ修理で回復*） | 69 | 不稼動 | 89 | 30 |
| 不稼動（ポンプ修理困難**） | 6 | | | |
| 井戸閉塞 | 14 | | | |

調査したハンドポンプの故障個所について図 A7－6－1　に示す。

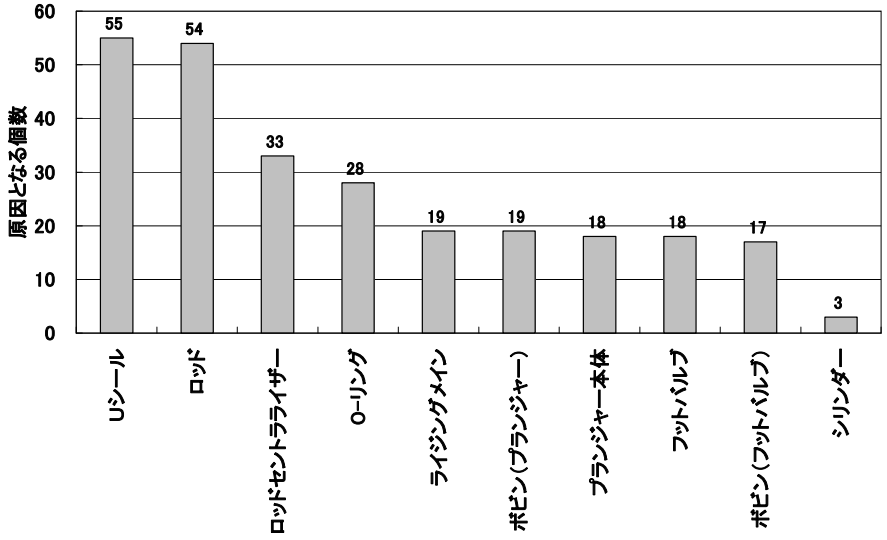



図 A7－6－1　ハンドポンプの故障個所と頻度ヒストグラム

# 表 A7－6－3　調査結果一覧

| S/N | 井戸番号 | 村落名 | X(UTM) | Y(UTM) | 1次調査<br>F: Function<br>N: Not Function | 2次調査<br>○：実施<br>×：実施 | 1次：2次調査により判明した井戸の状態 | 井戸の状態（詳細） | 井戸修繕計画 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1-001 | Chidambo | 491598 | 8471678 | N | × | 6. 井戸閉塞 | 石などによる井戸閉塞 | 新規掘削 | |
| 2 | 1-002 | Chiute | 495444 | 8468102 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 3 | 1-003 | Tsamphale | 495383 | 8466762 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 4 | 1-004 | Chamveka | 494955 | 8470386 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 5 | 1-005 | Maliwane | 500506 | 8469364 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 6 | 1-006 | Maliwane | 500781 | 8469150 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 7 | 1-007 | Mlonyeni | 503230 | 8467912 | N | × | 4. 不稼働 （ポンプ修理で回復可能） | 盗難 | ポンプ一式交換 | 井戸エアーリフト |
| 8 | 1-008 | Zunguze | 503364 | 8466930 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 9 | 1-009 | Mkangeni | 500110 | 8461372 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 10 | 1-010 | Maganga | 506176 | 8461450 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 11 | 1-011 | Chiwaula | 501704 | 8461936 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 12 | 1-012 | Chabwela | 502267 | 8462714 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 13 | 1-013 | Mbeza | 504263 | 8463184 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 14 | 1-014 | Chaonongeka | 499802 | 8469546 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 15 | 1-015 | Mgwende | 504331 | 8459770 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 16 | 1-016 | MWandawala | 508621 | 8462458 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 17 | 1-017 | Kadzakurnanja | 507443 | 8461054 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 18 | 1-018 | Milonga | 503734 | 8465822 | N | × | 4. 不稼働 （ポンプ修理で回復可能） | ライジングメイン内に石 | ポンプ一式交換 | 井戸エアーリフト |
| 19 | 1-019 | Mzikaola II | 500055 | 8468240 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 20 | 1-020 | Mkhala | 496389 | 8462972 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 21 | 1-021 | Chibonyola(B) | 496802 | 8463004 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 22 | 1-022 | Mwanayumo | 497688 | 8461542 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 23 | 1-023 | Mphindu | 498730 | 8465098 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 24 | 1-024 | Chibonyola (A) | 496507 | 8462764 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 25 | 1-025 | Chibonyola (A) | 496611 | 8462802 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 26 | 1-026 | Thukuta | 503644 | 8458742 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 27 | 1-027 | Kapita | 501937 | 8457400 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 28 | 1-028 | Maganga | 506056 | 8461900 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 29 | 1-029 | Alfred | 501508 | 8454124 | F | ○ | 3. 稼働だが、水量減少 | 水量が10L/min以下 | ポンプ一式交換 | 井戸エアーリフト |
| 30 | 1-030 | Pembere | 501384 | 8453148 | F | ○ | 3. 稼働だが、水量減少 | 水量が10L/min以下 | ポンプ一式交換 | 井戸エアーリフト |
| 31 | 1-031 | Mtsiliza | 503467 | 8447718 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 32 | 1-032 | Mkonda | 504661 | 8449314 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 33 | 1-033 | Katsenga | 504961 | 8450097 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 34 | 1-034 | Luka-Luciano | 509656 | 8456060 | N | ○ | 6. 井戸閉塞 | 石などによる井戸閉塞 | 新規掘削 | |
| 35 | 1-035 | Chimteteka | 506588 | 8453162 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 36 | 1-036 | Chaluma, Kalombo | 504233 | 8451652 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 37 | 1-037 | Mkwezendumba | 505859 | 8450237 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 38 | 1-038 | Galawe | 502432 | 8449660 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 39 | 1-039 | Chikaza | 501021 | 8451244 | F | ○ | 3. 稼働だが、水量減少 | 水量が10L/min以下 | ポンプ一式交換 | 井戸エアーリフト |
| 40 | 1-040 | Kunjawa | 503973 | 8453060 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 41 | 1-041 | Kunjawa | 503855 | 8453216 | N | × | 4. 不稼働 （ポンプ修理で回復可能） | ライジングメイン内に石 | ポンプ一式交換 | 井戸エアーリフト |
| 42 | 1-042 | Msukwala | 506668 | 8456130 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 43 | 1-043 | Mtukwa | 507356 | 8455065 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 44 | 1-044 | Mtukwa | 507654 | 8455029 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 45 | 1-045 | Mwenyeanthu | 505430 | 8458644 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 46 | 1-046 | Dambo | 508505 | 8460020 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |

| S/N | 井戸番号 | 村落名 | X(UTM) | Y(UTM) | 1次調査<br>F: Function<br>N: Not Function | 2次調査<br>○:実施<br>×:実施 | 1次:2次調査により判明した井戸の状態 | 井戸の状態(詳細) | 井戸修繕計画 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 47 | 1-047 | Mwanzika | 506449 | 8457382 | F | ○ | 3. 稼働だが、水量減少 | 水量が10L/min以下 | ポンプ一式交換 | 井戸エアーリフト |
| 48 | 1-048 | Chiganizo | 510266 | 8456594 | N | × | 4. 不稼働 (ポンプ修理で回復可能) | ライジングメイン内に石 | ポンプ一式交換 | 井戸エアーリフト |
| 49 | 1-049 | Chimkoka | 510941 | 8459252 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 50 | 1-050 | Gambatula | 512274 | 8457236 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 51 | 1-051 | Misale T. C. | 511538 | 8457990 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 52 | 1-052 | John | 509103 | 8457670 | F | ○ | 3. 稼働だが、水量減少 | 水量が10L/min以下 | ポンプ一式交換 | 井戸エアーリフト |
| 53 | 1-053 | Mselela | 514258 | 8459059 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 54 | 1-054 | Mselela | 513754 | 8458950 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 55 | 1-055 | Ngalule | 515271 | 8460426 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 56 | 1-056 | Masitala | 515559 | 8459182 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 57 | 1-057 | Mzingo | 521178 | 8459329 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 58 | 1-058 | Nathyola | 522138 | 8461117 | F | ○ | 3. 稼働だが、水量減少 | 水量が10L/min以下 | ポンプ一式交換 | 井戸エアーリフト |
| 59 | 1-059 | Kachere | 522064 | 8462686 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 60 | 1-060 | Simoko | 523329 | 8462043 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 61 | 1-061 | Bua T・C | 516142 | 8461170 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 62 | 1-062 | Nkhuzu | 518987 | 8460649 | N | ○ | 5. 不稼働 (ポンプ修理困難) | 孔内にライジングメイン(+ロッド)が落下 | 修理を試し、修理不可能なら新規掘削 | |
| 63 | 1-063 | Kazule | 516619 | 8459186 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 64 | 1-064 | Kaole Ⅱ | 517250 | 8459130 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 65 | 1-065 | Kaole Ⅰ | 518599 | 8458271 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 66 | 1-066 | Kamphemvu | 521097 | 8456552 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 67 | 1-067 | Kamphemvu | 521131 | 8457101 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 68 | 1-068 | Katsenga A | 522462 | 8456268 | N | × | 6. 井戸閉塞 | 盗難 + 石などによる井戸閉塞 | 新規掘削 | |
| 69 | 1-069 | Mlamba | 520546 | 8457811 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 70 | 1-070 | Nyongani | 523772 | 8452808 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 71 | 1-071 | Mtonya | 524200 | 8455636 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 72 | 1-072 | Waliranji | 529031 | 8455540 | N | × | 6. 井戸閉塞 | 車両が衝突し、井戸が損壊 | 新規掘削 | |
| 73 | 1-073 | Likungwi | 525851 | 8454579 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 74 | 1-074 | Mnamizana | 528439 | 8453127 | N | × | 6. 井戸閉塞 | 盗難 + 石などによる井戸閉塞 | 新規掘削 | |
| 75 | 1-075 | Kankhande | 524898 | 8457361 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 76 | 1-076 | Kankhande | 524329 | 8456897 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 77 | 1-077 | Mkusa | 525259 | 8456852 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 78 | 1-078 | Kajiwa | 528458 | 8454070 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 79 | 1-079 | Mnamizana | 527900 | 8452688 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 80 | 1-080 | Kanyindula | 522107 | 8458142 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 81 | 2-001 | Kambamd-zuwa | 517293 | 8461876 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 82 | 2-002 | Pinda | 515426 | 8462251 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 83 | 2-003 | Lupenga-Ndulama | 517531 | 8461140 | N | ○ | 5. 不稼働 (ポンプ修理で回復可能) | ロッドの落下 | ポンプ一式交換 | 井戸エアーリフト |
| 84 | 2-004 | Chikuta | 515201 | 8463806 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 85 | 2-005 | Chikuta | 515351 | 8464179 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 86 | 2-006 | Kamgwanga | 521340 | 8467230 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 87 | 2-007 | Nkhumba | 521411 | 8466892 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 88 | 2-008 | Makanda | 524080 | 8466538 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |

| S/N | 井戸番号 | 村落名 | X(UTM) | Y(UTM) | 1次調査<br>F: Function<br>N: Not Function | 2次調査<br>○：実施<br>×：実施 | 1次：2次調査により判明した井戸の状態 | 井戸の状態（詳細） | 井戸修繕計画 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 89 | 2-009 | Makanda | 524196 | 8466866 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 90 | 2-010 | Wisikoti | 521844 | 8465941 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 91 | 2-011 | Manthalu | 522349 | 8470020 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 92 | 2-012 | Manthalu | 522836 | 8470169 | N | ○ | 6. 井戸閉塞 | 石などによる井戸閉塞 | 新規掘削 | |
| 93 | 2-013 | Chamosola | 523500 | 8470287 | N | × | 6. 井戸閉塞 | 盗難 + 石などによる井戸閉塞 | 新規掘削 | |
| 94 | 2-014 | Kafunsa-Chalimba | 525663 | 8468674 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 95 | 2-015 | Mbwerera | 530905 | 8459128 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 96 | 2-016 | Kamwaza | 531093 | 8459662 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 97 | 2-017 | Papa | 530960 | 8458239 | F | ○ | 3. 稼働だが、水量減少 | 水量が10L/min以下 | ポンプ一式交換 | 井戸エアーリフト |
| 98 | 2-018 | Guwende | 526774 | 8468883 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 99 | 2-019 | Kamlilika | 525522 | 8467121 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 100 | 2-020 | Tankhule | 528105 | 8457731 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 101 | 2-021 | Welesani | 529270 | 8450672 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 102 | 2-022 | Temanim-wendo | 527738 | 8451723 | N | ○ | 5. 不稼働 （ポンプ修理困難） | ライジングメインが上がらない | 修理を試し、修理不可能なら新規掘削 | |
| 103 | 2-023 | Temanim-wendo | 529290 | 8450093 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 104 | 2-024 | Nkhono | 533858 | 8457302 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 105 | 2-025 | Geni | 533379 | 8457235 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 106 | 2-026 | Sinunbe | 532808 | 8454929 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 107 | 2-027 | Sinunbe | 533056 | 8455656 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 108 | 2-028 | Chikwan-bani | 534278 | 8457217 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 109 | 2-029 | Mweso | 534596 | 8456497 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 110 | 2-030 | Njiwa | 533342 | 8453199 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 111 | 2-031 | Chitumba | 532503 | 8451862 | N | × | 6. 井戸閉塞 | 石などによる井戸閉塞 | 新規掘削 | |
| 112 | 2-032 | Chinyata | 531165 | 8452134 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 113 | 2-033 | Lanadi | 523518 | 8464343 | F | ○ | 3. 稼働だが、水量減少 | 水量が10L/min以下 | ポンプ一式交換 | 井戸エアーリフト |
| 114 | 2-034 | Lumelo | 532169 | 8452375 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 115 | 2-035 | Lumelo | 532178 | 8452375 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 116 | 2-036 | Silombe | 532568 | 8450377 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 117 | 2-037 | Silombe | 532960 | 8449656 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 118 | 2-038 | Chinyata | 530782 | 8452171 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 119 | 2-039 | Nkokeza | 533942 | 8451119 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 120 | 2-040 | Mkonkha | 534872 | 8450018 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 121 | 2-041 | Mkonkha T.C. | 534222 | 8449729 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 122 | 2-042 | Mabvere | 528939 | 8462117 | N | × | 6. 井戸閉塞 | 石などによる井戸閉塞 | 新規掘削 | |
| 123 | 2-043 | Chinkota | 510422 | 8467137 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 124 | 2-044 | Mumba | 509367 | 8464894 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 125 | 2-045 | Kadzombe | 535023 | 8446862 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 126 | 2-046 | Kadzombe | 534332 | 8446054 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 127 | 2-047 | Chimbala-me | 511619 | 8463707 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 128 | 2-048 | Chiyese-lana | 536655 | 8444741 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 129 | 2-049 | Chamani | 536574 | 8440563 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 130 | 2-050 | Chamani | 536293 | 8440509 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |

| S/N | 井戸番号 | 村落名 | X(UTM) | Y(UTM) | 1次調査<br>F: Function<br>N: Not Function | 2次調査<br>○:実施<br>×:実施 | 1次:2次調査により判明した井戸の状態 | 井戸の状態(詳細) | 井戸修繕計画 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 131 | 2-051 | Kabuthu | 536446 | 8442474 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 132 | 2-052 | Kabuthu-Chifuca | 536754 | 8441378 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 133 | 2-053 | Mphonde | 535560 | 8443751 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 134 | 2-054 | Nkhompho-la | 535559 | 8440115 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 135 | 2-055 | Manyengo | 534213 | 8438404 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 136 | 2-056 | Kamlilika | 525422 | 8466799 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 137 | 2-057 | Mjolomobe | 524023 | 8468871 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 138 | 2-058 | M'manja | 529381 | 8457131 | N | ○ | 5. 不稼働 (ポンプ修理困難) | 孔内にライジングメイン(+ロッド)が落下 | 修理を試し、修理不可能なら新規掘削 | |
| 139 | 2-059 | Gomani 1 | 508840 | 8464360 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 140 | 2-060 | Jusi | 522964 | 8463355 | F | ○ | 3. 稼働だが、水量減少 | 水量が10L/min以下 | ポンプ一式交換 | 井戸エアーリフト |
| 141 | 2-061 | Mailosi | 510417 | 8468889 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 142 | 2-062 | Mtamad-zongo | 511314 | 8468583 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 143 | 2-063 | Nwandawa-ra | 510223 | 8464080 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 144 | 2-064 | Kachokam-komero | 509822 | 8464596 | N | × | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 145 | 2-065 | Mkumba | 510033 | 8470466 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 146 | 2-066 | Jamu | 508059 | 8469766 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 147 | 2-067 | Chimpanba | 517804 | 8472394 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 148 | 2-068 | Chiwoko | 513765 | 8470833 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 149 | 2-069 | Chiwoko | 513687 | 8471180 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 150 | 2-070 | Mazawa | 513199 | 8469594 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 151 | 2-071 | Mbachunda | 514680 | 8468041 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 152 | 2-072 | Mbachundu | 515212 | 8468195 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 153 | 2-073 | Chintanda | 512309 | 8465675 | N | ○ | 5. 不稼働 (ポンプ修理困難) | 孔内にライジングメイン(+ロッド)が落下 | 修理を試し、修理不可能なら新規掘削 | |
| 154 | 2-074 | Kachikon-do | 511253 | 8465364 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 155 | 2-075 | Chiphala | 513797 | 8462094 | N | × | 6. 井戸閉塞 | 石などによる井戸閉塞 | 新規掘削 | |
| 156 | 2-076 | Mthawira | 513770 | 8462642 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 157 | 2-077 | Dzidzwa | 514041 | 8467559 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 158 | 2-078 | Chalema | 516473 | 8468003 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 159 | 2-079 | Kalilang-we | 518557 | 8469459 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 160 | 2-080 | Msemwe | 515734 | 8469665 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 161 | 2-081 | Msemwe | 515638 | 8468898 | F | ○ | 3. 稼働だが、水量減少 | 水量が10L/min以下 | ポンプ一式交換 | 井戸エアーリフト |
| 162 | 2-082 | Mando | 519113 | 8473917 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 163 | 2-083 | Gereta | 517524 | 8471297 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 164 | 2-084 | Matimba | 523343 | 8475204 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 165 | 2-085 | Matimba | 522818 | 8475005 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 166 | 2-086 | Jenjewa | 507170 | 8465584 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 167 | 2-087 | Kanjeleng | 507568 | 8464314 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 168 | 2-088 | Kamndaya | 525956 | 8472555 | N | ○ | 5. 不稼働 (ポンプ修理困難) | 孔内にライジングメイン(+ロッド)が落下 | 修理を試し、修理不可能なら新規掘削 | |
| 169 | 2-089 | Mzati | 514696 | 8473204 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 170 | 2-090 | Zefalino | 512654 | 8461176 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 171 | 2-091 | Chipha-la A | 519128 | 8471318 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 172 | 2-092 | Chamveka | 507273 | 8470474 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 173 | 2-093 | Kamwendo T. C. | 504315 | 8471142 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 174 | 2-094 | Kamwendo T. C. | 504911 | 8471126 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 175 | 2-095 | Chidewa | 513031 | 8474331 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 176 | 2-096 | Chikomani | 514377 | 8477894 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |

| S/N | 井戸番号 | 村落名 | X(UTM) | Y(UTM) | 1次調査<br>F: Function<br>N: Not Function | 2次調査<br>○：実施<br>×：実施 | 1次：2次調査により判明した井戸の状態 | 井戸の状態（詳細） | 井戸修繕計画 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 177 | 2-097 | Mdawa | 518034 | 8478247 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 178 | 2-098 | Kwachau-name | 517268 | 8477763 | N | ○ | 5. 不稼働 （ポンプ修理困難） | ライジングメインが上がらない | 修理を試し、修理不可能なら新規掘削 | |
| 179 | 2-099 | Mando | 519356 | 8473172 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 180 | 2-100 | Chikoyi-Jombo | 518504 | 8476071 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 181 | 2-101 | Chimteka | 518331 | 8476942 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 182 | 2-102 | Chetamba-la | 522175 | 8479071 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 183 | 2-103 | Chiwenkha | 524656 | 8480393 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 184 | 2-104 | Mphanga | 528918 | 8480754 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 185 | 2-105 | Durira | 528142 | 8479588 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 186 | 2-106 | Mphanga | 528028 | 8479218 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 187 | 2-107 | Butawo | 527142 | 8477883 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 188 | 2-108 | Mndunga | 526442 | 8477077 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 189 | 2-109 | Kaligwen-je | 509828 | 8472213 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 190 | 2-110 | Kolona | 518648 | 8475650 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 191 | 3-001 | Kachaje | 507567 | 8476148 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 192 | 3-002 | Mchambo-Gunda | 507472 | 8474953 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 193 | 3-003 | Geresono | 508733 | 8478705 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 194 | 3-004 | Mchambo | 506993 | 8474048 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 195 | 3-005 | Chikoloka | 509312 | 8474215 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 196 | 3-006 | Tika | 509421 | 8474640 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 197 | 3-007 | Chimwere | 511769 | 8471766 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 198 | 3-008 | Kathyuka | 508103 | 8472161 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 199 | 3-009 | Chiwete | 511883 | 8474981 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 200 | 3-010 | Changata | 513082 | 8476319 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 201 | 3-011 | Langwani | 515012 | 8477643 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 202 | 3-012 | Sinosi | 513445 | 8479026 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 203 | 3-013 | Kanyimbo | 511433 | 8479389 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 204 | 3-014 | Machilika | 517874 | 8489745 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 205 | 3-015 | Chikwekwe | 528083 | 8485752 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 206 | 3-016 | Kanyenda | 526864 | 8483308 | N | ○ | 6. 井戸閉塞 | 石などによる井戸閉塞 | 新規掘削 | |
| 207 | 3-017 | Mberere | 526864 | 8483305 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 208 | 3-018 | Mikundi T.C. | 514999 | 8484767 | N | ○ | 6. 井戸閉塞 | 石などによる井戸閉塞 | 新規掘削 | |
| 209 | 3-019 | Kalombo Sch | 513442 | 8482133 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 210 | 3-020 | Tongole | 516451 | 8483150 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 211 | 3-021 | Kalinde | 520073 | 8483132 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 212 | 3-022 | Jasi | 521553 | 8483646 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 213 | 3-023 | Chipuntiko-Chimutu | 523631 | 8482579 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 214 | 3-024 | Kadiso | 530888 | 8492376 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 215 | 3-025 | Makumbi | 523318 | 8490602 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 216 | 3-026 | Mkangala | 514600 | 8486324 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 217 | 3-027 | Mng'ona | 513932 | 8489812 | N | ○ | 4. 不稼働 （ポンプ修理で回復可能） | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |

| S/N | 井戸番号 | 村落名 | X(UTM) | Y(UTM) | 1次調査<br>F: Function<br>N: Not Function | 2次調査<br>○:実施<br>×:実施 | 1次:2次調査により判明した井戸の状態 | 井戸の状態(詳細) | 井戸修繕計画 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 218 | 3-028 | Lezani | 516147 | 8481471 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 219 | 3-029 | Goseni | 512873 | 8483989 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 220 | 3-030 | Timoti | 513925 | 8483262 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 221 | 3-031 | Sigereta | 512547 | 8480284 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 222 | 3-032 | Chisamba | 510333 | 8482372 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 223 | 3-033 | Maole | 510477 | 8481978 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 224 | 3-034 | Saidi | 509748 | 8479872 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 225 | 3-035 | Mikuwa ii | 513605 | 8489467 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 226 | 3-036 | Sundwe | 525415 | 8483576 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 227 | 3-037 | Mphomwe | 516615 | 8486141 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 228 | 3-038 | Laisi | 515698 | 8484214 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 229 | 3-039 | Kabungwe-Drawo | 518444 | 8489872 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 230 | 3-040 | Machakulo | 532741 | 8491048 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 231 | 3-041 | Kapiri | 519585 | 8503896 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 232 | 3-042 | Mthema T.C. | 519045 | 8503018 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 233 | 3-043 | Chalunda T.C. | 514594 | 8497800 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 234 | 3-044 | Kasanda | 521033 | 8497942 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 235 | 3-045 | Mfelankhope | 520749 | 8491004 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 236 | 3-046 | Katonda Sch | 523647 | 8496585 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 237 | 3-047 | Kamera | 532491 | 8494442 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 238 | 3-048 | Chisenga | 530909 | 8496103 | N | × | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 239 | 3-049 | Kamphanbale | 525983 | 8495943 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 240 | 3-050 | Kabvuta | 528688 | 8497063 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 241 | 3-051 | Nkhunmbu | 529211 | 8497570 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 242 | 3-052 | Mphonda-Masinja | 523075 | 8493768 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 243 | 3-053 | Kampando | 524089 | 8488686 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 244 | 3-054 | Marten | 525654 | 8495547 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 245 | 3-055 | Kanzimbi | 519355 | 8493759 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 246 | 3-056 | Gandali | 512925 | 8496837 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 247 | 3-057 | Chinkolokota | 497351 | 8492717 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 248 | 3-058 | Elesani | 510679 | 8487081 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 249 | 3-059 | Kapiri Hosp. Miss. | 518530 | 8500673 | N | × | 6. 井戸閉塞 | 放棄し代替井戸建設済 | Excuded | |
| 250 | 3-060 | Japana | 522990 | 8503961 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 251 | 3-061 | Gong' ontha | 529671 | 8494274 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 252 | 3-062 | Kavunguti School | 525300 | 8489659 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 253 | 3-063 | Kachere | 518568 | 8496127 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 254 | 3-064 | Kakunga | 517720 | 8499774 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 255 | 3-065 | Kamenya | 518013 | 8494327 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 256 | 3-066 | Nthema T.C. | 518925 | 8502853 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 257 | 3-067 | Lubani | 502893 | 8506118 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 258 | 3-068 | Chinkhali | 502650 | 8504974 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 259 | 3-069 | Chang' amba | 498327 | 8493139 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |

| S/N | 井戸番号 | 村落名 | X(UTM) | Y(UTM) | 1次調査<br>F: Function<br>N: Not Function | 2次調査<br>○:実施<br>×:実施 | 1次:2次調査により判明した井戸の状態 | 井戸の状態(詳細) | 井戸修繕計画 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 260 | 3-070 | Kuthethe | 491154 | 8493152 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 261 | 3-071 | Dina | 495969 | 8504326 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 262 | 3-072 | Thengo | 495229 | 8504415 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 263 | 3-073 | Lameki | 498032 | 8501844 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 264 | 3-074 | Kaledza | 501846 | 8499521 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 265 | 3-075 | Malungo | 499854 | 8501014 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 266 | 3-076 | Mphunda | 501285 | 8494894 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 267 | 3-077 | Kadewele-Mbewa | 501271 | 8495628 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 268 | 3-078 | Kangulu | 500787 | 8493872 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 269 | 3-079 | Mkanda | 495083 | 8505778 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 270 | 3-080 | Mkanda | 494923 | 8505343 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 271 | 3-081 | Mazombwe | 494121 | 8491435 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 272 | 3-082 | Chimkolokota | 496273 | 8492474 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 273 | 3-083 | Masiwa | 495180 | 8494633 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 274 | 3-084 | kambandekha | 492893 | 8493177 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 275 | 3-085 | Jimu | 496461 | 8500973 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 276 | 3-086 | Lupiya | 495666 | 8496503 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 277 | 3-087 | Chisauka | 495626 | 8496915 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 278 | 3-088 | Kawere | 494869 | 8498331 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 279 | 3-089 | Msanda | 493958 | 8503572 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 280 | 3-090 | Zandana | 493104 | 8500941 | N | × | 6. 井戸閉塞 | 石などによる井戸閉塞 | 新規掘削 | |
| 281 | 3-091 | Khwere | 510693 | 8508721 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 282 | 3-092 | Khwere T.C. | 510198 | 8507537 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 283 | 3-093 | Mkumbi | 516970 | 8504066 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 284 | 3-094 | Kambuwe | 506692 | 8506167 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 285 | 3-095 | Kambuwe | 506805 | 8505984 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 286 | 3-096 | Kankhwende | 499264 | 8497510 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 287 | 3-097 | Mndaka | 500104 | 8498184 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 288 | 3-098 | Jowelo | 503380 | 8501235 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 289 | 3-099 | Mtulira | 508051 | 8497074 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 290 | 3-100 | Kalonga | 504057 | 8491160 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 291 | 3-101 | Diti | 513481 | 8501318 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 292 | 3-102 | Chitonde | 507512 | 8495903 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 293 | 3-103 | Kalulu Sch | 502456 | 8497652 | N | ○ | 4. 不稼働 (ポンプ修理で回復可能) | ポンプの不具合 | ポンプ一式交換 | 井戸エアーリフト |
| 294 | 3-104 | Kalulu T.C. | 502543 | 8496820 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 295 | 3-105 | Katsompho | 505311 | 8496649 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 296 | 3-106 | Msalanyama | 507004 | 8497474 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 297 | 3-107 | Mchonkwe | 506693 | 8495677 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 298 | 3-108 | Chiti | 502429 | 8490946 | F | × | 1. 稼働、付帯施設健全 | | ポンプ一式交換 | 井戸エアーリフト |
| 299 | 3-109 | Chiti | 502228 | 8491364 | F | × | 2. 稼働、付帯施設排水不良 | | ポンプ一式交換 | 井戸エアーリフト |
| 300 | 3-110 | Mphako | 502125 | 8494020 | N | × | 4. 不稼働 (ポンプ修理で回復可能) | 盗難 | ポンプ一式交換 | 井戸エアーリフト |

# ７－７　水質検査

「ムチンジ地下水開発計画」にて建設された井戸及び、その周辺の深井戸、浅井戸から採水し水質試験を実施した。水質試験実施箇所は以下の表 A7 - 7 - 1 に、また、水質検査結果を表 A7－7－2 に示す。

表 A7－7－1 水質試験実施箇所

| 井戸種類 | 水質検査実施数 |
|---|---|
| 「ムチンジ地下水開発計画」建設井戸 | 13 |
| 上記井戸周辺の深井戸 | 3 |
| 上記井戸周辺の保護なし浅井戸 | 8 |
| 合計 | 24 |

# 表 A7 – 7 – 2　ムチンジ井戸修繕計画水質検査結果一覧

| LAB No. | 699 | 701 | 702 | 693 | 691 | 690 | 697 | 695 | 698 | 696 | 712 | 713 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE SAMPLED | 08/10/2010 | 09/10/2010 | 09/10/2010 | 08/10/2010 | 07/10/2010 | 07/10/2010 | 08/10/2010 | 08/10/2010 | 08/10/2010 | 08/10/2010 | 10/10/2010 | 10/10/2010 |
| LOCATION | Chiute Village | Chimteteka Village | Chimkoka Village | Bua TC | Mtonya Village | Mbwerera Village | Mazawa Village | Matimba Village | Kamwendo TC | Chetambala Village | Mikuwa II Village | Kabvunguti School |
| SOURCE TYPE | JICA BH 1-002 | JICA BH 1-035 | JICA BH 1-049 | JICA BH 1-061 | JICA BH 1-071 | JICA BH 2-015 | JICA BH 2-070 | JICA BH 2-085 | JICA BH 2-094 | JICA BH 2-102 | USW near JICA BH 3-035 | JICA BH 3-062 |
| T.A. | Mlonyeni | Mlonyeni | Mlonyeni | Mlonyeni | Mavwere | Mavwere | Zulu | Zulu | Zulu | Zulu | Mduwa | Mduwa |
| pH | 7.34 | 6.98 | 7.47 | 6.44 | 7.75 | 7.65 | 7.01 | 7.62 | 7.23 | 7.02 | 7.5 | 7.59 |
| 電気伝導度 | 123.3 | 149 | 165 | 205 | 456 | 222 | 192 | 217 | 242 | 238 | 166 | 470 |
| 全蒸発残留物 | 63 | 75 | 83 | 106 | 208 | 110 | 97 | 108 | 122 | 120 | 83 | 237 |
| 炭酸イオン | 0 | 0 | 0 | 0 | 21 | 12 | 0 | 9.6 | 0 | 0 | 0 | 19 |
| 炭酸水素イオン | 65 | 88 | 78.1 | 127 | 213 | 97 | 109 | 90 | 133 | 138 | 95 | 230 |
| 塩素イオン | 5.9 | 3 | 11.9 | 1.1 | 8.9 | 5.9 | 5.9 | 8.9 | 8.9 | 5.9 | 3 | 6.9 |
| 硫酸塩 | <0.01 | <0.01 | <0.01 | 2.1 | <0.01 | <0.01 | 1.5 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 硝酸塩 | 0.212 | 0.021 | 0.63 | 0.034 | 0.031 | 0.263 | <0.0 | 0.541 | 1.381 | 0.009 | 0.297 | 0.028 |
| フッ素 | 0.56 | 0.66 | 0.69 | 0.7 | 0.61 | 0.61 | 0.7 | 0.66 | 0.55 | 0.6 | 0.66 | 0.66 |
| ナトリウム | 10.4 | 6.4 | 7.6 | 8.8 | 19.9 | 5.4 | 12.1 | 7.2 | 14 | 12 | 6.5 | 11.3 |
| カリウム | 0.8 | 1.3 | 1.2 | 1.7 | 4.8 | 0.4 | 1.1 | 1.4 | 1.6 | 1.3 | 1 | 1.4 |
| カルシウム | 10.2 | 13.2 | 16 | 22 | 53 | 21 | 17 | 22.5 | 24.2 | 27 | 18.6 | 65 |
| マグネシウム | 3.9 | 7.7 | 5.6 | 8 | 9.5 | 9.7 | 7 | 7.7 | 8 | 7.6 | 6.7 | 10.6 |
| 鉄 | 0.016 | 0.012 | 0.041 | 0.3 | 0.051 | 0.059 | 0.042 | 0.088 | 0.047 | 0.016 | 0.095 | 0.033 |
| マンガン | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 全硬度 | 41 | 64 | 63 | 87 | 171 | 92 | 71 | 88 | 93 | 98 | 74 | 205 |
| 全アルカリ度 | 53 | 72 | 63 | 104 | 209 | 99 | 89 | 90 | 109 | 113 | 77 | 220 |
| 二酸化珪素 | 30 | 28 | 26 | 29 | 23 | 25 | 28 | 26 | 36 | 31 | 23 | 31 |
| 濁度 | 0.2 | 0.4 | 0 | 0.1 | 1 | 0.3 | 0.5 | 0.6 | 1 | 0 | 0 | 2 |
| 浮遊物質 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 糞便性大腸菌 | 690 | 300 | 340 | 50 | 210 | 40 | 50 | 80 | 350 | 110 | 460 | 150 |
| 糞便性連鎖球菌 | 20 | 40 | 10 | 0 | 30 | 50 | 0 | 10 | 40 | 40 | 50 | 10 |

* USW : Unprotected Shallow Well

| LAB No. | 715 | 705 | 706 | 711 | 704 | 714 | 700 | 692 | 689 | 694 | 716 | 703 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE SAMPLED | 10/10/2010 | 09/10/2010 | 09/10/2010 | 09/10/2010 | 09/10/2010 | 10/10/2010 | 09/10/2010 | 07/10/2010 | 07/10/2010 | 08/10/2010 | 10/10/2010 | 09/10/2010 |
| LOCATION | Mphunda Village | Dina Village | Thengo Village | Mkanda TC at Nangantani House | Msanda Village | Chitonde Village | Chiganizo Village | Chimosola Village | Chithumba Village | Chiphala J P School | Kapiri Roman Catholic | Zandana Village |
| SOURCE TYPE | JICA BH 3-076 | USW near JICA BH 3-071 | USW near JICA BH 3-072 | USW near JICA BH 3-079 | USW near JICA BH 3-089 | JICA BH 3-102 | USW near JICA BH 1-048 | BH near JICA BH 2-013 | USW near JICA BH2-031 | BH near JICA BH2-075 | BH near JICA BH 3-059 | USW near JICA BH 3-090 |
| T.A. | Mkanda | Mkanda | Mkanda | Mkanda | Mkanda | Kaponda | Mlonyeni | Mavwere | Mavwere | Zulu | Dambe | Mkanda |
| pH | 6.88 | 7.34 | 7.82 | 7.41 | 7.21 | 6.98 | 6.11 | 5.46 | 6.2 | 6.29 | 7.07 | 7.77 |
| 電気伝導度 | 250 | 122 | 139 | 135 | 135 | 413 | 49.7 | 55.9 | 102 | 64 | 282 | 288 |
| 全蒸発残留物 | 131 | 62 | 69 | 67 | 70 | 210 | 25 | 28 | 53 | 32 | 144 | 145 |
| 炭酸イオン | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 炭酸水素イオン | 155 | 53 | 47 | 73 | 53 | 237 | 12 | 22 | 54 | 27 | 167 | 140 |
| 塩素イオン | 1 | 11.9 | 7.4 | 5.9 | 5.9 | 8.9 | 8.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 |
| 硫酸塩 | <0.01 | <0.01 | <0.01 | <0.01 | 13.9 | <0.01 | <0.01 | 1.3 | <0.01 | <0.01 | <0.01 | <0.01 |
| 硝酸塩 | 0.048 | 0.07 | 0.209 | 0.05 | 0.006 | 0.02 | 0.283 | 0.087 | 0.092 | 0.095 | 0.032 | 0.269 |
| フッ素 | 0.65 | 0.59 | 0.66 | 0.18 | 0.6 | 0.61 | 0.75 | 0.6 | 0.69 | 0.59 | 0.59 | 0.59 |
| ナトリウム | 16.9 | 3.4 | 3.7 | 3.7 | 8.9 | 29.4 | 2.8 | 3.6 | 5.6 | 4.1 | 18.3 | 3.8 |
| カリウム | 8.5 | 0.8 | 0.4 | 0.6 | 0.9 | 7.7 | 0.6 | 0.2 | 0.9 | 0.2 | 7.3 | 0.3 |
| カルシウム | 22 | 11 | 11.2 | 15 | 11.6 | 43 | 4 | 5 | 9 | 6 | 26.4 | 35 |
| マグネシウム | 7.6 | 5.8 | 6.8 | 5.7 | 3.8 | 9 | 1.9 | 1.5 | 4.4 | 1.7 | 7.7 | 11.7 |
| 鉄 | 0.243 | 0.31 | 0.341 | 0.738 | 0.313 | 0.013 | 0.03 | 0.13 | 0..232 | 0.14 | 0.019 | 0.34 |
| マンガン | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| 全硬度 | 86 | 51 | 56 | 62 | 45 | 144 | 17 | 18 | 40 | 22 | 97 | 136 |
| 全アルカリ度 | 127 | 43 | 53 | 59 | 43 | 194 | 9 | 18 | 44 | 22 | 136 | 133 |
| 二酸化珪素 | 33 | 21 | 23 | 23 | 25 | 22 | 17 | 20 | 21 | 22 | 34 | 23 |
| 濁度 | 2 | 8 | 17 | 20 | 40 | 1 | 6 | 2 | 12 | 52 | 1 | 120 |
| 浮遊物質 | 0 | 6 | 15 | 20 | 30 | 0 | 6 | 1 | 10 | 49 | 0 | 117 |
| 糞便性大腸菌 | 230 | 550 | 490 | 330 | 950 | 60 | 500 | 150 | 110 | 300 | 50 | 1000 |
| 糞便性連鎖球菌 | 20 | 60 | 100 | 80 | 50 | 0 | 30 | 0 | 40 | 20 | 0 | 20 |

* USW : Unprotected Shallow Well

# ７－８　井戸環境調査

修繕計画対象井戸の水質サンプリング 13 箇所の全てにおいて大腸菌群の検出があった（灌漑・水資源省中央水質試験所）ため、試験方法の検証とともに採水可能な対象井戸全数の大腸菌群の検査を行った。あわせて汚染源の可能性がある衛生施設（ピットラトリン、ゴミピット、家畜小屋、浸透枡等）の状況を把握し、汚染があると判断される場合には汚染源の検討を行い、修繕計画における衛生的な給水を検討する資料とした。

第 1 段階（試験方法の検証）：昨年の実施サイトで現地コンサルタントと中央水質試験所が同時に試験。コンサルタントは、調査団の提供するフィールド検査キットを使用し、中央試験所は昨年と同様の試験器を使用する。試験は Faecal Coliform（糞便性大腸菌）、Faecal Streptococci（連鎖球菌：動物の排泄物の影響を反映する）

**表 7－8－1　井戸環境調査第 1 段階の大腸菌群試験方法**

| 試験機関 | 試験機 | 培養基　（Faecal Coliform） |
|---|---|---|
| 現地コンサルタント | Field Water Testing Kit (Oxfam-DelAgua Dual) | MFC Broth (サンプル毎の既成パック) |
| 中央水質試験所 | Millepore Filtering Kit and Portable Incubator | Lauryl Membrane Sulphate Broth (希釈した溶液を冷蔵庫で保管) |

双方はほぼ同様の機材であるが、Faecal Coliform の培養基（Media）が異なり、前者は 1 検査毎にパックされた Media を使用し、試験所は、従来の冷蔵庫で保存された溶液を使用する点が異なる。

第 1 段階では、通常の井戸使用状態で（吐出し口を洗浄して 5 分汲出した後）採水したサンプルについて検査を実施する。採水後、井戸内を殺菌するため、塩素剤（HTH：塩素 70%） 4 g を約 350ml の水に溶かして投入する。大腸菌群が検出された井戸については、この洗浄後の検査を再度実施し、井戸孔内の汚れによるものか、地下水自体の汚染かを判断する。

第 2 段階（全数調査）：第 1 段階の検査結果を受けて、全数について Faecal Coliform の検査を行う。（Feacal Streptococci の検査は、培養時間が 48 時間で Faecal Coliform の 2 倍するが、試験機材が 1 日に処理できる数量に限界があるため、特に疑わしい箇所を除き、実施しない）

第 3 段階（大腸菌検出井戸の再検査）：大腸菌群が検出された井戸について、ポンプのメンテナンスなどによる井戸孔内の汚れの要因を排除するため、一旦塩素剤を投入して 30 分後に残留塩素確認し、その翌日以降残留塩素がなくなったことを確認してから再度検査を行う。再検出の場合は、地下水の汚染が確定する。

表 A7-8-2 にこれら調査結果一覧を示す。

# 表７–8– 2 調査結果一覧

| BH No. | Village | T.A. | pH | EC (μS/cm) | temp | Faecal Coliform | | | Faecal Streptococci | | | Remarks | Distribution of Possible Source of Contamination | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | No.1 | No.2 | CWL | No.1 | No.2 | CWL | | Toilet (Latrine) | | | Rubbish pit | | | Pen (Cattle, Goat, Poutry etc.) | | |
| | | | | | | | | | | | | | D < 15 m | 15 =<D<30m | 30=<D<45m | D < 15 m | 15 =<D<30m | 30=<D<45m | D < 15 m | 15 =<D<30m | 30=<D<45m |
| 1-001 | Chidambo | Mlonyeni | - | - | - | | | | | | | | | | | | | | | | |
| 1-002 | Chiute | Mlonyeni | 5.86 | 125 | 22.9 | 0 | | 0 | 0 | | 0 | | | | 2 | | 1 | | | | |
| 1-003 | Tsamphale | Mlonyeni | 6.29 | 161 | 26.4 | 0 | | | | | | BH brick fenced | | | 1 | | | | | 1 | |
| 1-004 | Chamveka | Mlonyeni | 6.05 | 134 | 23.5 | 0 | | | | | | Soak pit not filled with stones | | 2 | 3 | | 1 | | | | 1 |
| 1-005 | Maliwane | Mlonyeni | 6.56 | 175 | 26.1 | 0 | | | | | | BH brick fenced but broken | | 1 | | | | | | | |
| 1-006 | Maliwane | Mlonyeni | 6.42 | 215 | 26.9 | 0 | | | | | | BH brick fenced but broken | | 1 | 2 | | | | | | |
| 1-007 | Mlonyeni | Mlonyeni | - | - | - | N | | | | | | Stopped working in 2004 | | | | | | | | | |
| 1-008 | Zunguze | Mlonyeni | - | - | - | N | | | | | | Stopped working in October 2010 | | | | | | | | | |
| 1-009 | Mkangeni | Mlonyeni | 6.28 | 163 | 25.4 | 0 | | | | | | BH brick fenced | | | | | | | | | |
| 1-010 | Maganga | Mlonyeni | 6.21 | 161 | 26.7 | 0 | | | | | | | | 1 | 6 | | | | | | |
| 1-011 | Chiwaula | Mlonyeni | 5.51 | 75 | 25.9 | 0 | | | | | | | | | | | | | | | 1 |
| 1-012 | Chabwela | Mlonyeni | 7.41 | 267 | 25.8 | 0 | | | | | | | | 1 | 3 | | | | 1 | | |
| 1-013 | Mbeza | Mlonyeni | 6.68 | 292 | 25 | 0 | | | | | | Surrounding of BH poor | 1 | | 3 | | | | | | |
| 1-014 | Chaonongeka | Mlonyeni | 5.91 | 79 | 26.9 | 0 | | | | | | washing basin in use | 1 | | 3 | | | | | | 1 |
| 1-015 | Mgwende | Mlonyeni | 7.18 | 232 | 26.7 | 0 | | | | | | | | 1 | 4 | | | | | | |
| 1-016 | MWandawala | Mlonyeni | 6.15 | 163 | 24.5 | 0 | | | | | | BH brick fenced but broken | | 1 | 1 | | | | | 1 | |
| 1-017 | Kadzakurnanja | Mlonyeni | - | - | - | N | | | | | | Stopped working in June 2011 | | | | | | | | | |
| 1-018 | Milonga | Mlonyeni | - | - | - | N | | | | | | Stopped working in 2004 | | | | | | | | | |
| 1-019 | Mzikaola II | Mlonyeni | 7.12 | 223 | 24.3 | 0 | | | | | | | | | 1 | | | 1 | | | |
| 1-020 | Mkhala | Mlonyeni | 6.57 | 202 | 25.2 | 0 | | | 11 | 0 | | BH brick fenced but broken | | 1 | 3 | | | | | | 1 |
| 1-021 | Chibonyola(B) | Mlonyeni | 6.26 | 80 | 26.5 | 0 | | | | | | BH brick fenced and in good condition | | | | | | | | | |
| 1-022 | Mwanayumo | Mlonyeni | 6.18 | 139 | 24.6 | 0 | | | | | | | | 2 | | | | | | 1 | |
| 1-023 | Mphindu | Mlonyeni | 5.4 | 86 | 24.9 | 0 | | | | | | | | | | | | | | | |
| 1-024 | Chibonyola (A) | Mlonyeni | 5.94 | 150 | 25.4 | 0 | | | | | | BH brick fenced but broken | | | 3 | | | | | 2 | |
| 1-025 | Chibonyola (A) | Mlonyeni | 6.56 | 180 | 25.1 | 5 | | | | | | BH brick fenced | | 1 | 1 | | | | | | |
| 1-026 | Thukuta | Mlonyeni | - | - | - | | | | | | | | | | | | | | | | |
| 1-027 | Kapita | Mlonyeni | 6.11 | 132 | 24.8 | 0 | | | | | | | | 1 | 2 | | | | | | 1 |
| 1-028 | Maganga | Mlonyeni | 6.51 | 189 | 24.1 | 0 | | | | | | | 1 | 4 | 3 | | | | | | |
| 1-029 | Alfred | Mlonyeni | 6.02 | 103 | 26.1 | 0 | | | | | | | | 1 | 3 | | | | | | |
| 1-030 | Pembere | Mlonyeni | 5.42 | 63 | 24.8 | 0 | | | | | | | | | 1 | | | | | | |
| 1-031 | Mtsiliza | Mlonyeni | 6.27 | 264 | 24.6 | 0 | | | | | | Not fenced, yield adequate | | 1 | 6 | | | 2 | | | |
| 1-032 | Mkonda | Mlonyeni | 5.64 | 112 | 24.8 | 0 | | | | | | Fenced with bricks but broken | 1 | 5 | 9 | | | | | | |
| 1-033 | Katsenga | Mlonyeni | 5.8 | 147 | 25.6 | 0 | | | | | | Fenced with bricks | 2 | | 3 | | | | | 1 | |
| 1-034 | Luka-Luciano | Mlonyeni | 6.21 | 129 | 25.1 | 0 | | | | | | Not fenced | | 2 | 5 | | | | 2 | | |
| 1-035 | Chimteteka | Mlonyeni | 6.27 | 153 | 24.8 | 0 | | 0 | 0 | | 0 | | | 1 | 2 | | | | | | |
| 1-036 | Chaluma, Kalombo | Mlonyeni | 5.74 | 60 | 24.7 | 0 | | | | | | Brick fenced but broken | | | 4 | | | 1 | | | |
| 1-037 | Mkwezendumba | Mlonyeni | 6.01 | 132 | 25.1 | 0 | | | | | | Not fenced | | 2 | 2 | | | | | | |
| 1-038 | Galawe | Mlonyeni | 7.42 | 309 | 23.5 | 0 | | | | | | | | 3 | 4 | | | | | | |
| 1-039 | Chikaza | Mlonyeni | 6.48 | 198 | 25 | 0 | | | | | | | 1 | 4 | | | | | | | |
| 1-040 | Kunjawa | Mlonyeni | 6.65 | 171 | 23.6 | 0 | | | | | | BH fence broken | | 1 | 1 | | 1 | | | | 1 |
| 1-041 | Kunjawa | Mlonyeni | 6.18 | 151 | 24.1 | 0 | | | | | | Brick fenced and not broken | | 3 | 7 | | | | | | |
| 1-043 | Mtukwa | Mlonyeni | - | - | - | | | | | | | | | | | | | | | | |
| 1-044 | Mtukwa | Mlonyeni | - | - | - | N | | | | | | not working since 2006 | | | | | | | | | |
| 1-045 | Mwenyeanthu | Mlonyeni | 6.61 | 184 | 23.9 | 0 | | | | | | | 1 | 8 | 5 | | | | | | |
| 1-046 | Dambo | Mlonyeni | - | - | - | 0 | | | | | | | | | | | | | | | |
| 1-047 | Mwanzika | Mlonyeni | 6.75 | 198 | 24.9 | 0 | | | | | | Washing basin is in use | | 1 | 1 | | | | | 2 | |
| 1-048 | Chiganizo | Mlonyeni | 6.46 | 191 | 25 | 0 | | | | | | | | 1 | | | | | | | |
| 1-049 | Chimkoka | Mlonyeni | 5.8 | - | 25.6 | 0 | 0 | 0 | 1 | 0 | 0 | Apron has a crack | | | 2 | | | 1 | | 2 | |
| 1-050 | Gambatula | Mlonyeni | 6.05 | 149 | 25.7 | 0 | | | | | | Washing basin is in use | | 1 | 2 | | | 1 | | | |
| 1-051 | Misale T. C. | Mlonyeni | 6.1 | 166 | 25 | 0 | | | | | | | | 3 | 1 | | | | | | |
| 1-052 | John | Mlonyeni | 7.31 | 216 | 23.9 | 0 | | | | | | | | 1 | | | | | | | |
| 1-054 | Mselela | Mlonyeni | 6.55 | 164 | 26.4 | 0 | | | | | | BH is brick fenced but broken | | | 1 | | | | | | |
| 1-055 | Ngalule | Mlonyeni | 6.53 | 253 | 25.3 | 0 | | | | | | | | 1 | 1 | | | | | | |
| 1-056 | Masitala | Mlonyeni | 6.67 | 213 | 26.4 | 0 | | | | | | | | 1 | 1 | | | | | | 1 |
| 1-060 | Simoko | Mlonyeni | 6.08 | 169 | 25 | 0 | | | | | | Corroded rods | | 2 | 10 | | | | | | |
| 1-061 | Bua T・C | Mlonyeni | 6.53 | 203 | 25.9 | 0 | | 0 | 0 | | 3 | | | 1 | 3 | | | | | 1 | 4 |
| 1-063 | Kazule | Mlonyeni | 6.55 | 249 | 26.2 | 0 | | | | | | BH not fenced | | 2 | 4 | | | 2 | | | |
| 1-064 | Kaole Ⅱ | Mlonyeni | 6.55 | 208 | 24 | 0 | | | | | | BH not fenced | | | | | | | | | |
| 1-065 | Kaole Ⅰ | Mlonyeni | 6.48 | 176 | 25.2 | 0 | | | | | | BH not fenced | 1 | 2 | | | 2 | | | | |
| 2-001 | Kambamd-zuwa | Mlonyeni | - | - | - | N | | | | | | | | | | | | | | | |
| 2-002 | Pinda | Mlonyeni | 6.46 | 172 | 25.6 | 0 | | | | | | BH not fenced | 1 | 1 | 2 | | | | | 2 | 1 |
| 2-003 | Lupenga-Ndulama | Mlonyeni | - | - | - | N | | | | | | Not working due to falling rods | | | | | | | | | |
| 2-004 | Chikuta | Mlonyeni | 6.6 | 268 | 24.9 | 0 | | | | | | BH not fenced | | | | | | | | | |
| 2-005 | Chikuta | Mlonyeni | 6.8 | 394 | 24.8 | 0 | | | | | | BH not fenced | | | 4 | | | | | | 1 |
| 2-043 | Chinkota | Mlonyeni | 6.59 | 330 | 23.2 | 0 | | | | | | Washing slab in use | | 1 | 1 | | | | | 1 | 1 |
| 2-065 | Mkumba | Mlonyeni | 6.9 | 235 | 25.6 | 0 | 0 | | | | | Washing basin is in use | | | 1 | | | | | | |
| | | | | | | | | | | | | | **10** | **66** | **127** | **0** | **5** | **8** | **3** | **14** | **14** |

| BH No. | Village | T.A. | pH | EC (μS/cm) | temp | Faecal Coliform | | | Faecal Streptococci | | | Remarks | Distribution of Possible Source of Contamination | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | No.1 | No.2 | CWL | No.1 | No.2 | CWL | | Toilet (Latrine) | | | Rubbish pit | | | Pen (Cattle, Goat, Poutry etc.) | | |
| | | | | | | | | | | | | | D < 15 m | 15 =<D<30m | 30=<D<45m | D < 15 m | 15 =<D<30m | 30=<D<45m | D < 15 m | 15 =<D<30m | 30=<D<45m |
| 1-042 | Msukwala | Mavwere | 6.14 | 107 | 26.5 | 0 | | | | | | BH Not found | | 4 | 7 | | | | | | 2 |
| 1-053 | Mselela | Mavwere | - | - | - | N | | | | | | BH not functioning since June 2011 | | | | | | | | | |
| 1-057 | Mzingo | Mavwere | 7.03 | 424 | 24.7 | 0 | | | | | | | | 1 | | | | 1 | | | 1 |
| 1-058 | Nathyola | Mavwere | 6.77 | 302 | 25.1 | 0 | | | | | | BH not fenced | | | 1 | | | | | | |
| 1-059 | Kachere | Mavwere | 6.16 | 207 | 24.7 | 0 | | | | | | BH surrounded by few HH | | | 2 | | | | | | 1 |
| 1-062 | Nkhuzu | Mavwere | 6.29 | 230 | 25.3 | 0 | | | | | | | | | | | | | | | |
| 1-066 | Kamphemvu | Mavwere | - | - | - | N | | | | | | | | | | | | | | | |
| 1-067 | Kamphemvu | Mavwere | 6.58 | 195 | 26.3 | 0 | | | | | | | | 1 | | | | | | | |
| 1-068 | Katsenga A | Mavwere | - | - | - | N | | | | | | BH rods are broken | | | | | | | | | |
| 1-069 | Mlamba | Mavwere | 6.55 | 186 | 24.7 | 0 | | | | | | Wasing basin in use | | | 1 | | 2 | | | | |
| 1-070 | Nyongani | Mavwere | 6.42 | 296 | 25.1 | 0 | | | | | | Washing basin is in use | | 1 | 1 | | | | | | 1 |
| 1-071 | Mtonya | Mavwere | 7.38 | | 26 | 0 | | 0 | 0 | 0 | 1 | | | 1 | 2 | | 1 | | | 1 | 1 |
| 1-072 | Waliranji | Mavwere | 6.61 | 275 | 26.2 | 0 | | | | | | BH not fenced/Pump stand does exist but not functioning | | | 2 | | | | | 1 | |
| 1-073 | Likungwi | Mavwere | 6.63 | 258 | 25.1 | 0 | | | | | | Washing basin not in use | 1 | 1 | | | | | | 1 | |
| 1-074 | Mnamizana | Mavwere | - | - | - | N | | | | | | BH Stolen | | | | | | | | | |
| 1-075 | Kankhande | Mavwere | 6.33 | 228 | 25.9 | 0 | | | | | | | | | 2 | | | | | | |
| 1-076 | Kankhande | Mavwere | 7.01 | 346 | 25 | 0 | | | | | | washing basin in use | | | 1 | | | | | 1 | |
| 1-077 | Mkusa | Mavwere | 6.39 | 281 | 24.2 | 0 | | | | | | Washing basin is in use | | 2 | 2 | | | | 1 | | |
| 1-078 | Kajiwa | Mavwere | 7.26 | 243 | 25.4 | 0 | | | | | | No open defecation, | 2 | 1 | 1 | | | | | | 1 |
| 1-079 | Mnamizana | Mavwere | 6.83 | 332 | 26 | 0 | | | | | | | | 1 | 1 | | | | | | |
| 1-080 | Kanyindula | Mavwere | 6.76 | 289 | 25.5 | 0 | | | | | | | | | 2 | | | | | | |
| 2-006 | Kamgwanga | Mavwere | - | - | - | 0 | | | | | | Not working since May 2011 | | | | | | | | | |
| 2-007 | Nkhumba | Mavwere | 6.54 | 275 | 26.2 | 0 | | | | | | BH not fenced | 1 | 1 | 1 | | | | | | 1 |
| 2-008 | Makanda | Mavwere | 6.4 | 197 | 25.7 | 0 | | | | | | BH not fenced | | 1 | 1 | | 1 | 1 | | | |
| 2-009 | Makanda | Mlonyeni | 6.52 | 210 | 26 | 0 | | | | | | | | 1 | 1 | | | | | | |
| 2-010 | Wisikoti | Mavwere | 6.97 | 349 | 25.9 | 0 | | | | | | Kraal within 15m | | 2 | 2 | | | | 1 | | |
| 2-011 | Manthalu | Mavwere | 6.16 | 154 | 26.4 | 0 | | | | | | BH not fenced | | 2 | 2 | | | | | | |
| 2-012 | Manthalu | Mavwere | - | - | - | N | | | | | | Stopped working in 2007 | | | | | | | | | |
| 2-013 | Chamosola | Mavwere | - | - | - | N | | | | | | Stopped working in 2007 | | | | | | | | | |
| 2-014 | Kafunsa-Chalimba | Mavwere | 6.19 | 211 | 25.9 | 0 | | | | | | Washing slab is in use | | | 1 | | | | 1 | 1 | |
| 2-015 | Mbwerera | Mavwere | 6.74 | - | 27.6 | 0 | 0 | 1 | 0 | 0 | 3 | | | 1 | 2 | 1 | | 1 | | 1 | |
| 2-016 | Kamwaza | Mavwere | 7.44 | 365 | 26.4 | 0 | | | | | | | | 1 | 4 | | | | | 1 | 1 |
| 2-017 | Papa | Mavwere | 7.27 | 318 | 27.3 | 0 | | | | | | | | | | | | | | 1 | |
| 2-018 | Guwende | Mavwere | 6.37 | 268 | 27.6 | 0 | | | | | | Bh not fenced | 1 | | | | | | 1 | | 1 |
| 2-019 | Kamlilika | Mavwere | 6.21 | 222 | 26.8 | 0 | | | | | | BH not fenced | | | 5 | | | | | | |
| 2-020 | Tankhule | Mavwere | 6.25 | 240 | 25.9 | 0 | | | 0 | | | Washing Slab being used | | 1 | 3 | N/A | N/A | N/A | N/A | 1 | N/A |
| 2-021 | Welesani | Mavwere | 6.75 | 151 | 26.1 | 0 | | | | | | BH not fenced | | 1 | 3 | | | | 1 | | |
| 2-022 | Temanim-wendo | Mavwere | - | - | - | N | | | | | | Stopped working in 2006 | | | | | | | | | |
| 2-023 | Temanim-wendo | Mavwere | 6.72 | 279 | 24 | 0 | | | | | | Washing slab is in use | | | 1 | | | | | | |
| 2-024 | Nkhono | Mavwere | 6.74 | 267 | 25.9 | 0 | | | | | | BH brick fenced but broken | | 1 | 1 | | | 1 | | | |
| 2-025 | Geni | Mavwere | 6.43 | 206 | 26.1 | 0 | | | | | | | 1 | 1 | 1 | | | | | | |
| 2-026 | Sinunbe | Mavwere | 6.73 | 367 | 25.9 | 0 | | | | | | | | 1 | 1 | | | | | | 1 |
| 2-027 | Sinunbe | Mavwere | 6.51 | 257 | 25.4 | 0 | | | | | | | 2 | 1 | | | | | | | 1 |
| 2-028 | Chikwan-bani | Mavwere | 6.33 | 207 | 26.7 | 0 | | | | | | | 2 | 2 | 3 | | | | 1 | 1 | |
| 2-029 | Mweso | Mavwere | 6.42 | 242 | 26.4 | 0 | | | | | | | 1 | | | | | | | | |
| 2-030 | Njiwa | Mavwere | - | - | - | N | | | | | | Stopped functioning in 2010 | | | | | | | | | |
| 2-031 | Chitumba | Mavwere | - | - | - | N | | | | | | BH not working since 2007 | | | | | | | | | |
| 2-032 | Chinyata | Mavwere | 6.47 | 244 | 26.1 | 0 | | | 0 | | | Washing Slab not in use | N/A | N/A | Yes | N/A | N/A | N/A | N/A | N/A | N/A |
| 2-033 | Lanadi | Mavwere | 6.22 | 175 | 27.1 | 0 | | | | | | BH not fenced | | | 2 | | | | 1 | | |
| 2-034 | Lumelo | Mavwere | - | - | - | N | | | | | | Not working since May 2011 | | | | | | | | | |
| 2-035 | Lumelo | Mavwere | 7.78 | 317 | 26.7 | 0 | | | 0 | | | Washing slab not in use | | | | | | 1 | N/A | N/A | N/A |
| 2-036 | Silombe | Mavwere | 6.45 | 199 | 23.6 | 0 | | | | | | BH brick fenced but broken | | | | | | | | | 1 |
| 2-037 | Silombe | Mavwere | 6.95 | 341 | 22.8 | 0 | | | | | | BH brick fenced but broken | | 1 | 1 | | | | | | |
| 2-038 | Chinyata | Mavwere | 6.6 | 342 | 25.3 | 0 | | | | | | Washing slab being used | | N/A | 1 | N/A | 1 | 2 | N/A | N/A | N/A |
| 2-039 | Nkokeza | Mavwere | 6.51 | 129 | 26.4 | 0 | | | | | | Washing Slab not in use | | N/A | 2 | N/A | N/A | N/A | N/A | N/A | N/A |
| 2-040 | Mkonkha | Mavwere | 6.69 | 198 | 24.7 | 0 | | | | | | BH not fenced, no open defecation | | | | | | | | | |
| 2-041 | Mkonkha T.C. | Mavwere | 7.14 | 351 | 23.6 | 0 | | | | | | BH not fenced, no open defecation | | | 1 | | | | | | |
| 2-042 | Mavwere | Mavwere | - | - | - | N | | | | | | Stopped working in 2005 | | | | | | | | | |
| 2-049 | Chamani | Mavwere | 6.99 | 179 | 24,7 | 0 | | | | | | | | 1 | 1 | | | | | | 4 |
| 2-050 | Chamani | Mavwere | 6.54 | 76 | 25 | 0 | | | | | | | | 1 | 2 | | | | | | 1 |
| 2-051 | Kabuthu | Mavwere | 6.28 | 240 | 24.7 | 0 | | | 0 | | | Washing slab in use | 2 | | 1 | | 1 | | | 1 | 1 |
| 2-052 | Kabuthu-Chifuca | Mavwere | 6.34 | 111 | 25.2 | 0 | | | 0 | | | Washing slab in use | | 1 | 2 | | 1 | | | | 5 |
| 2-053 | Mphonde | Mavwere | - | - | - | N | | | | | | stopped working in April 2011 | | | | | | | | | |

| BH No. | Village | T.A. | pH | EC ($\mu$ S/cm) | temp | Faecal Coliform | | | Faecal Streptococci | | | Remarks | Distribution of Possible Source of Contamination | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | No.1 | No.2 | CWL | No.1 | No.2 | CWL | | Toilet (Latrine) | | | Rubbish pit | | | Pen (Cattle, Goat, Poutry etc.) | | |
| | | | | | | | | | | | | | D < 15 m | 15 =<D<30m | 30=<D<45m | D < 15 m | 15 =<D<30m | 30=<D<45m | D < 15 m | 15 =<D<30m | 30=<D<45m |
| 2-054 | Nkhompho-la | Mavwere | 6.55 | 117 | 24 | 0 | | | | | | | | | 1 | | | 1 | | | |
| 2-055 | Manyengo | Mavwere | 5.78 | 107 | 23.4 | 0 | | | | | | | | | | | 1 | | | | 2 |
| 2-056 | Kamlilika | Mavwere | 6.44 | 187 | 26.7 | 0 | | | | | | BH not fenced | | 1 | 1 | | | | | | |
| 2-057 | Mjolomobe | Mavwere | 5.86 | 85 | 26.6 | 0 | | | | | | BH not fenced | | 1 | 3 | | 1 | 1 | | | |
| 2-058 | M'manja | Mavwere | - | - | - | N | | | | | | Stopped working in 2006 | | | | | | | | | |
| 2-060 | Jusi | Mavwere | 6.64 | 243 | 25 | 0 | | | | | | | | | 2 | | | | | | |
| | | | | | | | | | | | | | **13** | **36** | **77** | **1** | **9** | **9** | **7** | **11** | **26** |
| 2-044 | Mumba | Zulu | 6.59 | 208 | 24.5 | 0 | | | | | | | | 1 | 2 | | | 1 | | | 2 |
| 2-045 | Kadzombe | Zulu | - | | - | N | | | | | | Stopped working in 2009 | | | | | | | | | |
| 2-046 | Kadzombe | Zulu | 6.26 | 178 | 26.2 | 0 | | | 0 | | | | | 1 | 2 | | | 1 | | | 1 |
| 2-047 | Chimbalame | Zulu | 6.75 | 248 | 24.6 | 0 | | | | | | | | | 1 | | 1 | | | | |
| 2-048 | Chiyeselana | Zulu | 7.01 | 325 | 24.6 | 0 | | | | | | Washing Slab not in use | | 1 | 1 | | | 1 | | | |
| 2-059 | Gomani 1 | Zulu | 8.01 | 261 | 25 | 0 | | | | | | BH is brick fenced | | | 2 | | | | | | 1 |
| 2-061 | Mailosi | Zulu | - | | - | N | | | | | | BH stopped working in 2009 | | | | | | | | | |
| 2-062 | Mtamad-zongo | Zulu | 6.6 | 184 | 26.4 | 0 | | | | | | Washing basin is in use | | 2 | | | | | | 2 | |
| 2-063 | Nwandawa-ra | Zulu | - | | - | N | | | | | | Stopped working on 1/6/2011 | | | | | | | | | |
| 2-064 | Kachokamkomero | Zulu | 6.64 | 244 | 25.1 | 44 | 0 | | | | | Just after pump replacement | | 2 | 2 | | | | | 1 | 1 |
| 2-066 | Jamu | Zulu | 6.3 | 130 | 24.9 | 0 | | | | | | | | 1 | 2 | | | | 2 | 1 | 1 |
| 2-067 | Chimpanba | Zulu | 6.77 | 519 | 26.1 | 0 | | | | | | | 1 | | 3 | | | | | | |
| 2-068 | Chiwoko | Zulu | 7.11 | 384 | 25.7 | 0 | | | | | | | | 1 | 2 | | | | 1 | | 2 |
| 2-069 | Chiwoko | Zulu | 7.17 | 408 | 24.9 | 0 | | | | | | | | 3 | 1 | | 2 | | | | |
| 2-070 | Mazawa | Zulu | 6.39 | 204 | 25 | 0 | | 0 | 0 | | 0 | Washing basin is in use | | 2 | 2 | | | | | | |
| 2-071 | Mbachunda | Zulu | 6.62 | 262 | 24.9 | 0 | | | | | | | 1 | 2 | 1 | | | | 1 | 1 | |
| 2-072 | Mbachundu | Zulu | 6.61 | 324 | 25.1 | 0 | | | | | | Washing basin in use | 3 | 2 | 1 | | | | | | |
| 2-073 | Chintanda | Zulu | - | | - | N | | | | | | Not working since 2006 | | | | | | | | | |
| 2-074 | Kachikon-do | Zulu | 6.33 | 157 | 25.5 | 0 | | | | | | | | | 1 | | | | | 2 | |
| 2-075 | Chiphala | Zulu | - | | - | N | | | | | | Stopped working in 2004 | | | | | | | | | |
| 2-076 | Mthawira | Zulu | 6.49 | 126 | 26.8 | 0 | | | | | | Washing basin is in use | | 1 | 1 | | | | | | 1 |
| 2-077 | Dzidzwa | Zulu | 5.78 | 166 | 26.1 | 0 | | | | | | | | 4 | 2 | | | | 1 | 2 | 1 |
| 2-078 | Chalema | Zulu | 7.17 | 448 | 24.7 | 0 | | | | | | Washing basin in use | | 1 | 2 | | | | 1 | | 1 |
| 2-079 | Kalilang-we | Zulu | - | | - | N | | | | | | Not working since 2002 | | | | | | | | | |
| 2-080 | Msemwe | Zulu | 6.71 | 220 | 25.2 | 0 | | | | | | Washing basin is in use | 1 | | 2 | | | | | 2 | 2 |
| 2-081 | Msemwe | Zulu | 6.25 | 235 | 25.5 | 0 | | | | | | Washing basin is in use | 1 | 2 | | | | | 1 | 1 | 1 |
| 2-082 | Mando | Zulu | 7.45 | 409 | 26 | 0 | | | | | | Washing basin is in use | | 1 | 1 | | | | | | 1 |
| 2-083 | Gereta | Zulu | 7.01 | 285 | 27.9 | 0 | | | | | | Washing basin is in use | | 1 | 1 | | 1 | 1 | | | |
| 2-084 | Matimba | Zulu | 6.45 | 282 | 25.9 | 0 | | | | | | | | | 1 | | | | | | |
| 2-085 | Matimba | Zulu | 6.17 | 222 | 25 | 0 | | 0 | 0 | | 0 | | | 1 | 1 | | | | | | 1 |
| 2-086 | Jenjewa | Zulu | 5.95 | 108 | 24.6 | 0 | | | | | | Washing basin is in use | | | 1 | | | | | | |
| 2-087 | Kanjeleng | Zulu | - | | - | N | | | | | | Stopped working in March 2011 | | | | | | | | | |
| 2-088 | Kamndaya | Zulu | - | | - | N | | | | | | | | | | | | | | | |
| 2-089 | Mzati | Zulu | 6.27 | 160 | 26.1 | 0 | | | | | | | 1 | | 1 | | | | | 1 | |
| 2-090 | Zefalino | Zulu | 6.4 | 131 | 27 | 0 | | | | | | Washing basin is in use | | | 2 | | | | | 2 | 1 |
| 2-091 | Chiphala A | Zulu | 6.12 | 337 | 24.9 | 0 | | | | | | Washing basin not in use | 2 | 4 | 2 | | | | 1 | 1 | 1 |
| 2-092 | Chamveka | Zulu | 5.98 | 112 | 23.8 | 0 | | | | | | Washing basin is in use | | | 5 | | | | 1 | | |
| 2-093 | Kamwendo T. C. | Zulu | - | | - | v | | | | | | Not found | | | | | | | | | |
| 2-094 | Kamwendo T. C. | Zulu | 6.6 | 251 | 25.1 | 0 | 0 | 1 | 3 | 0 | 1 | | 1 | 1 | 1 | | | | | | |
| 2-095 | Chidewa | Zulu | 6.71 | 230 | 25.1 | 0 | | | | | | Washing basin is in use | | 1 | 3 | | | | | 1 | |
| 2-096 | Chikomani | Zulu | 6.62 | 256 | 25.4 | 0 | | | | | | Washing basin not in use | | | 1 | | | | 1 | | |
| 2-097 | Mdawa | Zulu | 6.48 | 204 | 26 | 0 | | | | | | Washing basin is in use | | | | | | | | | 1 |
| 2-098 | Kwachau-name | Zulu | - | | - | N | | | | | | BH stopped working in 2005 | | | | | | | | | |
| 2-099 | Mando | Zulu | 6.77 | 256 | 26.4 | 0 | 0 | 1 | | | | | | 1 | | | | | | 2 | |
| 2-100 | Chikoyi-Jombo | Zulu | 6.64 | 312 | 26.2 | 0 | | | | | | | | 4 | 6 | | | | | | 2 |
| 2-101 | Chimteka | Zulu | 6.48 | 227 | 25.2 | 0 | | | | | | | 1 | 3 | 2 | | | | | | 1 |
| 2-102 | Chetamba-la | Zulu | 6.46 | 250 | 18.5 | 0 | | 0 | 0 | | 0 | | | 1 | 1 | | | | | | |
| 2-103 | Chiwenkha | Zulu | 6.71 | 241 | 27.2 | 0 | | | | | | Washing basin not in use | 1 | | 1 | | | | | | 1 |
| 2-104 | Mphanga | Zulu | 5.76 | 104 | 26.5 | 0 | | | | | | Washing basin is in use | | 2 | | | | | | 2 | |
| 2-105 | Durira | Zulu | 5.91 | 134 | 26 | 0 | | | | | | Washing basin is in use | | | 2 | | | | | | 1 |
| 2-106 | Mphanga | Zulu | 6.08 | 140 | 26.5 | 0 | | | | | | Washing basin not in use | 1 | 1 | 4 | | | | | | 1 |
| 2-107 | Butawo | Zulu | - | | - | N | | | | | | | | | | | | | | | |
| 2-108 | Mndunga | Zulu | 5.85 | 95 | 26.8 | 0 | | | | | | Washing basin is in use | | | 1 | | | | | | |
| 2-109 | Kaligwenje | Zulu | 6.59 | 201 | 25.2 | 1 | 0 | | | | | | | | 1 | | | | | | |
| 2-110 | Kolona | Zulu | 6.64 | 254 | 27.1 | 0 | | | | | | Washing basin is in use | | 2 | 3 | | | | 1 | | |
| 3-001 | Kachaje | Zulu | 6.81 | 248 | 24.8 | 0 | | | | | | Washing basin is in use | | 2 | | | | | | 1 | |
| 3-002 | Mchambo-Gunda | Zulu | - | | - | N | | | | | | under repair | | | | | | | | | |
| 3-003 | Geresono | Zulu | 6.59 | 231 | 25.6 | 0 | | | | | | | | 1 | 5 | | | | | 1 | |

| BH No. | Village | T.A. | pH | EC (μS/cm) | temp | Faecal Coliform | | | Faecal Streptococci | | | Remarks | Distribution of Possible Source of Contamination | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | No.1 | No.2 | CWL | No.1 | No.2 | CWL | | Toilet (Latrine) | | | Rubbish pit | | | Pen (Cattle, Goat, Poutry etc.) | | |
| | | | | | | | | | | | | | D < 15 m | 15 =<D<30m | 30=<D<45m | D < 15 m | 15 =<D<30m | 30=<D<45m | D < 15 m | 15 =<D<30m | 30=<D<45m |
| 3-004 | Mchambo | Zulu | 6.33 | 221 | 24.6 | 0 | | | | | | Washing basin is in use | | | | | | | | | |
| 3-005 | Chikoloka | Zulu | 6.72 | 473 | 24.7 | 0 | | | | | | Washing basin is not in use | | | 1 | | | | | | |
| 3-006 | Tika | Zulu | 6.78 | 338 | 24.7 | 0 | | | | | | Washing Slab not in use | | | 2 | | | | | 1 | |
| 3-007 | Chimwere | Zulu | 7.51 | 448 | 24.6 | 0 | | | | | | | 1 | | 4 | | | | | 1 | |
| 3-008 | Kathyuka | Zulu | 6.7 | 191 | 24.2 | 0 | | | | | | Washing basin not in use | | 1 | | | | | | | 1 |
| 3-009 | Chiwete | Zulu | 7.23 | 430 | 25.5 | 0 | | | | | | Washing basin is in use | | 1 | | | | | | | |
| 3-010 | Changata | Zulu | 6.11 | 131 | 26.4 | 0 | | | | | | | 1 | | 1 | | | | | | 1 |
| 3-011 | Langwani | Zulu | 6.81 | 234 | 27.8 | 0 | | | | | | | 1 | | | | | | | | 1 |
| 3-012 | Sinosi | Zulu | 6.35 | 208 | 25.1 | 0 | | | | | | Washing basin in use | | 1 | 4 | | | | 1 | | 1 |
| 3-013 | Kanyimbo | Zulu | 6.06 | 230 | 25.1 | 0 | | | | | | Washing basin not in use | | 1 | 2 | | | | | | 1 |
| | | | | | | | | | | | | | **17** | **56** | **90** | **0** | **4** | **4** | **12** | **25** | **30** |
| 3-014 | Machilika | Mduwa | 6.48 | | 23.8 | 0 | | | | | | | | 2 | 2 | | | 2 | | | |
| 3-015 | Chikwekwe | Mduwa | 6.64 | | 26 | 0 | | | | | | Washing basin is in use | 2 | 2 | 2 | | | | 1 | | |
| 3-016 | Kanyenda | Mduwa | - | | - | N | | | | | | BH was vandalised in 1997 | | | | | | | | | |
| 3-017 | Mberere | Mduwa | 6.58 | | 25.2 | 0 | | | | | | Washing basin not in use | | 1 | | | | | | | |
| 3-018 | Mikundi T.C. | Mduwa | - | | - | N | | | | | | BH not working since 2009 | | | | | | | | | |
| 3-019 | Kalombo Sch | Mduwa | 7 | | 23.7 | 0 | | | | | | Washing basin not in use | | 2 | 1 | | | | | | |
| 3-020 | Tongole | Mduwa | 7.17 | | 25.1 | 0 | | | | | | Washing basin not in use | | 2 | | | 1 | | | | |
| 3-021 | Kalinde | Mduwa | 6.61 | | 25.4 | 0 | | | | | | Washing basin is in use | | 1 | 1 | | | | | 1 | |
| 3-022 | Jasi | Mduwa | 6.56 | | 15.9 | 0 | | | | | | Washing basin not in use | 1 | | 1 | | | | 1 | | |
| 3-023 | Chipuntiko-Chimutu | Mduwa | 6.58 | | 26 | 0 | | | | | | Washing basin is in use | | | | | | | | | |
| 3-024 | Kadiso | Mduwa | - | | - | N | | | | | | Not functioning since January 2011 | | | | | | | | | |
| 3-025 | Makumbi | Mduwa | 6.97 | | 25.3 | 0 | | | | | | BH not fenced | | 1 | 1 | | | | | | 1 |
| 3-026 | Mkangala | Mduwa | 6.46 | | 22.8 | 0 | | | | | | Washing basin not in use | | | 1 | | | | | | |
| 3-027 | Mng'ona | Mduwa | 6.77 | | 25.6 | 0 | | | | | | Washing basin is in use | | 2 | 2 | | | | | 1 | |
| 3-028 | Lezani | Mduwa | 6.66 | | 24.8 | 0 | | | | | | Washing basin is in use | | 1 | 2 | | | | | 1 | |
| 3-029 | Goseni | Mduwa | 6.6 | | 24.5 | 0 | | | | | | Washing basin not in use | | | 4 | | | | | 2 | |
| 3-030 | Timoti | Mduwa | 6.73 | | 24.5 | 0 | | | | | | Washing basin is in use | | 2 | 1 | | | | | 2 | |
| 3-031 | Sigereta | Mduwa | 7.35 | | 23.3 | 0 | | | | | | Washing basin is in use | 1 | | 1 | | | | | | |
| 3-032 | Chisamba | Mduwa | 6.11 | | 23.1 | 0 | | | | | | Washing basin not in use | | 1 | 2 | | | | 1 | 2 | 1 |
| 3-033 | Maole | Mduwa | 6.34 | | 23.7 | 0 | | | | | | Washing basin is in use | 2 | | | | | | 1 | | |
| 3-034 | Saidi | Mduwa | 6.69 | | 22 | 0 | | | | | | Washing basin not in use | | | 5 | | | | | | 1 |
| 3-035 | Mikuwa ii | Mduwa | 7.3 | | 25.4 | 0 | | | | | | Washing basin not in use | 1 | 2 | | | | | 1 | 2 | |
| 3-036 | Sundwe | Mduwa | 6.32 | | 25.9 | 1 | 0 | | | | | Washing basin is in use | | 1 | 2 | | | | | 1 | |
| 3-037 | Mphomwe | Mduwa | 6.64 | | 22.6 | 0 | | | | | | Washing basin is in use | | 1 | 1 | | | | | | 1 |
| 3-038 | Laisi | Mduwa | 6.57 | | 24 | 0 | | | | | | Washing basin not in use | 3 | 1 | | | | | | | 1 |
| 3-039 | Kabungwe-Drawo | Mduwa | 6.15 | | 23.8 | 0 | | | | | | washing basin is in use | | 1 | 2 | | | | | 1 | |
| 3-040 | Machakulo | Mduwa | 6.38 | | 25 | 0 | | | | | | Washing basin is in use | 2 | 1 | | | | | | 1 | |
| 3-045 | Mfelankhope | Mduwa | 7 | | 25.9 | 0 | | | | | | | | 2 | 1 | | | | 1 | | |
| 3-053 | Chinyera | Mduwa | 7.1 | | 24.3 | 0 | | | | | | Wash slab not in use | | 2 | 1 | | | | | 2 | |
| 3-082 | Chimkolokota | Mduwa | 7.44 | | 24.1 | 0 | | | | | | Washing Slab not in use | | 2 | 3 | | 1 | | | 1 | 1 |
| | | | | | | | | | | | | | **12** | **30** | **36** | **0** | **2** | **2** | **6** | **17** | **6** |
| 3-041 | Kapiri | Dambe | 6.67 | | 26.3 | 0 | | | | | | Washing basin not in use | | | 1 | | | | | | |
| 3-042 | Mthema T.C. | Dambe | 6.35 | | 25.8 | 0 | | | | | | | | | 4 | | | | | | |
| 3-043 | Chalunda T.C. | Dambe | 6.94 | | 26 | 26 | 30 | | | | | | | 2 | 1 | | | | | | |
| 3-044 | Kasanda | Dambe | 6.69 | | 25.3 | 0 | | | | | | Washing Basin in use | 1 | | 2 | | | | 1 | 1 | |
| 3-046 | Katonda Sch | Dambe | 6.78 | | 25.4 | 0 | | | | | | Washing basin is in use | | | 1 | | | | | | |
| 3-047 | Kamera | Dambe | 6.06 | | 25.9 | 0 | | | | | | | | 2 | 2 | | | | 1 | 1 | |
| 3-048 | Chisenga | Dambe | - | | - | 0 | | | | | | | | | | | | | | | |
| 3-049 | Kamphanbale | Dambe | 6.5 | | 23.7 | 0 | | | | | | | | | 1 | | | | | | 1 |
| 3-050 | Kabvuta | Dambe | 6.69 | | 26 | 0 | | | | | | | | | 3 | | | | | 2 | |
| 3-051 | Nkhunmbu | Dambe | 6.68 | | 24.6 | 0 | | | | | | | 1 | 1 | | | | | | 1 | 3 |
| 3-052 | Mphonda-Masinja | Dambe | - | | - | N | | | | | | | | | | | | | | | |
| 3-054 | Marten | Dambe | 6.68 | | 23.2 | 0 | | | | | | | | | 1 | | | | | | |
| 3-055 | Kanzimbi | Dambe | - | | - | N | | | | | | | | | | | | | | | |
| 3-056 | Gandali | Dambe | 7.21 | | 25.7 | 0 | | | | | | Washing basin is in use | | | | | | | | | |
| 3-058 | Elesani | Dambe | - | | - | N | | | | | | | | | | | | | | | |
| 3-059 | Kapiri Hospital | Dambe | - | | - | N | | | | | | BH abandoned | | | | | | | | | |
| 3-060 | Japana | Dambe | 6.64 | | 24.6 | 0 | | | | | | Wash Slab is used | 1 | 1 | 2 | | | | | 1 | 1 |
| 3-061 | Gong' ontha | Dambe | - | | - | N | | | | | | | | | | | | | | | |
| 3-062 | Kavunguti School | Dambe | 6.66 | | 25 | 0 | | 0 | 0 | | 0 | | | | | | | | | | |
| 3-063 | Kachere | Dambe | - | | - | | | | | | | | | | | | | | | | |

| BH No. | Village | T.A. | pH | EC ($\mu$ S/cm) | temp | Faecal Coliform | | | Faecal Streptococci | | | Remarks | Distribution of Possible Source of Contamination | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | No.1 | No.2 | CWL | No.1 | No.2 | CWL | | Toilet (Latrine) | | | Rubbish pit | | | Pen (Cattle, Goat, Poutry etc.) | | |
| | | | | | | | | | | | | | D < 15 m | 15 =<D<30m | 30=<D<45m | D < 15 m | 15 =<D<30m | 30=<D<45m | D < 15 m | 15 =<D<30m | 30=<D<45m |
| 3-064 | Kakunga | Dambe | 6.58 | | 25.2 | 0 | | | | | | Washing basin not in use | | | 2 | | | | | 1 | |
| 3-065 | Kamenya | Dambe | - | | - | N | | | | | | Stopped working in 2004 | | | | | | | | | |
| 3-066 | Nthema T.C. | Dambe | 6.77 | | 26.7 | 0 | | | | | | | 1 | | 2 | | | | | | |
| 3-091 | Khwere | Dambe | 6.5 | | 25.2 | 0 | | | | | | | | | | | | | | | |
| 3-092 | Khwere T.C. | Dambe | 6.61 | | 25.7 | 0 | | | | | | | | | | | | | | | |
| 3-093 | Mkumbi | Dambe | 6.27 | | 25.6 | 0 | | | | | | | 1 | 1 | 3 | | | | | 1 | 1 |
| 3-094 | Kambuwe | Dambe | - | | - | N | | | | | | BH not functioning since 2010 | | | | | | | | | |
| 3-095 | Kambuwe | Dambe | 7.18 | | 24.3 | 0 | | | | | | | 1 | 2 | 1 | | | | | 1 | 1 |
| 3-098 | Jowelo | Dambe | 6.37 | | 24.6 | 0 | | | | | | | 1 | 3 | 2 | | | | | 1 | |
| 3-099 | Mtulira | Dambe | - | | - | N | | | | | | | | | | | | | | | |
| 3-100 | Kalonga | Dambe | 6.28 | | 24 | 0 | | | | | | | | | 2 | | | | | | |
| 3-101 | Diti | Dambe | 6.82 | | 25.1 | 0 | | | | | | | 1 | 1 | | | | | | 4 | |
| 3-102 | Chitonde | Dambe | 7.3 | | 26 | 0 | | 0 | 51 | 48 | 47 | | 1 | 1 | | | 2 | | | 2 | |
| 3-103 | Kalulu Sch | Dambe | - | | - | N | | | | | | | | | | | | | | | |
| 3-104 | Kalulu T.C. | Dambe | 6.32 | | 24.2 | 0 | | | | | | | | 2 | 2 | | | | 2 | | |
| 3-105 | Katsompho | Dambe | 6.13 | | 24.5 | 0 | | | | | | | | 1 | 2 | | | | | | 1 |
| 3-106 | Msalanyama | Dambe | 7.42 | | 24.2 | 0 | | | | | | | | | | | | | | | |
| 3-107 | Mchonkwe | Dambe | 6.71 | | 24.3 | 0 | | | | | | | | | | | | | | | |
| 3-108 | Chiti | Dambe | 6.14 | | 24.6 | 0 | | | | | | | | | 1 | | | | | | 1 |
| 3-109 | Chiti | Dambe | 6.17 | | 24.8 | 0 | | | | | | | | 1 | | | | | | | 1 |
| 3-110 | Mphako | Dambe | - | | - | N | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | **9** | **18** | **35** | **0** | **2** | **0** | **4** | **16** | **10** |
| 3-057 | Chinkolokota | Mkanda | - | | - | | | | | | | | | | | | | | | | |
| 3-067 | Lubani | Mkanda | - | | - | N | | | | | | Stopped working in March 2010 | | | | | | | | | |
| 3-068 | Chinkhali | Mkanda | 6.98 | | 25.1 | 0 | | | | | | | | 1 | 2 | | | | | | |
| 3-069 | Chang' amba | Mkanda | 6.88 | | 23.8 | 0 | | | | | | | | | | | | | | | |
| 3-070 | Kuthethe | Mkanda | 7.04 | | 23.4 | 0 | | | | | | | | | 4 | | 2 | | | 2 | 2 |
| 3-071 | Dina | Mkanda | - | | - | N | | | | | | Stopped functioning in March 2011 | | | | | | | | | |
| 3-072 | Thengo | Mkanda | 7.44 | | 25.5 | 0 | | | | | | | | | 1 | | | | | | |
| 3-073 | Lameki | Mkanda | 7.32 | | 24.6 | 0 | | | | | | The waste water flows to the ditch | | | 2 | | | 1 | | 2 | |
| 3-074 | Kaledza | Mkanda | - | | - | | | | | | | | | | | | | | | | |
| 3-075 | Malungo | Mkanda | - | | - | | | | | | | | | | | | | | | | |
| 3-076 | Mphunda | Mkanda | 6.6 | | 24.5 | 0 | | 0 | 0 | | 0 | | | | 3 | | | 1 | | | |
| 3-077 | Kadewele-Mbewa | Mkanda | 6.96 | | 24.2 | 0 | | | | | | | | 2 | 2 | 1 | | | 1 | | |
| 3-078 | Kangulu | Mkanda | 7.54 | | 24.2 | 0 | | | | | | Washing Slab not in use | | 1 | 2 | | | 1 | | | 1 |
| 3-079 | Mkanda | Mkanda | - | | - | N | | | | | | | | | | | | | | | |
| 3-080 | Mkanda | Mkanda | - | | - | N | | | | | | | | | | | | | | | |
| 3-081 | Mazombwe | Mkanda | 7.02 | | 22.5 | 0 | | | | | | Washing slab not in use | | 3 | 2 | | | | | 1 | 1 |
| 3-083 | Masiwa | Mkanda | 6.43 | | 24.1 | 0 | | | | | | | | 1 | 3 | | | 2 | | | 1 |
| 3-084 | kambandekha | Mkanda | 5.94 | | 24.5 | 0 | | | | | | Washing basin in use | | | | | | | | | |
| 3-085 | Jimu | Mkanda | - | | - | N | | | | | | | | | | | | | | | |
| 3-086 | Lupiya | Mkanda | 6.42 | | 24.1 | 0 | | | | | | Washing basin in use | | 1 | 2 | 1 | 1 | 1 | | | |
| 3-087 | Chisauka | Mkanda | 7.18 | | 24.1 | 0 | | | | | | Washing basin in use | | | | | | | | | |
| 3-088 | Kawere | Mkanda | - | | - | N | | | | | | | | | | | | | | | |
| 3-089 | Msanda | Mkanda | - | | - | N | | | | | | BH not functioning since 2003 | | | | | | | | | |
| 3-090 | Zandana | Mkanda | - | | - | N | | | | | | | | | | | | | | | |
| 3-096 | Kankhwende | Mkanda | - | | - | N | | | | | | | | | | | | | | | |
| 3-097 | Mndaka | Mkanda | 7.21 | | 24.7 | 0 | | | | | | | | 1 | 2 | | 2 | | | 1 | |
| | | | | | | | | | | | | | **0** | **10** | **25** | **2** | **5** | **6** | **1** | **6** | **5** |
| | | | | | | | | | | | | **Grand Total** | **61** | **216** | **390** | **3** | **27** | **29** | **33** | **89** | **91** |

# 7－9　社会条件調査（ムチンジプロジェクト）

## 1. インタビュー調査の規模

表 A7 – 9 – 1 調査世帯数及び人口等

| No. | Community/Market Centre | Population/HH | Target HH | Leader of Centre |
|---|---|---|---|---|
| 1 | Mchinji Rural Communities | 289,747/87436 | 600 | 300 |

## 2. 村落リーダーへのインタビュー結果

表 A7 – 9 – 2　政府ガイドライン（250 人毎に 1 つの給水施設）を満たしていない村落

| Village | Total Population | Boreholes | Protected shallow wells |
|---|---|---|---|
| Msanda | 900 | 0 | 0 |
| Thengo | 520 | 0 | 0 |
| Lubayini | 700 | 1 | 0 |
| Lameke | 1030 | 1 | 2 |
| Milonga | 320 | 0 | 0 |
| Ndawala Zefelino | 600 | 0 | 1 |
| Chetambala | 550 | 0 | 1 |
| Dulira | 1500 | 0 | 0 |
| Katonda | 193 | | 0 |

| Village | Total Population | Boreholes | Protected shallow wells |
|---|---|---|---|
| Butao | 400 | 0 | 0 |
| kamphamale | 50 | | 0 |
| Felankhope | 250 | 0 | 0 |
| Chinyera | 213 | 0 | 1 |
| Maliseni | 273 | 0 | 0 |
| Kadzakumanja | 200 | | |
| Mtemadzongo | 88 | 0 | 0 |
| Kachikondo | 500 | 0 | 0 |
| Mazombwe | 375 | 0 | 1 |
| Poko | 2320 | 0 | 1 |

表 A7 – 9 – 3　料金徴収方法の有無と井戸稼働状況

| Borehole condition | Decided | | Not decided | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Functioning | 162 | 72.6 | 13 | 5.8 |
| Non-functioning | 40 | 17.9 | 8 | 3.6 |
| TOTAL | 202 | 90.5 | 21 | 9.4 |

表 A7 – 9 – 4　料金徴収方法と井戸稼働状況

| Borehole condition | Fixed fee | | In-kind | | Adhoc | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Functioning | 110 | 42.8 | 50 | 19.5 | 50 | 19.5 |
| Non-functioning | 26 | 10.1 | 12 | 4.6 | 9 | 3.5 |
| TOTAL | 136 | 52.9 | 62 | 24.1 | 59 | 23.0 |

表 A7 – 9 – 5　修理用積立金額(平均）と井戸稼働状況

| Borehole condition | Average Amount (MK) |
|---|---|
| Functioning | 1,027.57 |
| Non-functioning | 251.13 |
| TOTAL | 639.35 |

表 A7 – 9 – 6　新規設置もしくは修理予定がある村落リスト

| LIST OF VILLAGES | | | | | |
|---|---|---|---|---|---|
| Kanyimbo | Mandawala | Jim | Diti | Kalulu TC | Dina |
| Thengo | Kalilangwe | Bololo | Mndaka | Mikundi | Kandaya |
| Lubayini | Tika | Chinkhale | Joel | Japana | Chemveka |
| Mkhala | Msemwe | Gunda | Temanimwendo | Kawele | Kamanga |
| Mphindu | Mazombwe | Sinos | Saidi | Lenadi | Khwere |
| Chibonyole | Poko | Langwani | Pinda | Zandana | Tsibwe |
| Ndawala zefelino | Chimkolokota | Chamveka | Malungo | Mphomwa | Kalulu |
| Chidzanja | Mbachundu | Geresomo | Machilika | Mkangala | Nkumbi |
| Chetambala | Galeta | Kanjelengo | Chiphala | Mng'ona | Lombo |
| Dulira | Mando | Kalinde | Chioko | Drawo | Chitande |
| Nkhunumbu | Mailosi | Goseni | Mzingo | Chalema | Kambuwe |
| Kamphamale | Mumba | Lezani | Manthala | Dzidzwa | Kadzakumanja |
| Felankhope | Chiphala | Jasi | Chiwaula | Tankhule | Mtemadzongo |
| Kanzimbi | Chambakata | Laisi | Maganga | Mthawira | Chidewa |
| Chinyera | Nkhotamo | Tongole | Chimwere | Milonga | Nkumba |
| Luka | Matimba | Mtsukunya | Bua TC | | |

表 A7 – 9 – 7　ハンドポンプ不稼働の理由

| Reasons | No. | % |
|---|---|---|
| WPC unable to maintain and repair | 17 | 5.8 |
| Inadequate funds | 140 | 47.7 |
| Lack of trained mechanics | 15 | 5.2 |
| Vandalism/Theft | 21 | 7.2 |
| Non-availability of spare parts | 92 | 31.4 |
| Unsatisfied with other water sources (such as boreholes) | 3 | 1.0 |
| Others | 5 | 1.7 |

表 A7 – 9 – 8　WPC トレーニングの必要性

| Borehole condition | Necessary | | Not necessary | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Functioning | 224 | 80.0 | 2 | 0.7 |
| Non-functioning | 53 | 18.9 | 1 | 0.4 |
| TOTAL | 277 | 98.9 | 3 | 1.1 |

表 A7 – 9 – 9　希望するトレーニング内容

| Training Contents | No. | % |
|---|---|---|
| Repairs and Maintenance | 273 | 42.0 |
| Money Collection and Financial Management | 95 | 14.6 |
| Awareness Campaigns on Water Usage | 81 | 12.5 |
| Hygiene and Sanitation Promotion | 201 | 30.9 |
| others | 0 | 0.0 |

表 A7 – 9 – 10　水洗い場の必要性

| Borehole condition | Necessary | | Not necessary | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Functioning | 147 | 54.0 | 73 | 26.8 |
| Non-functioning | 40 | 14.7 | 12 | 4.5 |
| TOTAL | 187 | 68.7 | 85 | 31.3 |

## 3. 村落住民へのインタビュー結果

表 A7 – 9 – 11　井戸の稼働/不稼働

| Condition /status of Borehole | No. | % |
|---|---|---|
| Functioning | 247 | 84.1 |
| Non-functioning | 47 | 15.9 |
| TOTAL | 294 | 100 |

表 A7 – 9 – 12　日本建設井戸の水量に関する満足度

| Volume | No. | % |
|---|---|---|
| Sufficient | 476 | 81.8 |
| Insufficient | 106 | 18.2 |

表 A7 – 9 – 13　日本建設井戸の水質に関する満足度

| Quality | No. | % |
|---|---|---|
| Good | 533 | 92.2 |
| Salty | 33 | 5.8 |
| Ferrous | 6 | 1.0 |
| Coloured | 6 | 1.0 |
| Other | 0 | 0.0 |

表 A7 – 9 – 14　過去のハンドポンプ修理試行

| Borehole condition | Have tried repair before | | Have not tried to repair before | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Functioning | 471 | 82.1 | 11 | 1.9 |
| Non-functioning | 81 | 14.1 | 11 | 1.9 |

表 A7 – 9 – 15　ハンドポンプ修理を行った機関

| Borehole condition | Community | | Donor | | WMA | | Neighbors | | Area mechanics | | Other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Functioning | 231 | 42.5 | 24 | 4.4 | 41 | 7.5 | 12 | 2.2 | 121 | 22.2 | 34 | 6.3 |
| Non-functioning | 49 | 9.0 | 6 | 1.1 | 3 | 0.6 | 5 | 0.9 | 14 | 2.6 | 4 | 0.7 |

表 A7 – 9 – 16　代替水源

| Borehole Condition | River /Dambo | Spring | UP SW | Protected SW | Borehole | Tap | Other |
|---|---|---|---|---|---|---|---|
| | No. | No. | No. | No. | No. | No. | No. |
| Functioning | 184 | 0 | 121 | 98 | 82 | 2 | 5 |
| Non-functioning | 31 | 0 | 26 | 18 | 19 | 0 | 0 |

表 A7 – 9 – 17　故障し代替水源を使用している井戸リスト

| No. | Village | TA | Code |
|---|---|---|---|
| 1 | Bua T.C. | Mlonyeni | 1-061 |
| 2 | Katsenga | Mlonyeni | 1-068 |
| 3 | Kankhande | Mlonyeni | 1-076 |
| 4 | Papa | Mlonyeni | 2-017 |
| 5 | Kamlilika | Mlonyeni | 2-019 |
| 6 | Kabuthu-Chituka | Mlonyeni | 2-052 |
| 7 | Nkhomphola | Mlonyeni | 2-054 |
| 8 | Matimba | Zulu | 2-084 |
| 9 | Mphonda-Masinja | Dambe | 3-052 |
| 10 | Thengo | Mkanda | 3-072 |
| 11 | Kangulu | Mkanda | 3-078 |
| 12 | Mkanda | Mkanda | 3-080 |
| 13 | Kammbadekha | Mkanda | 3-084 |
| 14 | Zandana | Mkanda | 3-090 |
| 15 | Khwere | Dambe | 3-091 |
| 16 | Kambuwe | Dambe | 3-094 |
| 17 | Kambuwe | Dambe | 3-095 |

表 A7 – 9 – 18　井戸の修理必要性

| Borehole condition | Necessary | | Unnecessary | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Functioning | 403 | 69.4 | 85 | 14.6 |
| Non-functioning | 83 | 14.3 | 10 | 2.1 |
| TOTAL | 486 | 83.7 | 95 | 16.7 |

表 A7 – 9 – 19　ハンドポンプ不稼働の理由

| Reasons | No. | % |
|---|---|---|
| WPC unable to maintain and repair | 34 | 6.2 |
| Inadequate funds | 238 | 43.7 |
| Lack of trained mechanics | 32 | 5.9 |
| Vandalism/Theft | 28 | 5.1 |
| Non-availability of spare parts | 197 | 36.1 |
| Unsatisfied with other water sources (such as boreholes) | 13 | 2.4 |
| Others | 3 | 0.6 |

表 A7 – 9 – 20　WPC に対する評価

| Borehole Condition | Excellent | | good | | moderate | | Not-good | | Very bad | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Functioning | 124 | 23.3 | 210 | 39.4 | 68 | 12.8 | 45 | 8.4 | 7 | 1.3 |
| Non-functioning | 17 | 3.2 | 30 | 5.6 | 21 | 3.9 | 9 | 1.7 | 2 | 0.4 |
| TOTAL | 141 | 26.5 | 240 | 45.0 | 89 | 16.7 | 54 | 10.1 | 9 | 1.7 |

表 A7 – 9 – 21　O&M への費用負担意志

| Borehole Condition | Willing | | Not willing | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Functioning | 453 | 77.2 | 40 | 6.8 |
| Non-functioning | 77 | 13.1 | 17 | 2.9 |
| TOTAL | 530 | 90.3 | 57 | 9.7 |

表 A7 – 9 – 22　O&M への費用負担可能額（年間）

| Borehole Condition | MK30/less | 50K | 100K | 150K | 200K | 300K | 400K | 500K | More | Average |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | No. | No. | No. | No. | No. | No. | No. | No. | MK/year |
| Functioning | 42 | 153 | 120 | 29 | 37 | 13 | 7 | 36 | 14 | 145.04 |
| Non-functioning | 6 | 20 | 25 | 4 | 11 | 7 | 1 | 5 | 0 | 146.00 |
| TOTAL | 48 | 173 | 145 | 33 | 48 | 20 | 8 | 41 | 14 | 145.18 |

表 A7 – 9 – 23　過去の O&M への費用負担有無

| Borehole Condition | Contributed (No.) | | Average Amount (MK) |
|---|---|---|---|
| | Yes | No | |
| Functioning | 438 | 55 | 521.10 |
| Non-functioning | 78 | 16 | 210.13 |
| TOTAL | 516 | 71 | 365.61 |

表 A7 – 9 – 24　実践している衛生的行動

| Practices | RESPONSES | | | |
|---|---|---|---|---|
| Boiling drinking water | Always<br>(17 )answers ( 3.0 ) % | Normally<br>(37) answers (6.5 ) % | Never<br>(513) answers (90.5 ) % | - |
| Storage of water | Pot with filter<br>(26) answers (4.6) % | Pot<br>(40) answers (7.1) % | Bucket<br>(489) answers (86.2) % | Other<br>(12) answers ( 2.1) % |
| Scooping water | A cup<br>(417)answers (73.5) % | A Dipper<br>(8) answers (1.4) % | Two cups<br>(120 ) answers (21.2) % | Dipper and cup<br>(22) answers (3.9) % |
| Wash hands | Always w/soap<br>( 72)answers (12.7) % | Always<br>(398 ) answers (70.2) % | Sometimes<br>(88 )answers (15.5) % | Seldom<br>( 9)answers (1.6) % |
| Toilet<br>excretion place | Toilet<br>(534) answers (94.2) % | Garden<br>(33) answers (5.8) % | River<br>( 0 ) answers ( 0.0) % | Other<br>( 0) answers (0.0) % |
| Owner of toilet | Individual<br>(471 ) answers ( 88.2) % | Community<br>(41) answers (7.8) % | Rent<br>(11)answers (2.0) % | Other<br>(11)answers (2.0) % |
| Type of toilet | VIP<br>( 1) answers (0.2) % | Pit w/san plat<br>(12) answers (2.2) % | Pit latrine<br>(521) answers (97.6) % | - |
| Wash hand after toilet | Always w/soap<br>(135) answers (23.8) % | Always<br>(269) answers (47.4) % | Sometimes<br>(154) answers (27.2) % | Seldom/never<br>(9) answers (1.6) % |
| Hygiene education | Never taken<br>( 247) answers (43.6) % | Taken<br>(319) answers (56.4) % | - | - |

表 A7 – 9 – 25　水因性疾病

| Borehole Condition | Diarrhea | | Dysentery | | Typhoid | | cholera | | Eye disease | | Skin disease | | other | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| Functioning | 161 | 34.9 | 63 | 13.7 | 3 | 0.6 | 11 | 2.3 | 28 | 6.1 | 65 | 14.1 | 57 | 12.3 |
| Non-functioning | 31 | 6.7 | 15 | 3.2 | 1 | 0.3 | 1 | 0.3 | 8 | 1.7 | 9 | 1.9 | 8 | 1.7 |
| TOTAL | 192 | 41.6 | 78 | 16.9 | 4 | 0.9 | 12 | 2.6 | 36 | 7.8 | 74 | 16.0 | 65 | 140 |

表 A7 – 9 – 26　世帯収入

| Borehole Condition | From Primary Occupation | From Secondary Occupation | Total (MK) |
|---|---|---|---|
| Functioning | 52,437.30 | 12,873.45 | 64,980.90 |
| Non-functioning | 51,494.70 | 14,876.12 | 66,081.17 |
| TOTAL | 51,966.00 | 13,874.79 | 65,531.04 |

表 A7 – 9 – 27　質問票（村落住民用）

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Questionnaire for | | | VILLAGERS (House wives/ Family chiefs) | | | | | | | **Mchinji Rehabili** | |
| District | | | TA | | G.V.H | | | WARD | | | |
| VILLAGE | | | NAME | M/F | DATE | | | Inter-viewer | | | |
| BH No. - | □JICA, ☐Other ( ) | Drilled in (yr) | | □Functioning ☐Not Functioning | Broken in (yr) | | Other BH | | □Functioning ☐Not Functioning | | |
| JICA Borehole | ☐Excellent, ☐ Good, ☐moderate, ☐not-good. ☐very bad | | | | Desirable Improvement | | | | | | |
| Functioning | JICA borehole | Satisfaction | Volume: □Sufficient ☐insufficient Quality: ☐Good ☐Salty ☐Ferrous ☐Colour ☐Other( ) | | | | | | | | |
| | | Daily Consumption | buckets/day *20L bucket | | | | | | | | |
| | Trial of repair (actually repaired): ☐Yes ☐No | | | Repaired by: | ☐by ourselves | □by donor, NGO | ☐by WMA (Govn't) | □by neiborings | □Area Mech. | □other | |
| Currently Not-Functioning | alternative water source | Water Source | ☐River/ Dambo ☐Spring ☐U-p SW ☐Protected SW ☐Borehole ☐Tap ☐Other( ) | | | | | | | | |
| | | Distance to source: m | Frequency: ☐Every day ☐Other( ) | | Times a day: | | | | times/day | | |
| | | Main Transport | ☐On foot ☐Bicycle ☐Cart ☐Motor bike ☐Domestic Animal ☐Other( ) | | | | | | | | |
| | | Satisfaction | Volume: □Sufficient ☐insufficient Quality: ☐Good ☐Salty ☐Ferrous ☐Colour ☐Other( ) | | | | | | | | |
| | | Daily Consumption | buckets/day *20L bucket | | | | | | | | |
| | Need of rehabilitation: ☐Yes ☐No | | Expectations: ☐Saving time ☐Lighten Labour ☐Secure Quality ☐Less Expense ☐Other | | | | | | | | |
| | Trial of repair (trial only, not actually): ☐Yes ☐No | | | | | | | | | | |
| | Trial of repair (actually repaired in the past): ☐Yes ☐No | | | Repaired by (check multi): | ☐by ourselves | □by donor, NGO | ☐by WMA (Govn't) | □by neiborings | □Area Mech. | □other | |
| | Reasons of not-functioning now (multiple answer): | | ☐WPC not know how to maintaine and repair ☐not have enough money ☐difficult to find mechanic | | | | | | | | |
| | | | ☐vandalism/theft ☐difficult to get spareparts ☐can be satisfied with other water supplies (such as other boreholes) ☐others | | | | | | | | |
| Willings/Affordability | Water Point Committee | | □Exist | □not exist | Evaluation of WPC's Activity: ☐Excellent, ☐ Good, ☐moderate, ☐not-good. ☐very bad | | | | | | |
| | Your willingness to pay for pump maintenance: ☐ Yes ☐ No | | | | | | | | | | |
| | Affordability to pay for pump maintenance per HH (annual): ☐-30 K ☐50 K ☐100 K ☐150 K ☐200 K ☐300K ☐400K ☐500K ☐More | | | | | | | | | | |
| | Have you ever provided monetary contribution for maintenance of the JICA's borehole? ☐Yes ☐No | | | | | | | | If Yes, how much? _____K | | |
| Hygiene & Sanitation | Boiling drinking water | | to drink water after boiling ☐always ☐normally ☐never | | | | | | | | |
| | Storage of Water | | Water Storage in house ☐Pot with filter ☐Pot ☐Bucket ☐Other ( ) | | | | | | | | |
| | Scooping water | | by ☐a cup ☐a dipper ☐two cups ☐a dipper and a cup ☐Other ( , ) | | | | | | | | |
| | Washing hands before eat? | | ☐always wash with soap or ash ☐always ☐sometimes ☐seldom ☐never | | | | | | | | |
| | Toilet | Excretion place | ☐toilet ☐garden ☐river ☐Other ( ) | | Owner of toilet: ☐individual ☐community ☐rent ☐other | | | | | | |
| | | Type of Toilet | ☐VIP toilet ☐Pit Latrine with SanPlat ☐Pit Latrine | | | | | | | | |
| | | Washing hands | after excretion ☐wash with soap ☐always ☐sometimes ☐seldom ☐never | | | | | | | | |
| | Hygiene Education | | ☐never taken ☐taken (place: at , frequency: / year, trained by: ) | | | | | | | | |
| | Previous Illness (persons in Family/year) | | ☐Diarrhoea( ) ☐Dysentery( ) ☐Typhoid( ) ☐Cholera( ) ☐Eye disease( ) ☐Skin disease ( ) | | | | | | | | |
| Socio-Economic Situation | Family | ( ) persons /family | Occupation:☐Agri. ☐Breeder, ☐Merchant, ☐Civil Servant, ☐Agri. Labourer, ☐Wage Earner, ☐Other( ) | | | | | | | | |
| | | | Side Job: ☐Agri. ☐Breeder, ☐Merchant, ☐Civil Servant, ☐Agri. Labourer☐Wage Earner, ☐Other( ) | | | | | | | | |
| | Income | Primary occuapation | | | K/year | | | | | | |
| | | Side job | | | K/year | | | | | | |
| | | Total Income | | | K/year | | | | | | |

# 表 A7 - 9 - 28　質問票（村落長用）

| Questionnaire for | | | VILLAGE HEADMAN / VILLAGE HEALTH WATER COMMITTEE | | | | | | **Mchinji Rehabili** |
|---|---|---|---|---|---|---|---|---|---|
| District/T.A. | | | | G.V.H | | Village | | | |
| Name | | | | Title | | Date | | Interviewer | |
| Village info. | Population | Population & Housing Census of 2008 | Village Name at the census | | Number of Households | Men | Women | Total | Change after Census 2008 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | Evolution | Year 1995 (at BH construction) | | Year 2000 | Year 2005 | | Year 2010 (at present) ( HH) | Event: Division, Merger, Changing Name etc. (year ) |
| | | Population by age | 0-9 years old | | 10-19 years old | 20-49 years old | | more than 50 years old | |
| | Infrastructure/ Facilities | Education | 1. Primary school ☐Yes ☐No | | | 2. Secondary school ☐Yes ☐No | | | |
| | | Health services | 1. Health Centre ☐Yes ☐No | | | Location: | | | (_____hours by walk to go) |
| | | | 2. Dispensary ☐Yes ☐No | | 3. Hospital ☐Yes ☐No | | name: | | (_____hours by walk to go) |
| | | Draw a map of the village which shows water supply facilities such as JICA's borehole and others with village boundary. | | | | | | | |
| Village Health Water Committee | Water point Committee of JICA's borehole | Establishment | ☐No --> | Plan for establishment: ☐Yes (expected date: ) ☐No (reason: ) | | | | | |
| | | | ☐Yes --> | Year of establishment: | Member : Men , Women | | Way of establishment: ☐ elected ☐ designated | | |
| | | Members: ☐Chairperson, ☐Vice-CP, ☐Secretary, ☐Treasurer, ☐Pump caretaker, ☐Other ( ) | | | | | | | Year of last member change |
| | | Replaced members: ☐President, ☐Vice-president, ☐Secretary, ☐Treasurer, ☐Pump caretaker, ☐Other ( ) | | | | | | | Reason: |
| | | O& M Charge | Way of collection | ☐Decided ☐Not yet | Way of payment | ☐Fixed fee ( MK/HH/year) ☐Piece Work ( days/ year) ☐when repair necessary | | | |
| | | | Current amount of the reserve for maintenance (estimated amount is acceptable): ☐ K（at present） ☐ do not know | | | | | | |
| | | | Place of safekeeping of the money collected: | ☐Treasurer (village) ☐Bank ☐Post office ☐Church ☐Other ( ) | | | | | |
| Water supply facilities | Infra. | Infrastructure of water supply in the village except JICA's borehole under functioning: boreholes-( ) places, standpipe-( ) places, protected shallow wells- ( ) places | | | | | | | |
| | | Does your village have plans to install and/or rehabilitate boreholes by your own effort and/or by external support? ☐Yes ☐ No | | | | | | | |
| | Condition of the JICA's borehole | Condition of the JICA's borehole | ☐function ☐ Not function | | | | | | |
| | | In the case of JICA's borehole is now not functioning, what are the reasons? (multiple answers) | | | | | | | |
| | | | ☐WPC does not know how to maintain and repair ☐not have enough money ☐difficult to find mechanic | | | | | | |
| | | | ☐vandalism/theft ☐difficult to get spareparts ☐can be satisfied with other water supplies (such as other boreholes) ☐others | | | | | | |
| | | Has the JICA's borehole got repaired before? ☐ Yes ☐ No | | | | | | | |
| | | | Repaired by (check multi): | ☐by ourselves | ☐by donor, NGO | ☐by WMA | ☐by neiborings | ☐Area Mech. | ☐by other |
| | | Detailed info on Failure/ Repair history | Failure (1)(cause: , month/year_____/____) , Failure (2) (cause: , month/year _____/____) | | | | | | |
| | | | Repair (repaired by : , month/year _____/_____, costs: MK) | | | | | | |
| | | | Maintenance ( dismantled by: , times/year, recent replacement of parts: in (Month/Yr) : / ) | | | | | | |
| | training | Do you think that WPC now has enough capacity to maintain the JICA's borehole in sustainable manner? ☐Yes ☐ No | | | | | | | |
| | | Do you think that WPC now needs to receive training for better maintainance of the JICA's borehole? ☐Yes ☐ No | | | | | | | |
| | | If Yes, what categories are necessary to receive trainings? (check multiple) | | | | | | | |
| | | | ☐mechanical techniques ☐ money collection and management ☐promotion of local people's awareness on water usage ☐ hygiene and sanitation ☐ others | | | | | | |
| Hygiene and sanitation | Toilet | Toilet utilization: _____% of villagers | | | Number of toilets in the village: _____places in the village | | | | |
| | Garbage | Garbage pits: _____places in the village | | | Cleanness in the village (observation) | ☐very clean ☐clean ☐normal ☐slightly dirty ☐dirty | | | |
| | Wash | Communal Wash Basin at Water Point ☐ necessary ☐ not necessary | | | Frequency: ☐everyday ☐2-3 times/week ☐less than once/week ☐other | | | | |
| | Bathing | ☐ River/ Dambo ☐ Bath shelter (at home) ☐ other ( ) | | | | | | | |
| | Education | Visit of Health Surveillance Assistant: | | times/ month | Opportunities of Sanitation and Hygiene education: | | | ☐Yes ☐No | |
| | | Frequency of Sanitation and Hygiene education | | times/ year | Sanitation and Hygiene education given by : | | | | |

# 表A7－7－29　結果一覧表（村落住民用）

| General | | | JICA Borehole | | | | | | Alternative Water source | | | | Willings/Affordability | | | | | | Hygine & Sanitation | | | Socio-Economic Situation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH No. | TA | Village | rating | Satisfaction | | Daily use buckets /day | Trial repair | Repaired by | Alternative Water source | Times a day | Need of rehab | Expectations | WPC | Evaluation WPC activities | Willingness to pay | Affordability to pay pump maintenance per hh | money contribution for maintenance of JICA BH | How much (MK) | Excretion place | Type of illness | No. of person in family | Occupation | Total income |
| | | | | Volume | Quality | | | | | | | | | | | | | | | | | | |
| 1-001 | Mlonyeni | Chidambo | Excellent | S | Good | 4 | Yes | Village | BH | 4 | Yes | Secure Quality | Exist | Good | No | N/A | Yes | 20 | Toilet | Skin disease | 7 | Agri. | 100,000 |
| 1-001 | Mlonyeni | Chidambo | Very bad | S | Good | 7 | Yes | Village | BH | 4 | Yes | Secure Quality | Exist | Not-Good | Yes | 100K | Yes | 100 | Toilet | Skin disease | 6 | Agri. | 24,000 |
| 1-002 | Mlonyeni | Chiute | Excellent | S | Good | 8 | Yes | Area Mech. | BH | 4 | Yes | Save Time | Exist | Very bad | Yes | 100K | Yes | 2,200 | Toilet | Cholera | 5 | Agri. | 120,000 |
| 1-002 | Mlonyeni | Chiute | Excellent | S | Good | 5 | Yes | Area Mech. | BH | 2 | Yes | Secure Quality | Exist | Good | Yes | 150K | Yes | 100 | Toilet | Cholera | 6 | Agri. | 80,000 |
| 1-003 | Mlonyeni | Tsamphale | Excellent | S | Good | 4 | Yes | N/A | R/D | 1 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 4,000 | Toilet | Skin disease | 4 | Agri. | 167,000 |
| 1-003 | Mlonyeni | Tsamphale | Excellent | S | Good | 5 | Yes | Area Mech. | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 4,000 | Toilet | Skin disease | 6 | Agri. | 40,000 |
| 1-004 | Mlonyeni | Chamveka | Very bad | S | Good | 5 | Yes | Village | Up SW | 5 | Yes | Save Time | Not exist | N/A | No | N/A | No | N/A | Toilet | N/A | 5 | Agri. | 105,000 |
| 1-004 | mlonyeni | Chamveka | Excellent | S | Good | 4 | Yes | Village | R/D | 3 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | Dysentery | 4 | Agri. | 10,000 |
| 1-005 | Mlonyeni | Maliwane | Good | S | Good | 5 | Yes | Village | R/D | 2 | Yes | Secure Quality | Exist | Good | Yes | 150K | Yes | 5,000 | Toilet | Diarrhoea | 3 | Merchant | 230,000 |
| 1-005 | Mlonyeni | Maliwane | Excellent | S | Good | 3 | Yes | Village | R/D | 2 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 10,000 | Toilet | Diarrhoea | 5 | Agri. | 113,000 |
| 1-006 | Mlonyeni | Maliwane | Excellent | S | Good | 6 | Yes | Area Mech. | BH | 2 | Yes | Lighten Labour | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Skin disease | 7 | Agri. | 80,000 |
| 1-006 | Mlonyeni | Maliwane | Excellent | S | Good | 6 | Yes | Area Mech. | BH | 2 | No | N/A | Not exist | Not-Good | Yes | 50K | Yes | 10,000 | Toilet | Skin disease | 6 | Agri. | 59,000 |
| 1-007 | Mlonyeni | Mlonyeni | Excellent | S | Good | 10 | Yes | Village | PSW | 1 | Yes | Secure Quality | Exist | Excellent | Yes | 200K | Yes | 50 | Toilet | Eye disease | 6 | Agri. | 13,000 |
| 1-007 | Mlonyeni | Mlonyeni | Moderate | S | Good | 2 | Yes | WMA | R/D | 3 | No | N/A | Exist | Good | Yes | 30K | Yes | 50 | Toilet | N/A | 5 | N/A | N/A |
| 1-008 | Mlonyeni | Zunguze | Excellent | S | Good | 2 | Yes | N/A | R/D | 4 | Yes | Less Expense | Exist | Good | No | N/A | Yes | 100 | Toilet | Diarrhoea | 3 | Agri. | 13,000 |
| 1-008 | Mlonyeni | Zunguze | Good | S | Salty | 4 | Yes | Neiborings | R/D | 3 | No | N/A | Exist | Good | Yes | 30K | Yes | 50 | Toilet | N/A | 5 | Agri. | 5,000 |
| 1-009 | Mlonyeni | Mkangeni | Good | S | Good | 4 | Yes | Area Mech. | Up SW | 10 | Yes | Lighten Labour | Not exist | N/A | Yes | 100K | Yes | 50 | Toilet | | 6 | Merchant | 20,000 |
| 1-009 | Mlonyeni | Mkangeni | Excellent | S | Good | 7 | Yes | Village | R/D | 4 | Yes | Less Expense | Exist | Good | Yes | 500K | Yes | 20 | Toilet | Dysentery | 8 | Agri. | 10,000 |
| 1-010 | Mlonyeni | Maganga | Good | S | Good | 6 | Yes | Area Mech. | BH | 5 | Yes | Save Time | Exist | Good | Yes | More | Yes | 300 | Toilet | | 8 | Agri. | 8,500 |
| 1-010 | Mlonyeni | Maganga | Excellent | S | Good | 6 | Yes | Village | R/D | 4 | Yes | Save Time | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 30,000 |
| 1-011 | Mlonyeni | Chiwaula | Good | S | Good | 2 | Yes | Village | N/A | 4 | No | N/A | Exist | Excellent | Yes | 50K | Yes | 200 | Toilet | Diarrhoea | 5 | Agri. | 65,000 |
| 1-011 | Mlonyeni | Chiwaula | Excellent | S | Good | 10 | Yes | Village | Up SW | 5 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 20 | Garden | N/A | 5 | Agri. | 10,000 |
| 1-012 | Mlonyeni | Chabwela | Excellent | S | Good | N/A | Yes | Village | Up SW | 4 | Yes | Lighten Labour | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 6 | Agri. | 45,000 |
| 1-012 | Mlonyeni | Chabwela | Excellent | S | Good | 13 | Yes | Village | BH | 4 | Yes | Save Time | Exist | Good | Yes | 150K | Yes | 150 | Toilet | Diarrhoea | 7 | Agri. | 10,000 |
| 1-013 | Mlonyeni | Mbeza | Moderate | S | Good | 8 | Yes | WMA | PSW | 2 | N/A | N/A | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Skin disease | 7 | Merchant | 72,000 |
| 1-013 | Mlonyeni | Mbeza | Good | S | Good | 10 | Yes | Village | R/D | 4 | No | N/A | Exist | Excellent | Yes | 500K | Yes | 300 | Toilet | Diarrhoea | 11 | Agri. | 32,000 |
| 1-014 | Mlonyeni | Chaonongeka | Good | S | Good | 4 | Yes | Area Mech. | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 25,000 | Toilet | Skin disease | 8 | Agri. | 72,000 |
| 1-014 | Mlonyeni | Chaonongeka | Moderate | S | Good | 8 | Yes | WMA | PSW | 2 | N/A | N/A | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Skin disease | 7 | Merchant | 72,000 |
| 1-015 | Mlonyeni | Mgwende | Not-good | S | Good | 6 | Yes | Area Mech. | R/D | 9 | Yes | Secure Quality | Exist | Very bad | No | N/A | Yes | 50 | Toilet | Eye disease | 8 | Agri.Labourer | 1,000 |
| 1-015 | Mlonyeni | Mgwende | Excellent | S | Good | 9 | Yes | Area Mech. | R/D | 5 | No | N/A | Exist | Good | Yes | More | Yes | 100 | Toilet | | 6 | Agri. | 80,000 |
| 1-016 | Mlonyeni | Mwandawala | Excellent | S | Good | 36 | Yes | Area Mech. | BH | 6 | Yes | Lighten Labour | Exist | Excellent | Yes | 200K | Yes | 100 | Toilet | Skin disease | 5 | Agri. | 75,000 |
| 1-016 | Mlonyeni | Mwandawala | Excellent | S | Good | 7 | Yes | Area Mech. | R/D | 8 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Cholera | 8 | Agri. | 10,000 |
| 1-017 | Mlonyeni | Kadzakurnanja | | | | | | | | | | | | | | | | | | | | | |
| 1-018 | Mlonyeni | Milonga | Very bad | S | Good | 10 | Yes | Village | R/D | N/A | Yes | Save Time | Exist | Good | Yes | 300K | Yes | 100 | Toilet | Diarrhoea | 8 | Agri. | 200,000 |
| 1-018 | Mlonyeni | Milonga | Good | S | Good | 4 | Yes | Area Mech. | BH | 8 | Yes | Secure Quality | Exist | Excellent | No | 30K | Yes | 10 | Toilet | Eye disease | 4 | Agri. | 9,000 |
| 1-019 | mlonyeni | Mzikaola II | Excellent | S | Good | 4 | Yes | Village | R/D | 6 | Yes | Save Time | Exist | Excellent | Yes | 50K | Yes | 150 | Toilet | Diarrhoea | 3 | Agri. | 35,000 |
| 1-019 | Mlonyeni | Mzikaola II | N/A | S | Good | 10 | Yes | Village | R/D | 3 | No | N/A | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 6 | Agri. | 17,000 |
| 1-020 | Mlonyeni | Mkhala | Excellent | S | Good | 4 | Yes | Area Mech. | R/D | 4 | No | N/A | Exist | Good | Yes | 30K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 10,000 |
| 1-020 | Mlonyeni | Mkhala | Excellent | S | Good | 4 | Yes | Area Mech. | R/D | 6 | No | N/A | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 10,000 |
| 1-021 | Mlonyeni | Chibonyola(B) | | | | | | | | | | | | | | | | | | | | | |
| 1-022 | Mlonyeni | Mwanayumo | Excellent | S | Good | 4 | Yes | Village | R/D | 4 | No | N/A | Exist | Not-Good | Yes | More | Yes | 20 | Toilet | N/A | 5 | Agri. | 6,000 |
| 1-022 | Mlonyeni | Mwanayumo | Excellent | S | Good | 3 | Yes | Donor | R/D | 4 | No | N/A | Exist | Not-Good | Yes | 50K | No | N/A | Toilet | | 4 | Agri. | 25,000 |
| 1-023 | Mlonyeni | Mphindu | Good | S | Good | 7 | Yes | Area Mech. | R/D | 3 | No | N/A | Exist | Excellent | Yes | 500K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 26,000 |
| 1-023 | Mlonyeni | Mphindu | Good | S | Good | 7 | Yes | Area Mech. | R/D | N/A | Yes | Secure Quality | Exist | Good | Yes | 500K | Yes | 200 | Toilet | Eye disease | 4 | Agri. | 49,500 |
| 1-024 | Mlonyeni | Chibonyola (A) | Very bad | S | Good | 6 | Yes | Village | BH | 6 | No | N/A | Exist | N/A | Yes | 100K | Yes | 1,000 | Toilet | Diarrhoea | 5 | Agri. | 50,000 |
| 1-024 | Mlonyeni | Chibonyola (A) | Very bad | S | Good | 6 | Yes | Village | BH | 6 | Yes | Secure Quality | Exist | N/A | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 80,000 |
| 1-025A | Mlonyeni | Chibonyola (A) | Very bad | S | Good | 8 | Yes | Village | R/D | N/A | Yes | Save Time | Exist | Good | Yes | 300K | Yes | 100 | Toilet | Diarrhoea | 8 | Agri. | 200,000 |
| 1-025A | Mlonyeni | Chibonyola (A) | Good | S | Good | 8 | Yes | Area Mech. | Up SW | 3 | Yes | Lighten Labour | Exist | Good | Yes | More | Yes | 150 | Toilet | Diarrhoea | 4 | Agri. | 10,500 |
| 1-026 | Mlonyeni | Thukuta | Good | S | Good | 8 | Yes | Village | R/D | 4 | No | N/A | Exist | Excellent | No | N/A | Yes | 400 | Toilet | Dysentery | 7 | Agri. | 16,000 |
| 1-026 | Mlonyeni | Thukuta | Moderate | S | Good | | Yes | Village | R/D | 3 | Yes | Lighten Labour | Exist | Excellent | Yes | 50K | Yes | 80 | Toilet | Dysentery | 4 | Agri. | 5,000 |
| 1-027 | Mlonyeni | Kapita | Excellent | S | Good | 7 | Yes | Village | R/D | 3 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 15,000 |
| 1-027 | Mlonyeni | Kapita | Excellent | S | Good | 4 | Yes | Village | R/D | 4 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 50,000 |
| 1-028 | Mlonyeni | Maganga | Moderate | S | Good | N/A | Yes | Village | BH | 3 | No | N/A | Exist | Good | Yes | 30K | Yes | 20 | Toilet | Diarrhoea | 6 | Agri. | 6,000 |
| 1-028 | Mlonyeni | Maganga | Excellent | S | Good | 50 | Yes | Area Mech. | BH | 2 | No | N/A | Not exist | Not-Good | Yes | 50K | Yes | 10,000 | Toilet | Skin disease | 6 | Agri. | 59,000 |
| 1-029 | Mavwere | Alfred | Good | S | Good | 4 | Yes | Village | R/D | 4 | No | N/A | Exist | Excellent | Yes | 500K | Yes | 300 | Toilet | Diarrhoea | 11 | Agri. | 32,000 |
| 1-029 | Mavwere | Alfred | Not-good | IS | Good | 5 | Yes | Area Mech. | R/D | 2 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 44,000 |
| 1-030 | Mavwere | Pembere | Good | S | Good | 40 | Yes | Village | R/D | 4 | Yes | Less Expense | Exist | Moderate | Yes | 50K | Yes | 100 | Toilet | Typoid | 4 | Agri. | 18,000 |
| 1-030 | Mavwere | Pembere | Good | S | Good | 5 | Yes | Area Mech. | R/D | N/A | Yes | Save Time | Exist | Not-Good | Yes | 50K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 5,000 |

| General | | | JICA Borehole | | | | | | Alternative Water source | | | | Willings/Affordability | | | | | | Hygine & Sanitation | | | Socio-Economic Situation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH No. | TA | Village | rating | Satisfaction | | Daily use buckets /day | Trial repair | Repaired by | Alternative Water source | Times a day | Need of rehab | Expectations | WPC | Evaluation WPC activities | Willingness to pay | Affordability to pay pump maintenance per hh | money contribution for maintenance of JICA BH | How much (MK) | Excretion place | Type of illness | No. of person in family | Occupation | Total income |
| | | | | Volume | Quality | | | | | | | | | | | | | | | | | | |
| 1-031 | Mavwere | Mtsiliza | Excellent | S | Good | 10 | Yes | Area Mech. | R/D | 5 | No | N/A | Exist | Good | Yes | More | Yes | 100 | Toilet | | 6 | Agri. | 80,000 |
| 1-031 | Mavwere | Mtsiliza | Excellent | S | Good | 10 | Yes | Area Mech. | R/D | 10 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Eye disease | 9 | Agri.Labourer | 7,000 |
| 1-032 | Mavwere | Mkonda | Excellent | S | N/A | 5 | Yes | Area Mech. | R/D | 2 | Yes | Secure Quality | Exist | Excellent | No | N/A | Yes | 50 | Toilet | Skin disease | 5 | Agri. | 22,000 |
| 1-032 | Mavwere | Mkonda | Excellent | S | Good | 7 | Yes | Area Mech. | R/D | 8 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Cholera | 8 | Agri. | 10,000 |
| 1-033 | Mavwere | Katsenga | Moderate | S | Good | 7 | Yes | Area Mech. | R/D | 7 | Yes | Less Expense | Exist | Moderate | Yes | 200K | Yes | 200 | Toilet | Eye disease | 5 | Agri. | 30,000 |
| 1-033 | Mavwere | Katsenga | Good | S | | 3 | Yes | Area Mech. | R/D | N/A | Yes | Lighten Labour | Exist | Good | Yes | More | Yes | 150 | Toilet | Diarrhoea | 3 | Agri. | 16,000 |
| 1-034 | Mavwere | Luka-luciano | Excellent | S | Good | 6 | Yes | Area Mech. | BH | 6 | Yes | Lighten Labour | Exist | Excellent | Yes | 200K | Yes | 100 | Toilet | Skin disease | 5 | Agri. | 75,000 |
| 1-034 | Mavwere | Luka-luciano | Good | S | Good | 11 | Yes | Area Mech. | PSW | 1 | Yes | Lighten Labour | Exist | Excellent | Yes | 500K | Yes | 170 | Toilet | Diarrhoea | 11 | Agri. | 384,950 |
| 1-035 | Mavwere | Chimteteka | Excellent | S | Good | 50 | Yes | Village | R/D | 3 | Yes | Secure Quality | Exist | Good | Yes | 200K | Yes | 100 | Toilet | Diarrhoea | 7 | Agri. | 60,000 |
| 1-035 | Mavwere | Chimteteka | Good | S | Good | 4 | No | N/A | R/D | 3 | Yes | Secure Quality | Exist | Moderate | Yes | 300K | Yes | 500 | Garden | | 6 | Agri. | 24,550 |
| 1-036 | Mavwere | Chaluma,Kalombo | Moderate | S | Good | 10 | Yes | Village | R/D | 4 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | Eye disease | 4 | Agri. | 99,600 |
| 1-036 | Mavwere | Chaluma,Kalombo | Good | S | Good | 5 | Yes | Area Mech. | R/D | N/A | Yes | Secure Quality | Exist | Good | Yes | 500K | Yes | 200 | Toilet | Eye disease | 4 | Agri. | 49,500 |
| 1-037 | Mavwere | Mkwezendumba | | | | | | | | | | | | | | | | | | | | | |
| 1-038 | Mavwere | Galawe | Excellent | S | Good | 15 | Yes | Area Mech. | R/D | 2 | No | N/A | Exist | Good | Yes | 30K | Yes | 100 | Toilet | N/A | 8 | Agri. | 60,000 |
| 1-038 | Mavwere | Galawe | Excellent | S | Good | 10 | Yes | Area Mech. | R/D | 2 | No | N/A | Exist | Good | Yes | 30K | Yes | 100 | Toilet | N/A | 7 | Agri. | 100,000 |
| 1-039 | Mavwere | Chikaza | Not-good | S | Good | 9 | Yes | Area Mech. | R/D | 9 | Yes | Secure Quality | Exist | Very bad | No | N/A | Yes | 50 | Toilet | Eye disease | 8 | Agri.Labourer | 1,000 |
| 1-039 | Mavwere | Chikaza | Excellent | S | Good | 2 | Yes | Area Mech. | R/D | 4 | No | N/A | Exist | Good | Yes | 30K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 70,000 |
| 1-040 | Mavwere | Kunjawa | Excellent | S | Good | 60 | Yes | N/A | R/D | 1 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 4,000 | Toilet | Skin disease | 4 | Agri. | 167,000 |
| 1-040 | Mavwere | Kunjawa | Excellent | S | Good | N/A | Yes | Area Mech. | BH | 2 | Yes | Secure Quality | Exist | Good | Yes | 150K | Yes | 100 | Toilet | Cholera | 6 | Agri. | 80,000 |
| 1-041 | Mavwere | Kunjawa | Good | S | Good | 3 | Yes | Area Mech. | BH | 8 | Yes | Secure Quality | Exist | Excellent | No | 30K | Yes | 10 | Toilet | Eye disease | 4 | Agri. | 9,000 |
| 1-041 | Mavwere | Kunjawa | Good | S | Good | 4 | Yes | Area Mech. | BH | 2 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 18,000 |
| 1-042 | Mavwere | Msukwala | Excellent | S | Good | 9 | N/A | N/A | PSW | N/A | No | N/A | Exist | Good | Yes | 200K | Yes | 40 | Toilet | Dysentery | 8 | Agri. | 52,160 |
| 1-042 | Mavwere | Msukwala | Good | S | Good | 5 | Yes | Area Mech. | R/D | 3 | No | N/A | Exist | Excellent | Yes | 500K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 26,000 |
| 1-043 | Mavwere | Mtukwa | Good | IS | Good | 8 | Yes | Village | R/D | 1 | Yes | Secure Quality | Exist | Not-Good | Yes | 150K | Yes | 250 | Toilet | Cholera | 5 | Agri. | 42,900 |
| 1-043 | Mavwere | Mtukwa | Excellent | S | Good | 3 | Yes | Neiborings | R/D | 7 | Yes | Save Time | Exist | Not-Good | Yes | 300K | Yes | 100 | Toilet | | 5 | Agri. | 50,000 |
| 1-044 | Mavwere | Mtukwa | Excellent | S | Good | 400 | Yes | Village | R/D | 4 | Yes | N/A | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 6 | Agri. | 48,000 |
| 1-044 | Mavwere | Mtukwa | Excellent | S | Good | 8 | Yes | Village | BH | 8 | No | Save Time | Exist | Excellent | Yes | 50K | Yes | 150 | Toilet | Dysentery | 6 | Agri. | 25,000 |
| 1-044 | Mavwere | Mtukwa | Excellent | S | Good | 5 | Yes | Area Mech. | R/D | 4 | Yes | Save Time | Exist | Excellent | Yes | 50K | Yes | 100 | Toilet | Skin disease | 6 | Agri. | 50,000 |
| 1-045 | Mavwere | Mwenyeanthu | Excellent | S | Good | 3 | Yes | Area Mech. | PSW | 7 | Yes | Save Time | Not exist | N/A | No | N/A | No | N/A | Toilet | N/A | 6 | Agri. | 80,000 |
| 1-045 | Mavwere | Mwenyeanthu | Good | S | Good | 7 | Yes | Village | PSW | 2 | Yes | Secure Quality | Exist | Excellent | Yes | 200K | Yes | 100 | Toilet | Eye disease | 4 | Other | 102,000 |
| 1-046 | Mavwere | Dambo | Good | IS | Good | | Yes | Village | Tap | N/A | Yes | Secure Quality | Exist | Good | Yes | 300K | No | N/A | Toilet | Diarrhoea | 3 | Merchant | N/A |
| 1-046 | Mavwere | Dambo | Good | S | Good | 4 | Yes | Neiborings | Up SW | 4 | Yes | Lighten Labour | Exist | Moderate | Yes | 500K | Yes | 60 | Toilet | Dysentery | 2 | Merchant | 291,500 |
| 1-047 | Mavwere | Mwanzika | Moderate | S | Good | 7 | Yes | Area Mech. | R/D | N/A | No | N/A | Exist | Good | Yes | 150K | Yes | 150 | Toilet | Skin disease | 3 | Agri. | 26,500 |
| 1-047 | Mavwere | Mwanzika | Excellent | S | Good | 4 | Yes | Area Mech. | R/D | 4 | No | N/A | Exist | Good | Yes | 30K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 10,000 |
| 1-048 | Mavwere | Chiganizo | Very bad | S | Good | 6 | Yes | Village | Up SW | 3 | Yes | Secure Quality | Exist | Not-Good | No | N/A | No | N/A | Toilet | | 3 | Agri.Labourer | 6,000 |
| 1-048 | Mavwere | Chiganizo | Good | S | Good | 4 | Yes | Village | R/D | 7 | Yes | Secure Quality | Exist | Moderate | Yes | 300K | Yes | 35 | Toilet | | 5 | Agri. | 16,500 |
| 1-049 | Mavwere | Chimkoka | Good | S | Good | 5 | Yes | Area Mech. | BH | 3 | Yes | Save Time | Exist | Good | Yes | 150K | Yes | 100 | Toilet | | 4 | Wage Earner | 40,000 |
| 1-049 | Mavwere | Chimkoka | Moderate | S | Good | 5 | Yes | Village | BH | 2 | Yes | Save Time | Exist | Not-Good | Yes | 200K | No | N/A | Toilet | | 4 | Agri. | 27,000 |
| 1-050 | Mavwere | Gambatula | Good | S | Good | N/A | Yes | WMA | Up SW | 6 | Yes | Less Expense | Exist | Good | Yes | 400K | Yes | 150 | Toilet | Dysentery | 8 | Other | 103,000 |
| 1-050 | Mavwere | Gambatula | Good | S | Good | 3 | Yes | WMA | Up SW | 6 | Yes | N/A | Exist | Good | Yes | More | No | N/A | Toilet | Dysentery | 4 | Agri. | 59,070 |
| 1-051 | Mavwere | Misale T. C. | Excellent | IS | Good | 9 | Yes | Village | R/D | 4 | Yes | N/A | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 6 | Agri. | 48,000 |
| 1-051 | Mavwere | Misale T. C. | Good | S | Good | 8 | Yes | Village | Up SW | 6 | Yes | Lighten Labour | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 30,000 |
| 1-052 | Mavwere | John | Excellent | S | Good | 6 | Yes | Village | Up SW | 3 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 200 | Toilet | Diarrhoea | | Agri. | 20,000 |
| 1-052 | Mavwere | John | Not-good | S | Good | 6 | Yes | Village | Up SW | 5 | Yes | Lighten Labour | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 160,000 |
| 1-053 | Mavwere | Mselela | Good | S | | 6 | Yes | Area Mech. | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 25,000 | Toilet | Skin disease | 8 | Agri. | 72,000 |
| 1-053 | Mavwere | Mselela | Very bad | S | | 4 | Yes | Village | BH | 10 | Yes | Save Time | Exist | Moderate | Yes | 200K | Yes | 200 | Toilet | Diarrhoea | 6 | Agri. | 90,000 |
| 1-054 | Mavwere | Mselela | Excellent | S | Good | 2 | Yes | Area Mech. | R/D | 4 | No | N/A | Exist | Good | Yes | 30K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 70,000 |
| 1-054 | Mavwere | Mselela | Not-good | S | Good | 2 | Yes | Area Mech. | R/D | 2 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 44,000 |
| 1-055 | Mavwere | Ngalule | Excellent | S | Good | 4 | Yes | Village | R/D | 8 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 25 | Toilet | Diarrhoea | 5 | Agri. | 25,000 |
| 1-055 | Mavwere | Ngalule | Excellent | S | Good | 3 | Yes | Village | Up SW | 6 | Yes | Less Expense | Exist | Moderate | Yes | 100K | No | N/A | Toilet | Eye disease | 6 | Agri. | 65,000 |
| 1-055 | Mavwere | Ngalule | Excellent | S | Good | 4 | Yes | Village | R/D | 4 | Yes | Save Time | Exist | Excellent | Yes | 50K | Yes | 100 | Toilet | N/A | 4 | Agri. | 20,000 |
| 1-056 | Mavwere | Masitala | Excellent | S | Good | 7 | Yes | Area Mech. | R/D | 2 | Yes | Secure Quality | Exist | Excellent | No | N/A | Yes | 50 | Toilet | Skin disease | 5 | Agri. | 22,000 |
| 1-056 | Mavwere | Masitala | Excellent | S | Good | 7 | Yes | Area Mech. | R/D | 10 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Eye disease | 9 | Agri.Labourer | 7,000 |
| 1-057 | Mavwere | Mzingo | Excellent | S | Good | 2 | Yes | WMA | Up SW | 6 | Yes | Less Expense | Exist | Good | Yes | 400K | Yes | 150 | Toilet | Dysentery | 8 | Other | 103,000 |
| 1-057 | Mavwere | Mzingo | Excellent | S | Good | N/A | Yes | Village | Up SW | 4 | No | N/A | Exist | Excellent | Yes | 30K | Yes | 50 | Toilet | Eye disease | 2 | Agri. | 14,500 |
| 1-058 | Mavwere | Nathyola | Moderate | S | Good | 50 | Yes | Village | BH | N/A | No | N/A | Exist | Excellent | Yes | 400K | Yes | 50 | Toilet | | 4 | Agri. | 7,500 |
| 1-058 | Mavwere | Nathyola | Good | S | Good | 5 | Yes | Area Mech. | PSW | 1 | Yes | Lighten Labour | Exist | Excellent | Yes | 500K | Yes | 170 | Toilet | Diarrhoea | 11 | Agri. | 384,950 |
| 1-059 | Mavwere | Kachere | Moderate | S | Good | 8 | Yes | Village | R/D | 4 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | Eye disease | 4 | Agri. | 99,600 |
| 1-059 | Mavwere | Kachere | Moderate | S | Good | 5 | Yes | Area Mech. | R/D | N/A | No | N/A | Exist | Good | Yes | 150K | Yes | 150 | Toilet | Skin disease | 3 | Agri. | 26,500 |
| 1-060 | Mavwere | Simoko | Moderate | IS | Good | 10 | Yes | Area Mech. | R/D | 5 | Yes | Less Expense | Exist | Excellent | Yes | 500K | Yes | 300 | Toilet | | 5 | Agri. | 7,600 |
| 1-060 | Mavwere | Simoko | Excellent | S | Good | 5 | Yes | Area Mech. | R/D | 5 | Yes | Less Expense | Exist | Excellent | Yes | 30K | Yes | 100 | Toilet | | 6 | Agri. | 40,000 |

| General | | | JICA Borehole | | | | | | Alternative Water source | | | | Willings/Affordability | | | | | | Hygine & Sanitation | | | Socio-Economic Situation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH No. | TA | Village | rating | Satisfaction | | Daily use buckets /day | Trial repair | Repaired by | Alternative Water source | Times a day | Need of rehab | Expectations | WPC | Evaluation WPC activities | Willingness to pay | Affordability to pay pump maintenance per hh | money contribution for maintenance of JICA BH | How much (MK) | Excretion place | Type of illness | No. of person in family | Occupation | Total income |
| | | | | Volume | Quality | | | | | | | | | | | | | | | | | | |
| 1-061 | Mavwere | Bua T・C | Moderate | S | Good | 4 | Yes | Village | R/D | 2 | Yes | Lighten Labour | Exist | Good | Yes | 500K | Yes | 100 | Toilet | Diarrhoea | 2 | Merchant | 10,400 |
| 1-061 | Mavwere | Bua T・C | Excellent | S | Good | 6 | Yes | Village | R/D | 5 | Yes | Less Expense | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 150,000 |
| 1-062 | Mavwere | Nkhuzu | Excellent | S | Good | 5 | N/A | N/A | PSW | N/A | No | N/A | Exist | Good | Yes | 200K | Yes | 40 | Toilet | Dysentery | 8 | Agri. | 52,160 |
| 1-062 | Mavwere | Nkhuzu | Excellent | S | Good | 8 | Yes | Area Mech. | Up SW | 2 | Yes | Lighten Labour | Exist | Good | Yes | 500K | Yes | 30 | Toilet | | 3 | Agri. | 80,000 |
| 1-063 | Mavwere | Kazule | Good | IS | Good | 6 | Yes | Village | R/D | 4 | No | N/A | Exist | Excellent | No | N/A | Yes | 400 | Toilet | Dysentery | 7 | Agri. | 16,000 |
| 1-063 | Mavwere | Kazule | Excellent | IS | Good | 6 | Yes | Village | Up SW | 4 | No | N/A | Exist | Excellent | Yes | 30K | Yes | 20 | Toilet | Eye disease | 4 | Agri. | 20,000 |
| 1-064 | Mavwere | Kaole Ⅱ | Good | S | Good | 7 | Yes | Neiborings | R/D | 3 | No | N/A | Exist | Good | Yes | 30K | Yes | 50 | Toilet | N/A | 5 | Agri. | 5,000 |
| 1-064 | Mavwere | Kaole Ⅱ | Excellent | S | Good | 5 | Yes | Village | R/D | 2 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 10,000 | Toilet | Diarrhoea | 5 | Agri. | 113,000 |
| 1-065 | Mavwere | Kaole Ⅰ | Moderate | IS | Good | 5 | Yes | WMA | BH | 6 | Yes | Lighten Labour | Exist | Excellent | Yes | 100K | Yes | 500 | Toilet | Dysentery | 7 | Agri. | 8,000 |
| 1-065 | Mavwere | Kaole Ⅰ | Excellent | IS | Good | 5 | Yes | Area Mech. | R/D | 2 | No | N/A | Exist | Good | Yes | 30K | Yes | 100 | Toilet | N/A | 7 | Agri. | 100,000 |
| 1-066 | Mavwere | Kamphemvu | Good | S | Good | N/A | Yes | Village | Up SW | 4 | Yes | Less Expense | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Skin disease | 4 | Agri. | 69,000 |
| 1-066 | Mavwere | Kamphemvu | Excellent | S | Good | 4 | Yes | Village | Up SW | 4 | Yes | Less Expense | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Skin disease | 5 | Agri. | 150,000 |
| 1-067 | Mavwere | Kamphemvu | Excellent | S | Good | 1 | Yes | Area Mech. | R/D | 3 | Yes | Lighten Labour | Exist | Moderate | Yes | 500K | Yes | 150 | Toilet | Diarrhoea | 6 | Agri. | 410,000 |
| 1-067 | Mavwere | Kamphemvu | Excellent | S | Good | 7 | Yes | Village | Up SW | 4 | No | N/A | Exist | Excellent | Yes | 30K | Yes | 20 | Toilet | Eye disease | 4 | Agri. | 20,000 |
| 1-068 | Mavwere | Katsenga A | Excellent | S | Good | N/A | Yes | Village | R/D | 4 | Yes | Secure Quality | Exist | Good | No | N/A | Yes | 100 | Toilet | Skin disease | 3 | Agri. | 25,000 |
| 1-068 | Mavwere | Katsenga A | Excellent | S | Good | 4 | Yes | Village | R/D | 4 | Yes | Secure Quality | Exist | N/A | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 80,000 |
| 1-069 | Mavwere | Mlamba | Excellent | IS | Salty | 8 | Yes | Neiborings | R/D | 4 | Yes | Less Expense | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Dysentery | 7 | Agri. | 2,000 |
| 1-069 | Mavwere | Mlamba | Excellent | IS | Salty | 8 | Yes | Village | Up SW | 4 | Yes | Less Expense | Exist | Excellent | Yes | 300K | Yes | 50 | Toilet | Dysentery | 14 | Agri. | 30,000 |
| 1-070 | Mavwere | Nyongani | Excellent | S | Good | 5 | Yes | Village | Up SW | 4 | Yes | Less Expense | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Skin disease | 5 | Agri. | 150,000 |
| 1-070 | Mavwere | Nyongani | Excellent | S | Good | 5 | Yes | Area Mech. | R/D | 3 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 20 | Toilet | Dysentery | 3 | Agri. | 110,000 |
| 1-071 | Mavwere | Mmtonya | Excellent | S | Good | 2 | Yes | Area Mech. | BH | 5 | Yes | Less Expense | Exist | Excellent | Yes | 500K | Yes | 200 | Toilet | Diarrhoea | 4 | Agri. | 103,000 |
| 1-071 | Mavwere | Mmtonya | Moderate | S | Good | 2 | Yes | Area Mech. | R/D | 5 | Yes | Less Expense | Exist | Excellent | Yes | 500K | Yes | 300 | Toilet | | 5 | Agri. | 7,600 |
| 1-072 | Mavwere | Waliranji | Excellent | S | Good | 5 | Yes | Area Mech. | R/D | 3 | Yes | Less Expense | Exist | Good | No | N/A | Yes | 50 | Toilet | Diarrhoea | 9 | Agri. | 100,000 |
| 1-072 | Mavwere | Waliranji | N/A | S | Good | N/A | Yes | Village | R/D | 3 | No | N/A | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 6 | Agri. | 17,000 |
| 1-073 | Mavwere | Likungwi | Good | S | Good | 6 | Yes | Area Mech. | Up SW | 2 | Yes | Lighten Labour | Exist | Good | Yes | 500K | Yes | 1,500 | Toilet | | 2 | Agri. | 55,000 |
| 1-073 | Mavwere | Likungwi | Excellent | S | Good | 6 | Yes | Area Mech. | Up SW | 2 | Yes | Lighten Labour | Exist | Good | Yes | 500K | Yes | 30 | Toilet | | 3 | Agri. | 80,000 |
| 1-074 | Mavwere | Mnamizana | Excellent | S | Good | 6 | Yes | Village | Up SW | 4 | Yes | Less Expense | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Skin disease | 5 | Agri. | 150,000 |
| 1-074 | Mavwere | Mnamizana | Excellent | S | Good | 10 | Yes | Area Mech. | R/D | 3 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 20 | Toilet | Dysentery | 3 | Agri. | 110,000 |
| 1-075 | Mavwere | Kankhande | Excellent | S | Good | 5 | Yes | Village | R/D | 4 | Yes | Less Expense | Exist | Excellent | No | N/A | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 16,000 |
| 1-075 | Mavwere | Kankhande | Excellent | S | Good | 6 | Yes | Area Mech. | BH | 5 | Yes | Less Expense | Exist | Excellent | Yes | 500K | Yes | 200 | Toilet | Diarrhoea | 4 | Agri. | 103,000 |
| 1-076 | Mavwere | Kankhande | Excellent | S | Good | 4 | Yes | Area Mech. | R/D | 3 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 20 | Toilet | Dysentery | 3 | Agri. | 150,000 |
| 1-076 | Mavwere | Kankhande | Excellent | S | Good | 3 | Yes | Area Mech. | R/D | 3 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 20 | Toilet | Dysentery | 3 | Agri. | 110,000 |
| 1-077 | Mavwere | Mkusa | Very bad | IS | Good | 8 | Yes | Village | BH | 4 | Yes | Secure Quality | Exist | Not-Good | Yes | 100K | Yes | 100 | Toilet | Skin disease | 6 | Agri. | 24,000 |
| 1-077 | Mavwere | Mkusa | Excellent | IS | Good | 8 | Yes | Area Mech. | BH | 2 | Yes | Lighten Labour | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Skin disease | 7 | Agri. | 80,000 |
| 1-078 | Mavwere | Kajiwa | Excellent | S | Good | 30 | Yes | Area Mech. | R/D | 4 | Yes | Less Expense | Exist | Excellent | Yes | 30K | Yes | 100 | Toilet | Dysentery | 6 | Agri. | 26,000 |
| 1-078 | Mavwere | Kajiwa | Excellent | S | Ferrous | 3 | Yes | | R/D | 3 | Yes | Less Expense | Exist | Good | Yes | 30K | Yes | 100 | Toilet | Dysentery | 6 | Agri. | 26,000 |
| 1-079 | Mavwere | Mnamizana | Excellent | S | Ferrous | 3 | Yes | Area Mech. | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 4,000 | Toilet | Skin disease | 6 | Agri. | 40,000 |
| 1-079 | Mavwere | Mnamizana | Excellent | S | Good | 5 | Yes | Area Mech. | BH | 4 | Yes | Save Time | Exist | Very bad | Yes | 100K | Yes | 2,200 | Toilet | Cholera | 5 | Agri. | 120,000 |
| 1-080 | Mavwere | Kanyindula | Good | S | Good | | Yes | Area Mech. | BH | 2 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 18,000 |
| 1-080 | Mavwere | Kanyindula | Excellent | S | Good | 4 | Yes | Village | R/D | 4 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 5 | Agri. | 7,000 |
| 2-001 | Mavwere | Kambamd-zuwa | Excellent | IS | Good | 2 | Yes | Village | Up SW | 6 | Yes | Less Expense | Exist | Moderate | Yes | 100K | No | N/A | Toilet | Eye disease | 6 | Agri. | 65,000 |
| 2-001 | Mavwere | Kambamd-zuwa | Excellent | IS | Good | 2 | Yes | Village | R/D | 4 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 5 | Agri. | 7,000 |
| 2-002 | Mavwere | Pinda | Very bad | S | Good | 4 | Yes | Village | Up SW | 5 | Yes | Save Time | Not exist | N/A | No | N/A | No | N/A | Toilet | N/A | 5 | Agri. | 105,000 |
| 2-002 | Mavwere | Pinda | Good | S | Good | 4 | Yes | Village | Up SW | 6 | Yes | Lighten Labour | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 30,000 |
| 2-003 | Mavwere | Lupenga-Ndulama | Excellent | IS | Salty | N/A | Yes | N/A | R/D | 4 | Yes | Less Expense | Exist | Good | No | N/A | Yes | 100 | Toilet | Diarrhoea | 3 | Agri. | 13,000 |
| 2-003 | Mavwere | Lupenga-Ndulama | Excellent | IS | Salty | N/A | Yes | Village | PSW | 1 | Yes | Secure Quality | Exist | Excellent | Yes | 200K | Yes | 50 | Toilet | Eye disease | 6 | Agri. | 13,000 |
| 2-004 | Mavwere | Chikuta | Excellent | IS | Salty | N/A | Yes | Area Mech. | BH | 5 | Yes | Less Expense | Exist | Excellent | Yes | 500K | Yes | 200 | Toilet | Diarrhoea | 4 | Agri. | 103,000 |
| 2-004 | Mavwere | Chikuta | Excellent | IS | Salty | N/A | Yes | Village | R/D | 4 | Yes | Less Expense | Exist | Good | Yes | 500K | Yes | 20 | Toilet | Dysentery | 8 | Agri. | 10,000 |
| 2-005 | Mavwere | Chikuta | Excellent | IS | Ferrous | N/A | Yes | Area Mech. | R/D | 3 | Yes | Less Expense | Exist | Good | No | N/A | Yes | 50 | Toilet | Diarrhoea | 9 | Agri. | 100,000 |
| 2-005 | Mavwere | Chikuta | Moderate | IS | Ferrous | N/A | Yes | Area Mech. | R/D | 5 | Yes | Less Expense | Exist | Excellent | Yes | 500K | Yes | 300 | Toilet | | 5 | Agri. | 7,600 |
| 2-006 | Mavwere | Kamgwanga | N/A | S | Good | N/A | Yes | Village | R/D | 3 | No | N/A | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 6 | Agri. | 17,000 |
| 2-006 | Mavwere | Kamgwanga | Excellent | S | Good | 8 | Yes | Area Mech. | BH | 2 | Yes | Lighten Labour | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Skin disease | 7 | Agri. | 80,000 |
| 2-007 | Mavwere | Nkhumba | Very bad | S | Good | 8 | Yes | Village | BH | 4 | Yes | Secure Quality | Exist | Not-Good | Yes | 100K | Yes | 100 | Toilet | Skin disease | 6 | Agri. | 24,000 |
| 2-007 | Mavwere | Nkhumba | Excellent | S | Good | 8 | Yes | Area Mech. | BH | 4 | Yes | Save Time | Exist | Very bad | Yes | 100K | Yes | 2,200 | Toilet | Cholera | 5 | Agri. | 120,000 |
| 2-008 | Mavwere | Makanda | Excellent | S | Good | 5 | Yes | Area Mech. | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 4,000 | Toilet | Skin disease | 6 | Agri. | 40,000 |
| 2-008 | Mavwere | Makanda | Excellent | S | Good | 5 | Yes | Village | R/D | 4 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 5 | Agri. | 7,000 |
| 2-009 | Mavwere | Makanda | Excellent | S | Good | 6 | Yes | Village | R/D | 3 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 30,000 |
| 2-009 | Mavwere | Makanda | Excellent | S | Good | 4 | Yes | Village | R/D | 4 | Yes | Save Time | Exist | Excellent | Yes | 50K | Yes | 100 | Garden | Diarrhoea | 3 | Agri. | 30,000 |
| 2-010 | Mavwere | Wisikoti | Excellent | IS | Good | 4 | Yes | Village | Up SW | 6 | Yes | Less Expense | Exist | Moderate | Yes | 100K | No | N/A | Toilet | Eye disease | 6 | Agri. | 65,000 |
| 2-010 | Mavwere | Wisikoti | Good | IS | Good | 4 | Yes | Village | Up SW | 6 | Yes | Lighten Labour | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 30,000 |

| General | | | JICA Borehole | | | | | | Alternative Water source | | | | Willings/Affordability | | | | | | Hygine & Sanitation | | | Socio-Economic Situation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH No. | TA | Village | rating | Satisfaction | | Daily use buckets /day | Trial repair | Repaired by | Alternative Water source | Times a day | Need of rehab | Expectations | WPC | Evaluation WPC activities | Willingness to pay | Affordability to pay pump maintenance per hh | money contribution for maintenance of JICA BH | How much (MK) | Excretion place | Type of illness | No. of person in family | Occupation | Total income |
| | | | | Volume | Quality | | | | | | | | | | | | | | | | | | |
| 2-011 | Mavwere | Manthalu | Excellent | IS | Good | 6 | Yes | Village | Up SW | 4 | No | N/A | Exist | Excellent | Yes | 30K | Yes | 50 | Toilet | Eye disease | 2 | Agri. | 14,500 |
| 2-011 | Mavwere | Manthalu | Moderate | S | Good | 4 | Yes | Village | R/D | 3 | Yes | Lighten Labour | Exist | Excellent | Yes | 50K | Yes | 80 | Toilet | Dysentery | 4 | Agri. | 5,000 |
| 2-012 | Mavwere | Manthalu | Good | S | Good | 6 | Yes | Village | R/D | 2 | Yes | Secure Quality | Exist | Good | Yes | 150K | Yes | 5,000 | Toilet | Diarrhoea | 3 | Merchant | 230,000 |
| 2-012 | Mavwere | Manthalu | Good | S | Good | 5 | Yes | Neiborings | R/D | 3 | No | N/A | Exist | Good | Yes | 30K | Yes | 50 | Toilet | N/A | 5 | N/A | N/A |
| 2-013 | Mavwere | Chamosola | Excellent | S | Good | 6 | Yes | Area Mech. | PSW | 7 | Yes | Save Time | Not exist | N/A | No | N/A | No | N/A | Toilet | N/A | 6 | Agri. | 80,000 |
| 2-013 | Mavwere | Chamosola | Very bad | S | Good | 7 | Yes | Village | Up SW | 5 | Yes | Save Time | Not exist | N/A | No | N/A | No | N/A | Toilet | N/A | 5 | Agri. | 105,000 |
| 2-014 | Mavwere | Kafunsa-Chalimba | | | | | | | | | | | | | | | | | | | | | |
| 2-015 | Mavwere | Mbwerera | Not-good | S | Good | 5 | Yes | WMA | BH | 2 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 200 | Toilet | Dysentery | 4 | Merchant | 51,000 |
| 2-015 | Mavwere | Mbwerera | Excellent | S | Good | 4 | Yes | Area Mech. | R/D | 2 | No | N/A | Exist | Good | Yes | 30K | Yes | 100 | Toilet | N/A | 8 | Agri. | 60,000 |
| 2-016 | Mavwere | Kamwaza | Good | S | Good | 5 | Yes | WMA | Up SW | 5 | Yes | Save Time | Exist | Moderate | Yes | 100K | Yes | 70 | Toilet | Diarrhoea | 8 | Agri. | 44,000 |
| 2-016 | Mavwere | Kamwaza | Good | S | Good | 5 | Yes | WMA | Up SW | 6 | Yes | N/A | Exist | Good | Yes | More | No | N/A | Toilet | Dysentery | 4 | Agri. | 59,070 |
| 2-017 | Mavwere | Papa | Excellent | S | Good | 3 | Yes | Area Mech. | BH | 3 | Yes | Secure Quality | Exist | Good | Yes | 150K | Yes | 50 | Toilet | Skin disease | 5 | Agri. | 37,200 |
| 2-017 | Mavwere | Papa | Excellent | S | Good | 6 | Yes | Village | R/D | 5 | Yes | Less Expense | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 150,000 |
| 2-018 | Mavwere | Guwende | Excellent | S | Ferrous | N/A | No | N/A | R/D | 4 | Yes | Less Expense | Exist | Excellent | No | N/A | Yes | 20 | Toilet | Dysentery | 4 | Agri. | 13,000 |
| 2-018 | Mavwere | Guwende | Very bad | S | Good | 2 | Yes | Village | BH | 6 | No | N/A | Exist | N/A | Yes | 100K | Yes | 1,000 | Toilet | Diarrhoea | 5 | Agri. | 50,000 |
| 2-019 | Mavwere | Kamlilika | Excellent | S | Good | 6 | Yes | Neiborings | R/D | 4 | Yes | Less Expense | Exist | Good | No | N/A | Yes | 150 | Toilet | Dysentery | 6 | Agri. | 20,000 |
| 2-019 | Mavwere | Kamlilika | Excellent | S | Good | 6 | Yes | Area Mech. | R/D | 3 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 20 | Toilet | Dysentery | 3 | Agri. | 150,000 |
| 2-020 | Mavwere | Tankhule | Excellent | S | Good | 4 | Yes | Village | R/D | 4 | Yes | Less Expense | Exist | Excellent | No | N/A | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 16,000 |
| 2-020 | Mavwere | Tankhule | Good | S | Good | 5 | Yes | Village | Up SW | 4 | Yes | Less Expense | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Skin disease | 4 | Agri. | 69,000 |
| 2-021 | Mavwere | Welesani | Good | S | Good | 15 | Yes | Area Mech. | Up SW | 3 | Yes | Lighten Labour | Exist | Good | Yes | More | Yes | 150 | Toilet | Diarrhoea | 4 | Agri. | 10,500 |
| 2-021 | Mavwere | Welesani | Excellent | S | Good | 4 | Yes | Area Mech. | R/D | 5 | Yes | Less Expense | Exist | Excellent | Yes | 30K | Yes | 100 | Toilet | | 6 | Agri. | 40,000 |
| 2-022 | Mavwere | Temanim-wendo | Excellent | S | Good | 4 | No | N/A | R/D | 4 | Yes | Less Expense | Exist | Excellent | No | N/A | Yes | 20 | Toilet | Dysentery | 4 | Agri. | 13,000 |
| 2-022 | Mavwere | Temanim-wendo | Excellent | S | Coloour | N/A | Yes | Village | Up SW | 4 | Yes | Less Expense | Exist | Excellent | Yes | 300K | Yes | 50 | Toilet | Dysentery | 14 | Agri. | 30,000 |
| 2-023 | Mavwere | Temanim-wendo | Very bad | S | Good | 6 | Yes | Village | R/D | | Yes | Save Time | Exist | Good | Yes | 300K | Yes | 100 | Toilet | Diarrhoea | 8 | Agri. | 200,000 |
| 2-023 | Mavwere | Temanim-wendo | Excellent | S | Good | N/A | Yes | Area Mech. | BH | 2 | No | N/A | Not exist | Not-Good | Yes | 50K | Yes | 10,000 | Toilet | Skin disease | 6 | Agri. | 59,000 |
| 2-024 | Mavwere | Nkhono | Good | S | Good | 10 | Yes | Village | BH | 4 | Yes | Secure Quality | Exist | Good | No | N/A | Yes | 20 | Toilet | Skin disease | 7 | Agri. | 100,000 |
| 2-024 | Mavwere | Nkhono | Excellent | S | Good | 3 | Yes | Area Mech. | R/D | 4 | Yes | Secure Quality | Exist | Good | No | N/A | Yes | 20 | Toilet | Skin disease | 7 | Agri. | 100,000 |
| 2-025 | Mavwere | Geni | Good | S | Good | 5 | Yes | Area Mech. | BH | 2 | Yes | Secure Quality | Exist | Good | Yes | 150K | Yes | 100 | Toilet | Cholera | 6 | Agri. | 80,000 |
| 2-025 | Mavwere | Geni | Good | S | Good | 3 | Yes | Village | R/D | 3 | Yes | Secure Quality | Exist | Good | Yes | 150K | Yes | 100 | Toilet | Cholera | 6 | Agri. | 80,000 |
| 2-026 | Mavwere | Sinunbe | Excellent | S | Good | 7 | Yes | Area Mech. | BH | 1 | N/A | N/A | Exist | Not-Good | No | N/A | Yes | 100 | Toilet | Skin disease | 4 | Agri. | 27,000 |
| 2-026 | Mavwere | Sinunbe | Good | S | Good | 6 | Yes | Village | BH | 3 | Yes | Lighten Labour | Exist | Good | Yes | 200K | Yes | 200 | Toilet | Skin disease | 4 | Agri. | 130,000 |
| 2-027 | Mavwere | Sinunbe | Good | S | Good | 4 | Yes | Area Mech. | BH | 8 | Yes | Secure Quality | Exist | Excellent | No | 30K | Yes | 10 | Toilet | Eye disease | 4 | Agri. | 9,000 |
| 2-027 | Mavwere | Sinunbe | Good | S | Good | 4 | Yes | Area Mech. | BH | 2 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 18,000 |
| 2-028 | Mavwere | Chikwan-bani | Excellent | S | Good | 5 | Yes | Area Mech. | R/D | 4 | Yes | Less Expense | Exist | Excellent | No | N/A | Yes | 20 | Toilet | Diarrhoea | 6 | Agri. | 205,000 |
| 2-028 | Mavwere | Chikwan-bani | Excellent | S | Good | 10 | Yes | Village | R/D | 4 | Yes | N/A | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | Dysentery | 3 | Agri. | 80,000 |
| 2-029 | Mavwere | Mweso | Excellent | S | Good | 6 | Yes | Area Mech. | R/D | 3 | Yes | Less Expense | Exist | Good | No | N/A | Yes | 50 | Toilet | Diarrhoea | 9 | Agri. | 100,000 |
| 2-029 | Mavwere | Mweso | Good | S | Good | 3 | Yes | Area Mech. | Up SW | 3 | Yes | Lighten Labour | Exist | Good | Yes | More | Yes | 150 | Toilet | Diarrhoea | 4 | Agri. | 10,500 |
| 2-030 | Mavwere | Njiwa | Good | S | Good | N/A | Yes | WMA | Up SW | 5 | Yes | Save Time | Exist | Moderate | Yes | 100K | Yes | 70 | Toilet | Diarrhoea | 8 | Agri. | 44,000 |
| 2-030 | Mavwere | Njiwa | Good | S | Good | 6 | Yes | WMA | Up SW | 5 | Yes | Lighten Labour | Exist | Moderate | Yes | 500K | Yes | 150 | Toilet | Diarrhoea | 6 | Agri. | 410,000 |
| 2-031 | Mavwere | Chitumba | Excellent | S | Good | N/A | Yes | Neiborings | R/D | 4 | Yes | Less Expense | Exist | Good | No | N/A | Yes | 150 | Toilet | Dysentery | 6 | Agri. | 20,000 |
| 2-031 | Mavwere | Chitumba | Excellent | S | Good | N/A | Yes | Neiborings | R/D | 4 | Yes | Less Expense | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Dysentery | 7 | Agri. | 2,000 |
| 2-032 | Mavwere | Chinyata | Excellent | S | Good | 4 | Yes | Area Mech. | PSW | 7 | Yes | Save Time | Not exist | N/A | No | N/A | No | N/A | Toilet | N/A | 6 | Agri. | 80,000 |
| 2-032 | Mavwere | Chinyata | Good | S | Good | 4 | Yes | Village | PSW | 2 | Yes | Secure Quality | Exist | Excellent | Yes | 200K | Yes | 100 | Toilet | Eye disease | 4 | Other | 102,000 |
| 2-033 | Mavwere | Lanadi | Good | S | Good | 6 | Yes | Village | Up SW | 6 | No | N/A | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | Skin disease | 5 | Agri. | 45,000 |
| 2-033 | Mavwere | Lanadi | Moderate | IS | Good | 10 | Yes | Area Mech. | Up SW | 8 | Yes | Save Time | Exist | Good | Yes | 200K | Yes | 700 | Toilet | Diarrhoea | 6 | Agri. | 66,000 |
| 2-034 | Mavwere | Lumelo | Excellent | S | Good | 10 | Yes | WMA | Up SW | 2 | Yes | Secure Quality | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 18,000 |
| 2-034 | Mavwere | Lumelo | Moderate | IS | Good | 2 | Yes | Area Mech. | BH | 1 | Yes | Less Expense | Exist | Good | Yes | More | Yes | N/A | Toilet | Diarrhoea | 1 | Agri. | 4,500 |
| 2-035 | Mavwere | Lumelo | Good | S | Good | 6 | Yes | N/A | PSW | 6 | Yes | Secure Quality | Exist | Excellent | Yes | More | Yes | 40 | Toilet | Dysentery | 5 | Merchant | 48,000 |
| 2-035 | Mavwere | Lumelo | Good | S | Good | 5 | Yes | N/A | -Other | N/A | Yes | Secure Quality | Exist | Good | Yes | More | Yes | 40 | Toilet | Diarrhoea | 3 | Agri. | 18,000 |
| 2-036 | Mavwere | Silombe | Not-good | S | Good | 50 | Yes | WMA | BH | 2 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 200 | Toilet | Dysentery | 4 | Merchant | 51,000 |
| 2-036 | Mavwere | Silombe | Moderate | IS | Good | 5 | Yes | WMA | BH | 6 | Yes | Lighten Labour | Exist | Excellent | Yes | 100K | Yes | 500 | Toilet | Dysentery | 7 | Agri. | 8,000 |
| 2-037 | Mavwere | Silombe | Not-good | S | Good | 8 | Yes | Village | Up SW | 5 | Yes | Lighten Labour | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 160,000 |
| 2-037 | Mavwere | Silombe | Good | S | Good | 8 | Yes | Area Mech. | BH | 3 | Yes | Save Time | Exist | Good | Yes | 150K | Yes | 100 | Toilet | | 4 | Wage Earner | 40,000 |
| 2-038 | Mavwere | Chinyata | Very bad | S | Good | 7 | Yes | Village | BH | 10 | Yes | Save Time | Exist | Moderate | Yes | 200K | Yes | 200 | Toilet | Diarrhoea | 6 | Agri. | 90,000 |
| 2-038 | Mavwere | Chinyata | Excellent | S | Good | 4 | Yes | Village | Up SW | 3 | Yes | Save Time | Exist | Excellent | Yes | 50K | Yes | 150 | Toilet | Dysentery | 3 | Agri. | 4,050 |
| 2-038 | Mavwere | Chinyata | Excellent | S | Good | 7 | Yes | Area Mech. | BH | 4 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 500 | Toilet | Diarrhoea | 8 | Agri. | 25,000 |
| 2-039 | Mavwere | Nkokeza | Good | S | Good | 10 | Yes | Area Mech. | Up SW | 10 | Yes | Lighten Labour | Not exist | N/A | Yes | 100K | Yes | 50 | Toilet | | 6 | Merchant | 20,000 |
| 2-039 | Mavwere | Nkokeza | Moderate | IS | Salty | 6 | Yes | Village | BH | 2 | Yes | Save Time | Exist | Not-Good | Yes | 200K | No | N/A | Toilet | | 4 | Agri. | 27,000 |
| 2-040 | Mavwere | Mkonkha | Good | S | Good | 5 | Yes | Area Mech. | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 25,000 | Toilet | Skin disease | 8 | Agri. | 72,000 |
| 2-040 | Mavwere | Mkonkha | Not-good | S | Good | 6 | Yes | Area Mech. | R/D | 2 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 44,000 |

| General | | | JICA Borehole | | | | | | Alternative Water source | | | | Willings/Affordability | | | | | | Hygine & Sanitation | | | Socio-Economic Situation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH No. | TA | Village | rating | Satisfaction | | Daily use buckets /day | Trial repair | Repaired by | Alternative Water source | Times a day | Need of rehab | Expectations | WPC | Evaluation WPC activities | Willingness to pay | Affordability to pay pump maintenance per hh | money contribution for maintenance of JICA BH | How much (MK) | Excretion place | Type of illness | No. of person in family | Occupation | Total income |
| | | | | Volume | Quality | | | | | | | | | | | | | | | | | | |
| 2-041 | Mavwere | Mkonkha T.C. | Excellent | S | Good | 5 | Yes | Area Mech. | R/D | 4 | No | N/A | Exist | Good | Yes | 30K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 70,000 |
| 2-041 | Mavwere | Mkonkha T.C. | Excellent | S | Good | 15 | Yes | Area Mech. | R/D | 10 | Yes | Less Expense | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Eye disease | 9 | Agri.Labourer | 7,000 |
| 2-042 | Mavwere | Mabvere | Excellent | S | Good | 3 | Yes | Area Mech. | R/D | 2 | Yes | Secure Quality | Exist | Excellent | No | N/A | Yes | 50 | Toilet | Skin disease | 5 | Agri. | 22,000 |
| 2-042 | Mavwere | Mabvere | Good | S | Good | 6 | Yes | Area Mech. | PSW | 1 | Yes | Lighten Labour | Exist | Excellent | Yes | 500K | Yes | 170 | Toilet | Diarrhoea | 11 | Agri. | 384,950 |
| 2-043 | Mavwere | Chinkota | Excellent | S | Good | 4 | Yes | Village | R/D | 4 | Yes | Less Expense | Exist | Good | Yes | 500K | Yes | 20 | Toilet | Dysentery | 8 | Agri. | 10,000 |
| 2-043 | Mavwere | Chinkota | Good | S | Good | 2 | Yes | Neiborings | Up SW | 4 | Yes | Lighten Labour | Exist | Moderate | Yes | 500K | Yes | 60 | Toilet | Dysentery | 2 | Merchant | 291,500 |
| 2-044 | Mavwere | Mumba | Moderate | S | Good | 15 | Yes | Area Mech. | R/D | N/A | No | N/A | Exist | Good | Yes | 150K | Yes | 150 | Toilet | Skin disease | 3 | Agri. | 26,500 |
| 2-044 | Mavwere | Mumba | Moderate | S | Salty | 3 | Yes | Village | BH | N/A | No | N/A | Exist | Excellent | Yes | 400K | Yes | 50 | Toilet | | 4 | Agri. | 7,500 |
| 2-045 | Mavwere | Kadzombe | | | | | | | | | | | | | | | | | | | | | |
| 2-046 | Mavwere | Kadzombe | | | | | | | | | | | | | | | | | | | | | |
| 2-047 | Mavwere | Chimbala-me | Good | S | Good | 7 | Yes | Donor | PSW | 4 | Yes | Secure Quality | Not exist | N/A | Yes | 500K | No | N/A | Toilet | | 2 | Agri. | 25,000 |
| 2-048 | Mavwere | Chiyese-lana | Moderate | S | Good | 4 | Yes | Village | R/D | 4 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | Eye disease | 4 | Agri. | 99,600 |
| 2-048 | Mavwere | Chiyese-lana | Excellent | S | Good | 4 | N/A | N/A | PSW | N/A | No | N/A | Exist | Good | Yes | 200K | Yes | 40 | Toilet | Dysentery | 8 | Agri. | 52,160 |
| 2-049 | Mavwere | Chamani | Excellent | S | Good | 6 | Yes | Village | BH | 4 | Yes | Save Time | Exist | Good | Yes | 150K | Yes | 150 | Toilet | Diarrhoea | 7 | Agri. | 10,000 |
| 2-049 | Mavwere | Chamani | Very bad | S | Good | 10 | Yes | Village | BH | 10 | Yes | Save Time | Exist | Moderate | Yes | 200K | Yes | 200 | Toilet | Diarrhoea | 6 | Agri. | 90,000 |
| 2-050 | Mavwere | Chamani | Excellent | S | Good | 6 | Yes | Area Mech. | Up SW | 2 | Yes | Lighten Labour | Exist | Good | Yes | 500K | Yes | 30 | Toilet | | 3 | Agri. | 80,000 |
| 2-050 | Mavwere | Chamani | Excellent | S | Good | 8 | Yes | Village | Up SW | 4 | No | N/A | Exist | Excellent | Yes | 30K | Yes | 20 | Toilet | Eye disease | 4 | Agri. | 20,000 |
| 2-051 | Mavwere | Kabuthu | Good | IS | Good | 7 | Yes | Village | R/D | 4 | No | N/A | Exist | Excellent | No | N/A | Yes | 400 | Toilet | Dysentery | 7 | Agri. | 16,000 |
| 2-051 | Mavwere | Kabuthu | Excellent | S | Good | 5 | Yes | Village | R/D | 2 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 10,000 | Toilet | Diarrhoea | 5 | Agri. | 113,000 |
| 2-052 | Mavwere | Kabuthu-Chifuca | Excellent | S | Good | 6 | Yes | Area Mech. | BH | 4 | Yes | Lighten Labour | Exist | Good | Yes | 150K | Yes | 150 | Toilet | Diarrhoea | 4 | Agri. | 50,000 |
| 2-052 | Mavwere | Kabuthu-Chifuca | Moderate | S | Good | 4 | Yes | Village | Up SW | 4 | No | N/A | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 7 | Merchant | 155,000 |
| 2-053 | Mavwere | Mphonde | Good | S | Good | 3 | Yes | Area Mech. | BH | 3 | Yes | Save Time | Exist | Good | Yes | 150K | Yes | 100 | Toilet | | 4 | Wage Earner | 40,000 |
| 2-053 | Mavwere | Mphonde | Good | IS | Good | 10 | Yes | Village | BH | 5 | Yes | Save Time | Exist | Good | Yes | More | Yes | 300 | Toilet | | 8 | Agri. | 8,500 |
| 2-054 | Mavwere | Nkhompho-la | Moderate | IS | Good | 6 | Yes | Area Mech. | BH | 4 | Yes | Other | Exist | Good | Yes | 150K | Yes | 250 | Toilet | N/A | 8 | Agri. | 76,400 |
| 2-054 | Mavwere | Nkhompho-la | Excellent | IS | Good | 5 | Yes | Village | R/D | 4 | Yes | Less Expense | Exist | Good | Yes | 150K | Yes | 150 | Toilet | Dysentery | 3 | Agri. | 12,500 |
| 2-055 | Mavwere | Manyengo | | | | | | | | | | | | | | | | | | | | | |
| 2-056 | Mavwere | Kamlilika | Good | S | Good | 2 | Yes | Area Mech. | BH | 5 | Yes | Secure Quality | Exist | Good | No | N/A | Yes | 100 | Toilet | Skin disease | 3 | Agri. | 25,000 |
| 2-056 | Mavwere | Kamlilika | Excellent | S | Good | 6 | Yes | Area Mech. | BH | 3 | Yes | Secure Quality | Exist | Good | Yes | 150K | Yes | 50 | Toilet | Skin disease | 5 | Agri. | 37,200 |
| 2-057 | Mavwere | Mjolomobe | Not-good | S | Good | 5 | Yes | Village | Up SW | 5 | Yes | Lighten Labour | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 160,000 |
| 2-057 | Mavwere | Mjolomobe | Excellent | S | Good | 6 | Yes | Village | Up SW | 4 | Yes | Lighten Labour | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 6 | Agri. | 45,000 |
| 2-058 | Mavwere | M'manja | | | | | | | | | | | | | | | | | | | | | |
| 2-059 | Mavwere | Gomani 1 | Excellent | S | Good | 3 | Yes | N/A | R/D | 4 | Yes | Less Expense | Exist | Good | No | N/A | Yes | 100 | Toilet | Diarrhoea | 3 | Agri. | 13,000 |
| 2-059 | Mavwere | Gomani 1 | Good | S | Good | 6 | Yes | Village | Tap | N/A | Yes | Secure Quality | Exist | Good | Yes | 300K | No | N/A | Toilet | Diarrhoea | 3 | Merchant | N/A |
| 2-060 | Mavwere | Jusi | Moderate | S | Good | 6 | Yes | Village | BH | N/A | No | N/A | Exist | Excellent | Yes | 400K | Yes | 50 | Toilet | | 4 | Agri. | 7,500 |
| 2-060 | Mavwere | Jusi | Excellent | S | Good | 5 | Yes | Area Mech. | R/D | 6 | No | N/A | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 4 | Agri. | 10,000 |
| 2-061 | Zulu | Mailosi | Good | S | Salty | 5 | Yes | Village | PSW | 5 | Yes | Save Time | Exist | Moderate | Yes | 200K | Yes | 500 | Toilet | Dysentery | 1 | Agri. | 30,000 |
| 2-061 | Zulu | Mailosi | Excellent | S | Salty | 4 | Yes | Village | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 30K | Yes | 500 | Toilet | Skin disease | 6 | Agri. | N/A |
| 2-062 | Zulu | Mtamad-zongo | Good | S | Good | 6 | Yes | Area Mech. | R/D | 1 | Yes | Secure Quality | Exist | Moderate | Yes | 100K | No | N/A | Toilet | Diarrhoea | 6 | Agri. | 13,000 |
| 2-062 | Zulu | Mtamad-zongo | Excellent | | | 8 | Yes | Area Mech. | PSW | 4 | No | Save Time | Exist | Very bad | Yes | 50K | Yes | 1,500 | Garden | Skin disease | | Agri. | 50,000 |
| 2-063 | Zulu | Nwandawa-ra | Excellent | S | Good | 8 | Yes | Village | PSW | 1 | Yes | Secure Quality | Exist | N/A | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 6 | Agri. | 38,500 |
| 2-063 | Zulu | Nwandawa-ra | Good | S | Good | 5 | Yes | Village | Up SW | 3 | Yes | Lighten Labour | Exist | Not-Good | Yes | 50K | Yes | 50 | Toilet | | 5 | Agri. | 82,000 |
| 2-064 | Zulu | Kachokam-komero | Good | S | Good | 4 | Yes | Village | PSW | 2 | Yes | Secure Quality | Exist | Excellent | Yes | 200K | Yes | 100 | Toilet | Eye disease | 4 | Other | 102,000 |
| 2-064 | Zulu | Kachokam-komero | Excellent | S | Good | 4 | Yes | Village | PSW | 1 | Yes | Secure Quality | Exist | Excellent | Yes | 200K | Yes | 50 | Toilet | Eye disease | 6 | Agri. | 13,000 |
| 2-064 | Zulu | Kachokam-komero | Good | S | Good | 4 | Yes | Village | PSW | 3 | Yes | Save Time | Exist | Moderate | Yes | 500K | Yes | 400 | Toilet | Eye disease | 1 | Agri. | 10,000 |
| 2-064 | Zulu | Kachokam-komero | Very bad | N/A | N/A | N/A | N/A | N/A | Up SW | 3 | No | N/A | Exist | Not-Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 75,000 |
| 2-065 | Zulu | Mkumba | Not-good | IS | Good | 3 | Yes | Area Mech. | PSW | 3 | No | N/A | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 2 | Agri. | 37,000 |
| 2-065 | Zulu | Mkumba | Excellent | IS | Good | 4 | Yes | Village | R/D | 4 | Yes | Secure Quality | Exist | Not-Good | Yes | 50K | Yes | 100 | Garden | Skin disease | | Agri. | 44,000 |
| 2-066 | Zulu | Jamu | Excellent | S | Good | 35 | Yes | Village | PSW | 4 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Skin disease | 5 | Other | 60,000 |
| 2-066 | Zulu | Jamu | Good | S | Good | 7 | Yes | WMA | R/D | 4 | Yes | Save Time | Exist | Not-Good | Yes | 50K | Yes | 300 | Toilet | Diarrhoea | | Agri. | 87,000 |
| 2-067 | Zulu | Chimpanba | Not-good | IS | Good | 12 | Yes | Area Mech. | Up SW | 6 | Yes | Secure Quality | Exist | Good | No | N/A | No | N/A | Toilet | Diarrhoea | 6 | Agri. | 55,000 |
| 2-067 | Zulu | Chimpanba | Excellent | IS | Good | 5 | Yes | Donor | R/D | 4 | Yes | Secure Quality | Exist | Good | No | N/A | Yes | 20 | Toilet | N/A | 4 | Wage Earner | 20,000 |
| 2-068 | Zulu | Chiwoko | Good | S | Salty | 7 | Yes | Village | Up SW | 4 | Yes | Lighten Labour | Exist | Moderate | No | N/A | No | N/A | Toilet | Dysentery | 3 | Agri. | 25,000 |
| 2-068 | Zulu | Chiwoko | Very bad | S | Good | 4 | No | Area Mech. | Up SW | 5 | No | N/A | Exist | Not-Good | Yes | 30K | No | N/A | Toilet | Dysentery | 7 | Merchant | 48,000 |
| 2-069 | Zulu | Chiwoko | Good | IS | Good | 5 | Yes | Village | Up SW | 5 | Yes | Save Time | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 4 | Agri. | 200,000 |
| 2-069 | Zulu | Chiwoko | Excellent | S | Good | 8 | Yes | Area Mech. | Up SW | 2 | No | N/A | Exist | N/A | Yes | 200K | Yes | 200 | Toilet | Diarrhoea | 3 | Agri. | 16,000 |
| 2-070 | Zulu | Mazawa | Excellent | S | Good | 3 | Yes | Donor | R/D | 4 | Yes | Secure Quality | Exist | Good | No | N/A | Yes | 20 | Toilet | N/A | 4 | Wage Earner | 20,000 |
| 2-070 | Zulu | Mazawa | Moderate | S | Good | 150 | Yes | Village | PSW | 4 | Yes | Save Time | Exist | Good | Yes | 30K | Yes | 20 | Garden | Diarrhoea | 6 | Agri. | 16,000 |

| General | | | JICA Borehole | | | | | | Alternative Water source | | | | Willings/Affordability | | | | | | Hygine & Sanitation | | | Socio-Economic Situation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH No. | TA | Village | rating | Satisfaction | | Daily use buckets /day | Trial repair | Repaired by | Alternative Water source | Times a day | Need of rehab | Expectations | WPC | Evaluation WPC activities | Willingness to pay | Affordability to pay pump maintenance per hh | money contribution for maintenance of JICA BH | How much (MK) | Excretion place | Type of illness | No. of person in family | Occupation | Total income |
| | | | | Volume | Quality | | | | | | | | | | | | | | | | | | |
| 2-071 | Zulu | Mbachunda | Excellent | S | Good | 3 | Yes | Village | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 30K | Yes | 500 | Toilet | Skin disease | 6 | Agri. | N/A |
| 2-071 | Zulu | Mbachunda | Excellent | S | Good | 6 | Yes | Village | PSW | 4 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Skin disease | 5 | Other | 60,000 |
| 2-072 | Zulu | Mbachunda | Good | S | Good | 3 | Yes | Area Mech. | R/D | 1 | Yes | Lighten Labour | Exist | Good | Yes | 100K | No | N/A | Toilet | Diarrhoea | 7 | Agri. | 18,000 |
| 2-072 | Zulu | Mbachunda | Good | S | Good | 6 | Yes | WMA | R/D | 3 | Yes | Lighten Labour | Exist | Good | Yes | 50K | No | N/A | Toilet | Diarrhoea | 1 | Agri. | 20,000 |
| 2-073 | Zulu | Chintanda | Good | S | Good | 4 | Yes | WMA | PSW | 4 | Yes | Save Time | Exist | Good | Yes | 500K | Yes | 120 | Toilet | Diarrhoea | 2 | Agri. | 78,000 |
| 2-073 | Zulu | Chintanda | Very bad | S | Good | 5 | No | Area Mech. | Up SW | 5 | No | N/A | Exist | Not-Good | Yes | 30K | No | N/A | Toilet | Dysentery | 7 | Merchant | 48,000 |
| 2-073 | Zulu | Chintanda | Very bad | S | Good | 4 | Yes | WMA | Up SW | 4 | Yes | Less Expense | Exist | Moderate | Yes | 50K | Yes | 500 | Toilet | Diarrhoea | 4 | Agri. | 72,000 |
| 2-074 | Zulu | Kachikon-do | Excellent | S | Good | 4 | Yes | Village | R/D | 4 | Yes | Secure Quality | Exist | Not-Good | Yes | 50K | Yes | 100 | Garden | Skin disease | | Agri. | 44,000 |
| 2-074 | Zulu | Kachikon-do | Good | S | Good | 3 | Yes | Area Mech. | PSW | 5 | Yes | Lighten Labour | Not exist | N/A | Yes | 50K | No | N/A | Garden | | 1 | Agri. | N/A |
| 2-075 | Zulu | Chiphala | Very bad | S | Good | 3 | No | N/A | Up SW | 3 | Yes | Secure Quality | Exist | N/A | Yes | 50K | Yes | 60 | Toilet | Dysentery | 3 | Agri. | 11,000 |
| 2-075 | Zulu | Chiphala | Very bad | S | Good | 8 | Yes | Village | Up SW | 4 | Yes | Lighten Labour | Not exist | N/A | Yes | 50K | Yes | 50 | Toilet | Dysentery | 7 | Agri. | 48,000 |
| 2-076 | Zulu | Mthawira | Not-good | S | Good | 10 | Yes | WMA | Up SW | 10 | No | N/A | Exist | Not-Good | Yes | 100K | No | N/A | Toilet | Dysentery | 7 | Agri. | 45,000 |
| 2-076 | Zulu | Mthawira | Excellent | S | Good | 5 | Yes | WMA | PSW | 5 | Yes | Save Time | Exist | Good | Yes | 200K | No | N/A | Toilet | Dysentery | 4 | Merchant | 6,000 |
| 2-077 | Zulu | Dzidzwa | Moderate | IS | Good | 4 | Yes | Village | PSW | 4 | Yes | Save Time | Exist | Good | Yes | 30K | Yes | 20 | Garden | Diarrhoea | 6 | Agri. | 16,000 |
| 2-077 | Zulu | Dzidzwa | Moderate | IS | Good | 10 | Yes | WMA | R/D | 8 | Yes | Save Time | Not exist | N/A | Yes | 50K | Yes | 500 | Toilet | N/A | 5 | Agri. | 300,000 |
| 2-078 | Zulu | Chalema | Good | S | Good | 6 | Yes | Area Mech. | R/D | 3 | Yes | Lighten Labour | Exist | Excellent | Yes | 50K | Yes | 100 | Toilet | Diarrhoea | 2 | Agri. | 14,000 |
| 2-078 | Zulu | Chalema | Very bad | S | Good | 4 | N/A | N/A | Up SW | 3 | No | N/A | Exist | Not-Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 75,000 |
| 2-079 | Zulu | Kalilang-we | Very bad | S | Good | 4 | Yes | Area Mech. | Up SW | 2 | Yes | Secure Quality | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | N/A | 3 | Agri. | 35,000 |
| 2-079 | Zulu | Kalilang-we | Very bad | S | Good | 2 | No | N/A | R/D | 3 | Yes | Lighten Labour | Not exist | N/A | Yes | 500K | Yes | 100 | Toilet | Diarrhoea | 1 | Agri. | 99,000 |
| 2-080 | Zulu | Msemwe | Good | S | Good | 6 | Yes | Village | Up SW | 3 | Yes | Save Time | Not exist | N/A | Yes | 100K | No | N/A | Garden | Diarrhoea | 6 | Agri. | 48,000 |
| 2-080 | Zulu | Msemwe | Excellent | S | Good | 8 | Yes | Area Mech. | PSW | 4 | No | Save Time | Exist | Very bad | Yes | 50K | Yes | 1,500 | Garden | Skin disease | | Agri. | 50,000 |
| 2-081 | Zulu | Msemwe | Not-good | IS | Good | 7 | Yes | Area Mech. | Up SW | 6 | Yes | Secure Quality | Exist | Good | No | N/A | No | N/A | Toilet | Diarrhoea | 6 | Agri. | 55,000 |
| 2-081 | Zulu | Msemwe | Moderate | S | Good | 5 | Yes | Donor | R/D | 3 | Yes | Secure Quality | Exist | Good | Yes | 30K | Yes | 20 | Garden | N/A | 5 | Agri. | 24,000 |
| 2-082 | Zulu | Mando | Good | S | Good | 4 | Yes | Village | Up SW | 4 | Yes | Lighten Labour | Exist | Moderate | No | N/A | No | N/A | Toilet | Dysentery | 3 | Agri. | 25,000 |
| 2-082 | Zulu | Mando | Good | S | Good | 6 | Yes | Area Mech. | R/D | N/A | No | N/A | Exist | Good | Yes | 50K | Yes | 500 | Toilet | N/A | 8 | Agri. | 50,000 |
| 2-083 | Zulu | Gereta | Excellent | S | Good | 10 | Yes | WMA | PSW | 5 | Yes | Save Time | Exist | Good | Yes | 200K | No | N/A | Toilet | Dysentery | 4 | Merchant | 6,000 |
| 2-083 | Zulu | Gereta | Good | S | Good | 4 | Yes | Village | PSW | 5 | Yes | Save Time | Exist | Moderate | Yes | 200K | Yes | 500 | Toilet | Dysentery | 1 | Agri. | 30,000 |
| 2-084 | Zulu | Matimba | Good | S | Good | 4 | Yes | Area Mech. | PSW | N/A | Yes | Secure Quality | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Dysentery | 3 | Wage Earner | 10,000 |
| 2-084 | Zulu | Matimba | Good | IS | Good | 10 | Yes | Village | R/D | 8 | Yes | Save Time | Exist | Excellent | Yes | 200K | Yes | 100 | Toilet | Diarrhoea | | Agri. | N/A |
| 2-085 | Zulu | Matimba | Good | S | Good | 3 | Yes | Village | Up SW | 3 | Yes | Save Time | Not exist | N/A | Yes | 100K | No | N/A | Garden | Diarrhoea | 6 | Agri. | 48,000 |
| 2-085 | Zulu | Matimba | Good | S | Good | 4 | Yes | Village | Up SW | 3 | Yes | Lighten Labour | Exist | Not-Good | Yes | 50K | Yes | 50 | Toilet | | 5 | Agri. | 82,000 |
| 2-086 | Zulu | Jenjewa | Not-good | S | Good | 12 | Yes | Area Mech. | PSW | 3 | No | N/A | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 2 | Agri. | 37,000 |
| 2-086 | Zulu | Jenjewa | Very bad | S | Good | 20 | Yes | Village | Up SW | 4 | Yes | Lighten Labour | Not exist | N/A | Yes | 50K | Yes | 50 | Toilet | Dysentery | 7 | Agri. | 48,000 |
| 2-087 | Zulu | Kanjeleng | Good | S | Good | 10 | Yes | Village | Up SW | 3 | Yes | Lighten Labour | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 4 | Agri. | N/A |
| 2-087 | Zulu | Kanjeleng | Good | S | Good | 6 | Yes | Village | Up SW | 5 | Yes | Save Time | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 4 | Agri. | 200,000 |
| 2-088 | Zulu | Kamndaya | Excellent | IS | Good | 8 | Yes | Area Mech. | Up SW | 2 | No | N/A | Exist | N/A | Yes | 200K | Yes | 200 | Toilet | Diarrhoea | 3 | Agri. | 16,000 |
| 2-088 | Zulu | Kamndaya | Excellent | S | Good | 15 | Yes | Area Mech. | Up SW | 1 | 3 | N/A | Exist | Moderate | Yes | 50K | Yes | 150 | Toilet | Diarrhoea | 5 | Agri. | 14,800 |
| 2-089 | Zulu | Mzati | Good | S | Good | 6 | Yes | Area Mech. | R/D | 1 | Yes | Secure Quality | Exist | Moderate | Yes | 100K | No | N/A | Toilet | Diarrhoea | 6 | Agri. | 13,000 |
| 2-089 | Zulu | Mzati | Good | IS | Good | 3 | Yes | Neiborings | PSW | 8 | No | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | | | Agri. | 110,000 |
| 2-090 | Zulu | Zefalino | Very bad | S | Good | 3 | Yes | Area Mech. | Up SW | 2 | Yes | Secure Quality | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | N/A | 3 | Agri. | 35,000 |
| 2-090 | Zulu | Zefalino | Very bad | S | Good | 4 | Yes | WMA | Up SW | 4 | Yes | Less Expense | Exist | Moderate | Yes | 50K | Yes | 500 | Toilet | Diarrhoea | 4 | Agri. | 72,000 |
| 2-091 | Zulu | Chipha-la A | Good | IS | Salty | 6 | Yes | Area Mech. | PSW | 6 | Yes | Save Time | Exist | Excellent | Yes | 100K | No | 100 | Toilet | Eye disease | 1 | Agri. | 20,000 |
| 2-091 | Zulu | Chipha-la A | Not-good | IS | Coloour | 3 | Yes | Donor | Up SW | 3 | Yes | Save Time | Exist | Good | Yes | 30K | No | N/A | Toilet | Diarrhoea | 2 | Merchant | 110,000 |
| 2-092 | Zulu | Chamveka | Good | S | Good | 10 | Yes | Village | R/D | 4 | Yes | Lighten Labour | Exist | Good | Yes | 200K | Yes | 50 | Toilet | | 7 | Agri. | 73,000 |
| 2-092 | Zulu | Chamveka | Good | S | Good | 6 | Yes | WMA | R/D | 6 | Yes | Secure Quality | Exist | N/A | Yes | 500K | Yes | 560 | Toilet | Diarrhoea | 5 | Agri. | 55,000 |
| 2-093 | Zulu | Kamwendo T. C. | | | | | | | | | | | | | | | | | | | | | |
| 2-094 | Zulu | Kamwendo T. C. | Excellent | S | Good | 5 | Yes | Village | PSW | 1 | Yes | Secure Quality | Exist | N/A | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 6 | Agri. | 38,500 |
| 2-094 | Zulu | Kamwendo T. C. | Very bad | S | Good | 10 | No | N/A | Up SW | 3 | Yes | Secure Quality | Exist | N/A | Yes | 50K | Yes | 60 | Toilet | Dysentery | 3 | Agri. | 11,000 |
| 2-095 | Zulu | Chidewa | Excellent | S | Good | 4 | Yes | Donor | Up SW | 4 | No | N/A | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 5 | Merchant | 48,000 |
| 2-095 | Zulu | Chidewa | Not-good | IS | Good | 6 | Yes | Donor | Up SW | 6 | No | N/A | Not exist | N/A | Yes | 50K | Yes | 50 | Garden | Diarrhoea | 6 | Breeder | 50,000 |
| 2-096 | Zulu | Chikomani | Excellent | S | Good | 4 | Yes | Donor | Up SW | 4 | No | N/A | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 5 | Merchant | 48,000 |
| 2-096 | Zulu | Chikomani | Moderate | S | Good | 10 | Yes | WMA | R/D | 8 | Yes | Save Time | Not exist | N/A | Yes | 50K | Yes | 500 | Toilet | N/A | 5 | Agri. | 300,000 |
| 2-097 | Zulu | Mdawa | Moderate | IS | Salty | 7 | Yes | Donor | R/D | 3 | Yes | Secure Quality | Exist | Good | Yes | 30K | Yes | 20 | Garden | N/A | 5 | Agri. | 24,000 |
| 2-097 | Zulu | Mdawa | Good | IS | Good | 8 | Yes | Area Mech. | R/D | N/A | No | N/A | Exist | Good | Yes | 50K | Yes | 500 | Toilet | N/A | 8 | Agri. | 50,000 |
| 2-098 | Zulu | Kwachau-name | Very bad | S | Good | 8 | Yes | Village | BH | 6 | Yes | Save Time | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 4 | Agri.Labourer | 115,000 |
| 2-098 | Zulu | Kwachau-name | Very bad | S | Good | 4 | No | N/A | BH | 3 | No | N/A | Exist | Moderate | Yes | 50K | No | N/A | Toilet | | 4 | Agri.Labourer | 115,000 |
| 2-099 | Zulu | Mando | Moderate | S | Good | 5 | Yes | Village | BH | 2 | Yes | Save Time | Exist | N/A | Yes | 50K | Yes | 150 | Toilet | Diarrhoea | 5 | Agri. | 18,700 |
| 2-099 | Zulu | Mando | Good | S | Good | 8 | Yes | WMA | R/D | 4 | Yes | Save Time | Exist | Not-Good | Yes | 50K | Yes | 300 | Toilet | Diarrhoea | | Agri. | 87,000 |
| 2-100 | Zulu | Chikoyi-Jombo | Good | S | Good | 8 | Yes | Village | PSW | 3 | Yes | Save Time | Exist | Moderate | Yes | 500K | Yes | 400 | Toilet | Eye disease | 1 | Agri. | 10,000 |
| 2-100 | Zulu | Chikoyi-Jombo | Very bad | S | Good | 5 | No | N/A | R/D | 3 | Yes | Lighten Labour | Not exist | N/A | Yes | 500K | Yes | 100 | Toilet | Diarrhoea | 1 | Agri. | 99,000 |

| General | | | JICA Borehole | | | | | | Alternative Water source | | | | Willings/Affordability | | | | | | Hygine & Sanitation | | | Socio-Economic Situation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH No. | TA | Village | rating | Satisfaction | | Daily use buckets /day | Trial repair | Repaired by | Alternative Water source | Times a day | Need of rehab | Expectations | WPC | Evaluation WPC activities | Willingness to pay | Affordability to pay pump maintenance per hh | money contribution for maintenance of JICA BH | How much (MK) | Excretion place | Type of illness | No. of person in family | Occupation | Total income |
| | | | | Volume | Quality | | | | | | | | | | | | | | | | | | |
| 2-101 | Zulu | Chimteka | Good | IS | Salty | 3 | Yes | Village | R/D | 3 | Yes | Save Time | Exist | Good | Yes | 500K | Yes | 120 | Toilet | Diarrhoea | 2 | Agri. | 78,000 |
| 2-101 | Zulu | Chimteka | Moderate | S | Good | 5 | Yes | Village | BH | 3 | Yes | Lighten Labour | Exist | Good | Yes | 50K | No | N/A | Toilet | Diarrhoea | 1 | Agri. | 20,000 |
| 2-102 | Zulu | Chetamba-la | Not-good | S | Coloour | 3 | Yes | Area Mech. | Up SW | 6 | Yes | Secure Quality | Exist | Good | No | N/A | No | N/A | Toilet | Diarrhoea | 6 | Agri. | 55,000 |
| 2-102 | Zulu | Chetamba-la | Excellent | S | Good | 4 | Yes | Village | PSW | 4 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Skin disease | 5 | Other | 60,000 |
| 2-103 | Zulu | Chiwenkha | Not-good | IS | Good | 6 | Yes | Village | PSW | 3 | Yes | Lighten Labour | Exist | Good | Yes | 100K | Yes | 200 | Toilet | | 2 | Agri. | 20,000 |
| 2-103 | Zulu | Chiwenkha | Very bad | S | Good | 3 | Yes | Donor | PSW | 2 | Yes | Lighten Labour | Exist | Good | Yes | 100K | Yes | 200 | Toilet | | 2 | Agri. | 20,000 |
| 2-104 | Zulu | Mphanga | Good | S | Good | 5 | Yes | Village | Up SW | 4 | Yes | Lighten Labour | Exist | Moderate | No | N/A | No | N/A | Toilet | Dysentery | 3 | Agri. | 25,000 |
| 2-104 | Zulu | Mphanga | Very bad | S | Good | 6 | No | Area Mech. | Up SW | 5 | No | N/A | Exist | Not-Good | Yes | 30K | No | N/A | Toilet | Dysentery | 7 | Merchant | 48,000 |
| 2-105 | Zulu | Durira | Moderate | IS | Salty | 10 | Yes | Village | PSW | 4 | Yes | Save Time | Exist | Good | Yes | 30K | Yes | 20 | Garden | Diarrhoea | 6 | Agri. | 16,000 |
| 2-105 | Zulu | Durira | Very bad | IS | Coloour | 3 | N/A | N/A | Up SW | 3 | No | N/A | Exist | Not-Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 75,000 |
| 2-106 | Zulu | Mphanga | Not-good | S | Good | 5 | Yes | WMA | Up SW | 10 | No | N/A | Exist | Not-Good | Yes | 100K | No | N/A | Toilet | Dysentery | 7 | Agri. | 45,000 |
| 2-106 | Zulu | Mphanga | Excellent | S | Good | 3 | Yes | WMA | PSW | 5 | Yes | Save Time | Exist | Good | Yes | 200K | No | N/A | Toilet | Dysentery | 4 | Merchant | 6,000 |
| 2-107 | Zulu | Butawo | Good | IS | Good | 5 | Yes | Area Mech. | PSW | N/A | Yes | Secure Quality | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Dysentery | 3 | Wage Earner | 10,000 |
| 2-107 | Zulu | Butawo | Good | IS | Good | 6 | Yes | Village | PSW | 5 | Yes | Save Time | Exist | Moderate | Yes | 200K | Yes | 500 | Toilet | Dysentery | 1 | Agri. | 30,000 |
| 2-108 | Zulu | Mndunga | Good | IS | Good | 6 | Yes | Village | Up SW | 3 | Yes | Save Time | Not exist | N/A | Yes | 100K | No | N/A | Garden | Diarrhoea | 6 | Agri. | 48,000 |
| 2-108 | Zulu | Mndunga | Good | S | Good | 3 | Yes | Village | Up SW | 3 | Yes | Lighten Labour | Exist | Not-Good | Yes | 50K | Yes | 50 | Toilet | | 5 | Agri. | 82,000 |
| 2-109 | Zulu | Kaligwen-je | Good | S | Good | 7 | Yes | Village | Up SW | 3 | Yes | Lighten Labour | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 4 | Agri. | N/A |
| 2-109 | Zulu | Kaligwen-je | Excellent | S | Good | 6 | Yes | Area Mech. | Up SW | 1 | 3 | N/A | Exist | Moderate | Yes | 50K | Yes | 150 | Toilet | Diarrhoea | 5 | Agri. | 14,800 |
| 2-110 | Zulu | Kolona | Moderate | S | Good | 10 | Yes | Area Mech. | R/D | 3 | Yes | Lighten Labour | Exist | Excellent | Yes | 50K | Yes | 100 | Toilet | Diarrhoea | 2 | Agri. | 14,000 |
| 2-110 | Zulu | Kolona | Good | IS | Good | 5 | Yes | Village | Up SW | 4 | Yes | Lighten Labour | Not exist | N/A | Yes | 50K | Yes | 50 | Toilet | Dysentery | 7 | Agri. | 48,000 |
| 3-001 | Zulu | Kachaje | Good | IS | Good | 8 | Yes | Village | Up SW | 3 | Yes | Lighten Labour | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 4 | Agri. | N/A |
| 3-001 | Zulu | Kachaje | Not-good | IS | Good | 10 | Yes | Area Mech. | PSW | 3 | No | N/A | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 2 | Agri. | 37,000 |
| 3-002 | Zulu | Mchambo-Gunda | Good | IS | Good | 3 | Yes | Village | Up SW | 5 | Yes | Save Time | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 4 | Agri. | 200,000 |
| 3-002 | Zulu | Mchambo-Gunda | Excellent | IS | Good | 4 | Yes | Donor | Up SW | 4 | No | N/A | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 5 | Merchant | 48,000 |
| 3-003 | Zulu | Geresono | Moderate | S | Good | 10 | Yes | WMA | R/D | 8 | Yes | Save Time | Not exist | N/A | Yes | 50K | Yes | 500 | Toilet | N/A | 5 | Agri. | 300,000 |
| 3-003 | Zulu | Geresono | Moderate | S | Good | 8 | Yes | Village | R/D | 4 | Yes | Lighten Labour | Exist | Excellent | Yes | 50K | Yes | 50 | 0 | | 4 | Merchant | 46,000 |
| 3-004 | Zulu | Mchambo | Good | S | Good | 3 | Yes | Village | PSW | 3 | Yes | Save Time | Exist | Moderate | Yes | 500K | Yes | 400 | Toilet | Eye disease | 1 | Agri. | 10,000 |
| 3-004 | Zulu | Mchambo | Moderate | S | Good | 7 | Yes | Donor | R/D | 3 | Yes | Secure Quality | Exist | Good | Yes | 30K | Yes | 20 | Garden | N/A | 5 | Agri. | 24,000 |
| 3-005 | Zulu | Chikoloka | Very bad | S | Salty | 4 | No | N/A | R/D | 3 | Yes | Lighten Labour | Not exist | N/A | Yes | 500K | Yes | 100 | Toilet | Diarrhoea | 1 | Agri. | 99,000 |
| 3-005 | Zulu | Chikoloka | Good | S | Good | 10 | Yes | Area Mech. | R/D | 3 | Yes | Lighten Labour | Exist | Excellent | Yes | 50K | Yes | 100 | Toilet | Diarrhoea | 2 | Agri. | 14,000 |
| 3-006 | Zulu | Tika | Good | S | Good | 150 | Yes | WMA | PSW | 4 | Yes | Save Time | Exist | Good | Yes | 500K | Yes | 120 | Toilet | Diarrhoea | 2 | Agri. | 78,000 |
| 3-006 | Zulu | Tika | Good | S | Good | 8 | Yes | WMA | R/D | 3 | Yes | Lighten Labour | Exist | Good | Yes | 50K | No | N/A | Toilet | Diarrhoea | 1 | Agri. | 20,000 |
| 3-007 | Zulu | Chimwere | Excellent | S | Good | 4 | Yes | Area Mech. | R/D | 1 | Yes | Lighten Labour | Exist | Good | Yes | 100K | No | N/A | Toilet | Diarrhoea | 7 | Agri. | 18,000 |
| 3-007 | Zulu | Chimwere | Good | S | Good | 6 | Yes | Donor | PSW | 4 | Yes | Secure Quality | Not exist | N/A | Yes | 500K | No | N/A | Toilet | | 2 | Agri. | 25,000 |
| 3-008 | Zulu | Kathyuka | Good | S | Good | 2 | Yes | Area Mech. | PSW | N/A | Yes | Secure Quality | Exist | Excellent | Yes | 100K | Yes | 50 | Toilet | Dysentery | 3 | Wage Earner | 10,000 |
| 3-008 | Zulu | Kathyuka | Good | S | Good | 5 | Yes | Neiborings | PSW | 8 | No | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | | | Agri. | 110,000 |
| 3-009 | Zulu | Chiwete | Excellent | S | Good | 3 | Yes | Area Mech. | Up SW | 2 | No | N/A | Exist | N/A | Yes | 200K | Yes | 200 | Toilet | Diarrhoea | 3 | Agri. | 16,000 |
| 3-009 | Zulu | Chiwete | Excellent | S | Good | 4 | Yes | WMA | PSW | 2 | Yes | N/A | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Skin disease | 8 | Agri. | 160,000 |
| 3-010 | Zulu | Changata | Good | S | Good | 2 | Yes | Area Mech. | R/D | 1 | Yes | Secure Quality | Exist | Moderate | Yes | 100K | No | N/A | Toilet | Diarrhoea | 6 | Agri. | 13,000 |
| 3-010 | Zulu | Changata | Good | S | Good | 4 | Yes | Neiborings | PSW | 8 | No | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | | | Agri. | 110,000 |
| 3-011 | Zulu | Langwani | Very bad | S | Good | 7 | Yes | Area Mech. | Up SW | 2 | Yes | Secure Quality | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | N/A | 3 | Agri. | 35,000 |
| 3-011 | Zulu | Langwani | Very bad | S | Good | 10 | Yes | WMA | Up SW | 4 | Yes | Less Expense | Exist | Moderate | Yes | 50K | Yes | 500 | Toilet | Diarrhoea | 4 | Agri. | 72,000 |
| 3-012 | Zulu | Sinosi | Good | S | Good | 10 | Yes | Donor | PSW | 1 | Yes | N/A | Exist | Moderate | No | N/A | No | N/A | Toilet | | 8 | Agri. | 130,000 |
| 3-012 | Zulu | Sinosi | Good | S | Good | 8 | Yes | Area Mech. | R/D | 2 | Yes | Save Time | N/A | N/A | Yes | 50K | Yes | 20 | Garden | | 11 | Agri. | 100,000 |
| 3-013 | Zulu | Kanyimbo | Excellent | S | Good | 5 | Yes | Village | PSW | 1 | Yes | Secure Quality | Exist | N/A | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 6 | Agri. | 38,500 |
| 3-013 | Zulu | Kanyimbo | Very bad | S | Salty | 4 | No | N/A | Up SW | 3 | Yes | Secure Quality | Exist | N/A | Yes | 50K | Yes | 60 | Toilet | Dysentery | 3 | Agri. | 11,000 |
| 3-014 | Mduwa | Machilika | Very bad | S | Good | 6 | Yes | Village | R/D | 5 | Yes | Secure Quality | Exist | Moderate | Yes | 100K | Yes | 50 | Toilet | Skin disease | 7 | Agri. | 52,000 |
| 3-014 | Mduwa | Machilika | Not-good | N/A | N/A | 4 | Yes | Village | R/D | N/A | Yes | Secure Quality | Exist | Moderate | Yes | 50K | Yes | 100 | Toilet | Diarrhoea | 6 | Agri. | 38,000 |
| 3-015 | Mduwa | Chikwekwe | Moderate | S | Good | 3 | Yes | Village | PSW | N/A | Yes | Secure Quality | Exist | Good | No | N/A | No | N/A | Toilet | | 13 | Merchant | 115,000 |
| 3-015 | Mduwa | Chikwekwe | Not-good | IS | Good | 12 | Yes | Village | R/D | N/A | Yes | Secure Quality | Exist | Moderate | Yes | 100K | Yes | 150 | Toilet | | 3 | Merchant | 89,000 |
| 3-016 | Mduwa | Kanyenda | Very bad | S | Good | 5 | No | N/A | R/D | 3 | Yes | Save Time | Exist | Not-Good | Yes | 100K | No | N/A | Toilet | Diarrhoea | 4 | Agri. | 120,000 |
| 3-016 | Mduwa | Kanyenda | Very bad | N/A | N/A | 4 | No | N/A | R/D | 3 | Yes | Save Time | Exist | Very bad | Yes | 100K | Yes | 30 | Toilet | Skin disease | 3 | Agri. | 95,000 |
| 3-017 | Mduwa | Mberere | Moderate | IS | Good | 5 | Yes | Village | R/D | N/A | Yes | Less Expense | Exist | Good | Yes | 50K | Yes | 50 | Toilet | N/A | 3 | Agri. | 36,000 |
| 3-017 | Mduwa | Mberere | Moderate | IS | Good | 1 | Yes | Village | R/D | N/A | Yes | Less Expense | Exist | Moderate | Yes | 50K | Yes | 50 | Toilet | | 4 | Other | 145,000 |
| 3-018 | Mduwa | Mikundi T.C. | Very bad | IS | Salty | 3 | No | N/A | BH | N/A | Yes | Secure Quality | Not exist | N/A | No | N/A | No | N/A | Toilet | Diarrhoea | 7 | Agri. | 40,000 |
| 3-018 | Mduwa | Mikundi T.C. | Very bad | IS | Salty | 4 | No | N/A | BH | N/A | Yes | Secure Quality | Not exist | N/A | No | N/A | No | N/A | Toilet | Dysentery | 9 | Agri. | 70,000 |
| 3-019 | Mduwa | Kalombo Sch | Moderate | IS | Good | 5 | Yes | Village | N/A | N/A | Yes | Secure Quality | Exist | Not-Good | No | N/A | Yes | 20 | Toilet | Diarrhoea | 7 | Agri. | 50,000 |
| 3-019 | Mduwa | Kalombo Sch | Moderate | IS | Good | 4 | Yes | Village | N/A | N/A | Yes | Secure Quality | Exist | Not-Good | Yes | 50K | Yes | 20 | Toilet | N/A | 6 | Agri. | 20,000 |
| 3-020 | Mduwa | Tongole | Moderate | S | Good | 3 | Yes | Village | PSW | 1 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 50 | Toilet | | 3 | Agri. | 82,000 |
| 3-020 | Mduwa | Tongole | Good | S | Good | 3 | Yes | Village | PSW | N/A | Yes | Secure Quality | Exist | Good | Yes | 30K | Yes | 50 | Toilet | N/A | 5 | Agri. | 42,000 |

| General | | | JICA Borehole | | | | | | Alternative Water source | | | | Willings/Affordability | | | | | | Hygine & Sanitation | | | Socio-Economic Situation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH No. | TA | Village | rating | Satisfaction | | Daily use buckets /day | Trial repair | Repaired by | Alternative Water source | Times a day | Need of rehab | Expectations | WPC | Evaluation WPC activities | Willingness to pay | Affordability to pay pump maintenance per hh | money contribution for maintenance of JICA BH | How much (MK) | Excretion place | Type of illness | No. of person in family | Occupation | Total income |
| | | | | Volume | Quality | | | | | | | | | | | | | | | | | | |
| 3-021 | Mduwa | Kalinde | Good | S | Good | 6 | N/A | N/A | R/D | N/A | Yes | Less Expense | Exist | Good | Yes | 50K | No | N/A | Toilet | Skin disease | 6 | Agri. | 60,000 |
| 3-021 | Mduwa | Kalinde | N/A | S | Good | 5 | Yes | Village | R/D | N/A | Yes | N/A | Exist | Good | Yes | 50K | Yes | 20 | Toilet | N/A | 5 | Agri. | 37,000 |
| 3-022 | Mduwa | Jasi | Good | S | Good | 8 | Yes | Village | R/D | 2 | Yes | Less Expense | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Skin disease | 6 | Agri. | 52,000 |
| 3-022 | Mduwa | Jasi | Good | S | Good | 10 | Yes | Village | R/D | N/A | Yes | Secure Quality | Exist | Moderate | Yes | 50K | Yes | 100 | Toilet | Skin disease | 5 | Agri. | 48,000 |
| 3-023 | Mduwa | Chipuntiko-Chimutu | Good | S | Good | 6 | Yes | Village | R/D | 3 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 70 | Toilet | N/A | 5 | Agri. | 22,000 |
| 3-023 | Mduwa | Chipuntiko-Chimutu | Good | S | Good | 4 | Yes | Village | R/D | 3 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 70 | Toilet | N/A | 4 | Agri. | 18,000 |
| 3-024 | Mduwa | Kadiso | Not-good | IS | Good | 9 | Yes | N/A | R/D | 5 | Yes | Save Time | Not exist | N/A | No | N/A | No | N/A | Toilet | Diarrhoea | 8 | Agri. | 103,000 |
| 3-024 | Mduwa | Kadiso | Good | IS | Good | 7 | Yes | N/A | R/D | 4 | Yes | Secure Quality | Not exist | N/A | Yes | 50K | No | N/A | Garden | N/A | 4 | Agri. | 50,000 |
| 3-025 | Mduwa | Makumbi | Moderate | S | Good | 5 | Yes | Village | R/D | N/A | Yes | Save Time | Exist | N/A | Yes | 50K | Yes | 50 | Toilet | N/A | 8 | Agri. | 48,000 |
| 3-025 | Mduwa | Makumbi | Moderate | S | Good | 8 | Yes | N/A | PSW | N/A | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Toilet | | 9 | Agri. | 102,000 |
| 3-026 | Mduwa | Mkangala | Moderate | IS | Good | 8 | Yes | Village | R/D | N/A | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 50 | Toilet | | 7 | Agri. | 50,000 |
| 3-026 | Mduwa | Mkangala | Moderate | IS | Good | 5 | Yes | Village | BH | 2 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 20 | Garden | Skin disease | 4 | Agri. | 19,000 |
| 3-027 | Mduwa | Mng'ona | Not-good | N/A | N/A | 5 | Yes | Village | BH | 5 | Yes | Save Time | Exist | Good | Yes | 100K | Yes | 100 | Toilet | N/A | 6 | Agri. | N/A |
| 3-027 | Mduwa | Mng'ona | Not-good | S | Good | N/A | N/A | N/A | BH | 4 | Yes | Save Time | Exist | Moderate | Yes | 50K | Yes | 100 | Toilet | Typoid | 5 | Agri. | N/A |
| 3-028 | Mduwa | Lezani | Moderate | S | Good | 6 | Yes | Village | Up SW | N/A | Yes | Secure Quality | Exist | Good | No | N/A | No | N/A | Toilet | Diarrhoea | 4 | Agri. | 135,000 |
| 3-028 | Mduwa | Lezani | Moderate | IS | Good | 3 | Yes | Village | R/D | N/A | Yes | Secure Quality | Exist | Moderate | No | N/A | No | N/A | Toilet | N/A | 2 | Agri. | 44,000 |
| 3-029 | Mduwa | Goseni | Good | S | Good | 9 | Yes | Village | Up SW | 2 | Yes | Less Expense | Exist | Good | Yes | 50K | Yes | 100 | Toilet | Diarrhoea | | Agri. | 18,000 |
| 3-029 | Mduwa | Goseni | Good | S | Good | 8 | Yes | Village | PSW | N/A | Yes | Less Expense | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Skin disease | 6 | Agri. | 35,000 |
| 3-030 | Mduwa | Timoti | Good | IS | Good | 3 | Yes | Village | PSW | N/A | Yes | Secure Quality | Exist | Moderate | Yes | N/A | Yes | 50 | Toilet | Skin disease | 7 | Agri. | 46,000 |
| 3-030 | Mduwa | Timoti | Moderate | S | Good | 8 | Yes | Village | PSW | N/A | Yes | Secure Quality | Exist | Good | Yes | 30K | Yes | 50 | Toilet | Diarrhoea | 6 | Agri. | 35,000 |
| 3-031 | Mduwa | Sigereta | Good | S | Good | 6 | Yes | Village | PSW | N/A | Yes | Secure Quality | Exist | Excellent | Yes | 100K | Yes | 200 | Toilet | N/A | 3 | Agri. | 220,000 |
| 3-031 | Mduwa | Sigereta | Good | S | Good | 5 | Yes | Village | PSW | N/A | Yes | Less Expense | Exist | Good | Yes | 100K | Yes | 50 | Toilet | N/A | 4 | Agri. | 155,000 |
| 3-031 | Mduwa | Sigereta | Good | S | Good | 8 | Yes | Area Mech. | R/D | N/A | No | N/A | Exist | Good | Yes | 50K | Yes | 500 | Toilet | N/A | 8 | Agri. | 50,000 |
| 3-032 | Mduwa | Chisamba | Moderate | S | Good | 9 | Yes | Village | R/D | 1 | Yes | Secure Quality | Exist | Not-Good | Yes | 150K | Yes | 100 | Toilet | Diarrhoea | 10 | Agri. | 30,000 |
| 3-032 | Mduwa | Chisamba | Moderate | S | Good | 7 | Yes | Village | R/D | 1 | Yes | Secure Quality | Exist | Not-Good | Yes | 150K | Yes | 100 | Toilet | N/A | 6 | Agri. | N/A |
| 3-033 | Mduwa | Maole | Good | S | Good | 11 | Yes | WMA | Up SW | 6 | Yes | Less Expense | Exist | Good | Yes | 400K | Yes | 150 | Toilet | Dysentery | 8 | Other | 103,000 |
| 3-033 | Mduwa | Maole | Good | S | Good | 5 | Yes | Village | R/D | N/A | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Toilet | | 4 | Agri. | 48,000 |
| 3-034 | Mduwa | Saidi | Good | S | Good | 5 | Yes | Village | PSW | N/A | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 50 | Toilet | | 6 | Agri. | 45,000 |
| 3-034 | Mduwa | Saidi | Moderate | S | Good | 10 | No | N/A | R/D | N/A | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | N/A | 8 | Agri. | 54,000 |
| 3-035 | Mduwa | Mikuwa ii | Good | IS | Good | 4 | Yes | Village | Up SW | 2 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Garden | N/A | 5 | Merchant | N/A |
| 3-035 | Mduwa | Mikuwa ii | Good | IS | Good | 5 | Yes | Village | Up SW | 2 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Garden | N/A | 4 | Agri. | N/A |
| 3-036 | Mduwa | Sundwe | Moderate | S | Good | 7 | Yes | Village | PSW | N/A | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 20 | Garden | | 3 | Agri. | 29,000 |
| 3-036 | Mduwa | Sundwe | Moderate | S | Good | 5 | Yes | Village | R/D | N/A | Yes | Secure Quality | Exist | Moderate | Yes | 50K | Yes | 50 | Garden | | 3 | Agri. | 18,000 |
| 3-037 | Mduwa | Mphomwe | Moderate | S | Good | 7 | Yes | Village | R/D | N/A | Yes | Secure Quality | Exist | Good | Yes | 30K | Yes | 20 | Toilet | N/A | 5 | Agri. | 18,000 |
| 3-037 | Mduwa | Mphomwe | Moderate | S | Good | 3 | Yes | Village | Up SW | 2 | Yes | Secure Quality | Exist | Not-Good | Yes | 50K | Yes | 20 | Toilet | Skin disease | 6 | Agri. | 17,000 |
| 3-038 | Mduwa | Laisi | Moderate | S | Good | 6 | Yes | Village | PSW | 3 | Yes | Secure Quality | Exist | N/A | Yes | 50K | Yes | 20 | Toilet | Diarrhoea | 7 | Agri. | 35,000 |
| 3-038 | Mduwa | Laisi | Moderate | S | Good | 10 | Yes | Village | BH | 3 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 50 | Toilet | N/A | 5 | Merchant | 50,000 |
| 3-039 | Mduwa | Kabungwe-Drawo | Moderate | S | Good | 10 | Yes | Village | Up SW | N/A | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 4 | Agri. | 42,000 |
| 3-039 | Mduwa | Kabungwe-Drawo | N/A | IS | Good | 6 | Yes | Donor | PSW | 4 | Yes | Secure Quality | Exist | Moderate | Yes | 150K | Yes | 80 | Toilet | | 6 | Agri. | 19,000 |
| 3-040 | Mduwa | Machakulo | Moderate | S | Good | 4 | Yes | Village | Up SW | N/A | Yes | N/A | Exist | Good | Yes | 50K | No | N/A | Toilet | N/A | 8 | Agri. | N/A |
| 3-040 | Mduwa | Machakulo | N/A | S | Good | 6 | Yes | Village | Up SW | N/A | Yes | Less Expense | Exist | Moderate | Yes | 50K | Yes | 30 | Toilet | Diarrhoea | 4 | Agri. | N/A |
| 3-041 | Dambe | Kapiri | Good | S | Good | 3 | Yes | Village | BH | 3 | Yes | Save Time | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Dysentery | 7 | Agri. | 210,000 |
| 3-041 | Dambe | Kapiri | Moderate | S | Good | 6 | Yes | Village | BH | 6 | Yes | Lighten Labour | Exist | Good | Yes | 150K | No | N/A | Toilet | | 3 | Agri. | 26,000 |
| 3-042 | Dambe | Mthema T.C. | Good | S | Good | 5 | Yes | Village | BH | 3 | Yes | Lighten Labour | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | | 2 | Merchant | 140,000 |
| 3-042 | Dambe | Mthema T.C. | Excellent | N/A | Good | 6 | Yes | Village | BH | 4 | N/A | Save Time | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 5 | Merchant | 200,000 |
| 3-043 | Dambe | Chalunda T.C. | Moderate | IS | Good | | Yes | Village | Up SW | N/A | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Toilet | Dysentery | 7 | Agri. | 118,000 |
| 3-043 | Dambe | Chalunda T.C. | Moderate | IS | Good | 5 | Yes | Village | Up SW | N/A | Yes | Secure Quality | Exist | Moderate | Yes | 50K | Yes | 100 | Toilet | | 5 | Agri. | 30,000 |
| 3-044 | Dambe | Kasanda | Moderate | S | Good | 12 | Yes | Area Mech. | Up SW | 8 | Yes | Lighten Labour | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 9 | Agri. | 84,000 |
| 3-044 | Dambe | Kasanda | Good | S | Good | 4 | Yes | Village | PSW | 4 | No | N/A | Exist | Good | Yes | 50K | Yes | 100 | Toilet | Skin disease | 8 | Agri. | 100,000 |
| 3-045 | Dambe | Mfelankhope | Good | S | Good | 5 | Yes | WMA | PSW | 5 | Yes | Secure Quality | Exist | Not-Good | Yes | 200K | Yes | 200 | Toilet | | 4 | Agri. | 110,000 |
| 3-045 | Dambe | Mfelankhope | Good | S | Good | 8 | Yes | WMA | PSW | 5 | Yes | Secure Quality | Exist | Not-Good | Yes | 200K | Yes | 150 | Toilet | | 6 | Agri. | 51,000 |
| 3-046 | Dambe | Katonda Sch | Good | S | Salty | 6 | Yes | Village | PSW | 4 | Yes | Lighten Labour | Exist | Moderate | Yes | 200K | Yes | 250 | Toilet | Eye disease | 4 | Civil servant | 56,000 |
| 3-046 | Dambe | Katonda Sch | Moderate | S | Good | 3 | Yes | Village | Up SW | 3 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 5 | Agri. | 300,000 |
| 3-047 | Dambe | Kamera | Not-good | S | Good | 10 | Yes | Village | PSW | 10 | Yes | Save Time | Exist | Good | Yes | 100K | Yes | 500 | Toilet | Diarrhoea | | Agri. | 200,000 |
| 3-047 | Dambe | Kamera | Very bad | S | Good | 8 | Yes | Donor | Up SW | 8 | Yes | Lighten Labour | Not exist | N/A | Yes | 200K | Yes | 200 | Toilet | Cholera | 7 | Civil servant | 144,000 |
| 3-048 | Dambe | Chisenga | Not-good | S | Good | 5 | Yes | Area Mech. | R/D | 5 | Yes | Secure Quality | Exist | Moderate | Yes | 300K | Yes | 150 | Toilet | Diarrhoea | 6 | Agri. | 16,000 |
| 3-048 | Dambe | Chisenga | Very bad | S | Good | 15 | Yes | Village | Up SW | 10 | Yes | Less Expense | Exist | N/A | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 7 | Agri. | 75,000 |
| 3-049 | Dambe | Kamphanbale | Excellent | IS | Good | 4 | Yes | Village | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 300K | Yes | 100 | Toilet | Diarrhoea | 3 | Agri. | 80,000 |
| 3-049 | Dambe | Kamphanbale | Good | S | Good | 12 | Yes | Village | Up SW | 12 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 87,500 |
| 3-050 | Dambe | Kabvuta | Good | IS | Good | 6 | Yes | Village | Up SW | 3 | Yes | Secure Quality | Exist | Good | Yes | 100K | No | N/A | Toilet | | 3 | Agri. | 47,200 |
| 3-050 | Dambe | Kabvuta | Moderate | IS | Good | 5 | Yes | Village | Up SW | 3 | Yes | Lighten Labour | Exist | Not-Good | Yes | 300K | Yes | 500 | Toilet | Diarrhoea | 3 | Agri. | 53,000 |

| General | | | JICA Borehole | | | | | | Alternative Water source | | | | Willings/Affordability | | | | | | Hygine & Sanitation | | | Socio-Economic Situation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH No. | TA | Village | rating | Satisfaction | | Daily use buckets /day | Trial repair | Repaired by | Alternative Water source | Times a day | Need of rehab | Expectations | WPC | Evaluation WPC activities | Willingness to pay | Affordability to pay pump maintenance per hh | money contribution for maintenance of JICA BH | How much (MK) | Excretion place | Type of illness | No. of person in family | Occupation | Total income |
| | | | | Volume | Quality | | | | | | | | | | | | | | | | | | |
| 3-051 | Dambe | Nkhunmbu | Moderate | S | Good | 5 | Yes | Donor | Up SW | 5 | No | N/A | Exist | Moderate | Yes | 150K | Yes | 150 | Toilet | Dysentery | 3 | Agri. | 20,000 |
| 3-051 | Dambe | Nkhunmbu | Good | S | Good | 6 | Yes | Neiborings | R/D | 3 | Yes | Lighten Labour | Exist | Excellent | Yes | 50K | No | N/A | Toilet | Dysentery | 4 | Agri. | N/A |
| 3-052 | Dambe | Mphonda-Masinja | Very bad | S | Good | 6 | Yes | Area Mech. | Up SW | 3 | Yes | Secure Quality | Exist | Not-Good | Yes | 200K | Yes | 150 | Toilet | | 3 | Agri. | 17,000 |
| 3-052 | Dambe | Mphonda-Masinja | Excellent | S | Good | 3 | Yes | Village | R/D | 2 | Yes | Lighten Labour | Exist | Good | Yes | 300K | Yes | 100 | Toilet | N/A | 6 | Agri. | 7,000 |
| 3-053 | Dambe | Kampando | Moderate | IS | N/A | 6 | Yes | Village | Up SW | 6 | Yes | Save Time | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Dysentery | 3 | Agri. | 50,000 |
| 3-053 | Dambe | Kampando | Good | IS | Good | 5 | Yes | Neiborings | R/D | 7 | Yes | Save Time | Exist | Not-Good | Yes | 300K | Yes | 50 | Toilet | Skin disease | 5 | Agri. | 70,000 |
| 3-054 | Dambe | Marten | Moderate | S | Good | 10 | Yes | Area Mech. | R/D | 8 | Yes | Lighten Labour | Exist | Not-Good | Yes | 100K | Yes | 30 | Toilet | Diarrhoea | 7 | Agri. | 31,000 |
| 3-054 | Dambe | Marten | Good | S | Good | 10 | Yes | Village | R/D | 8 | No | N/A | Exist | Good | Yes | 30K | Yes | 20 | Toilet | | 4 | Agri. | 18,000 |
| 3-055 | Dambe | Kanzimbi | Good | S | Good | 5 | Yes | Area Mech. | R/D | 3 | Yes | Lighten Labour | Exist | Good | Yes | 200K | Yes | 250 | Toilet | Dysentery | 4 | Agri. | 40,000 |
| 3-055 | Dambe | Kanzimbi | Good | S | Good | 6 | Yes | Village | Up SW | 6 | No | N/A | Exist | Good | Yes | 30K | Yes | 20 | Toilet | Diarrhoea | 3 | Agri. | 65,000 |
| 3-056 | Dambe | Gandali | Moderate | IS | Good | 12 | Yes | Village | R/D | 4 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 30 | Toilet | N/A | 8 | Agri. | 90,000 |
| 3-056 | Dambe | Gandali | Not-good | S | Good | 4 | Yes | Village | Up SW | 4 | Yes | Secure Quality | Exist | Good | Yes | 100K | Yes | 100 | Toilet | N/A | 7 | Agri. | 80,000 |
| 3-057 | Dambe | Chinkolokota | Moderate | S | Good | 2 | Yes | Donor | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 50K | No | N/A | Toilet | | 5 | Agri. | 23,000 |
| 3-057 | Dambe | Chinkolokota | Good | S | Good | 6 | Yes | Donor | PSW | N/A | Yes | Secure Quality | Exist | Good | Yes | | Yes | 20 | Toilet | Diarrhoea | 3 | Agri. | 8,000 |
| 3-058 | Dambe | Elesani | | | | | | | | | | | | | | | | | | | | | |
| 3-059 | Dambe | Kapiri Hosp. Miss. | Very bad | S | Good | 4 | Yes | Village | BH | 3 | Yes | Secure Quality | Exist | Good | No | N/A | No | N/A | Toilet | Skin disease | 8 | Agri. | 64,000 |
| 3-059 | Dambe | Kapiri Hosp. Miss. | Very bad | S | Good | 4 | Yes | Village | PSW | 4 | Yes | Save Time | Not exist | N/A | No | N/A | No | N/A | Toilet | | 4 | Agri. | N/A |
| 3-060 | Dambe | Japana | Not-good | S | Good | 8 | Yes | Village | R/D | 8 | No | N/A | Exist | Moderate | Yes | 200K | Yes | 200 | Toilet | Eye disease | 12 | Wage Earner | 131,000 |
| 3-060 | Dambe | Japana | Good | IS | Good | 15 | Yes | Area Mech. | R/D | 10 | Yes | Lighten Labour | Exist | Not-Good | Yes | 200K | Yes | 100 | Toilet | Dysentery | 7 | Agri. | 50,000 |
| 3-061 | Dambe | Gong' ontha | Good | S | Good | 10 | Yes | WMA | R/D | 5 | No | N/A | Exist | Good | Yes | 100K | Yes | 100 | Garden | | 4 | Agri. | 96,000 |
| 3-061 | Dambe | Gong' ontha | Good | S | Good | 3 | Yes | Area Mech. | R/D | 3 | Yes | Save Time | Exist | Good | Yes | 200K | Yes | 250 | Toilet | | 3 | Agri. | 38,000 |
| 3-062 | Mduwa | Kavunguti School | N/A | IS | Good | 6 | Yes | Village | N/A | N/A | Yes | Secure Quality | Exist | Moderate | Yes | 50K | Yes | 100 | Toilet | Diarrhoea | 3 | Agri. | N/A |
| 3-062 | Mduwa | Kavunguti School | N/A | IS | Good | 8 | Yes | Village | N/A | N/A | Yes | Secure Quality | Exist | Moderate | Yes | 50K | Yes | 80 | Toilet | Diarrhoea | 6 | Agri. | N/A |
| 3-063 | Dambe | Kachere | Not-good | S | Good | 6 | Yes | Area Mech. | R/D | 6 | Yes | Lighten Labour | Exist | Moderate | Yes | 100K | Yes | 50 | Toilet | | 6 | Agri. | 72,000 |
| 3-063 | Dambe | Kachere | Very bad | S | Good | 4 | Yes | Donor | Up SW | 4 | Yes | Save Time | Exist | Very bad | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 5 | Agri. | 60,000 |
| 3-064 | Dambe | Kakunga | Moderate | S | Good | 6 | Yes | Village | BH | 2 | Yes | Lighten Labour | Exist | Good | Yes | 100K | Yes | 250 | Toilet | Diarrhoea | 6 | Agri. | 60,000 |
| 3-064 | Dambe | Kakunga | Not-good | S | Good | 5 | Yes | Village | PSW | N/A | Yes | Secure Quality | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | N/A | 5 | Agri. | N/A |
| 3-065 | Dambe | Kamenya | Moderate | IS | Good | 8 | Yes | Donor | R/D | 8 | Yes | Save Time | Exist | Moderate | Yes | 100K | Yes | 50 | Toilet | | 4 | Agri. | 103,000 |
| 3-065 | Dambe | Kamenya | Very bad | S | Good | 7 | Yes | Donor | R/D | 5 | Yes | Secure Quality | Exist | Good | Yes | 50K | No | N/A | Toilet | Skin disease | 4 | Agri. | 20,000 |
| 3-066 | Dambe | Nthema T.C. | Good | S | Good | 10 | Yes | Village | BH | 7 | No | N/A | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | | 5 | Merchant | 65,000 |
| 3-066 | Dambe | Nthema T.C. | Moderate | S | Good | 10 | Yes | Area Mech. | Up SW | 7 | Yes | Lighten Labour | Exist | Moderate | Yes | 100K | Yes | 50 | Toilet | | 8 | Merchant | 50,000 |
| 3-067 | Mkanda | Lubani | Good | S | Good | 6 | Yes | Neiborings | R/D | 3 | Yes | Lighten Labour | Exist | Excellent | Yes | 50K | No | N/A | Toilet | Dysentery | 4 | Agri. | N/A |
| 3-067 | Mkanda | Lubani | Good | S | Good | 10 | Yes | Donor | PSW | N/A | Yes | Secure Quality | Exist | Good | Yes | | Yes | 20 | Toilet | Diarrhoea | 3 | Agri. | 8,000 |
| 3-068 | Mkanda | Chinkhali | Very bad | S | Salty | 4 | Yes | Village | PSW | 3 | Yes | Secure Quality | Exist | Not-Good | Yes | 100K | Yes | 300 | Toilet | | 1 | Agri. | 95,000 |
| 3-068 | Mkanda | Chinkhali | Moderate | S | Good | 5 | Yes | Village | R/D | 4 | Yes | Lighten Labour | Exist | Not-Good | Yes | 100K | Yes | 50 | Toilet | Diarrhoea | 7 | Agri. | 45,000 |
| 3-069 | Mkanda | Chang' amba | Good | S | Good | 5 | Yes | Village | BH | 1 | Yes | Lighten Labour | Exist | Good | Yes | 100K | No | N/A | Toilet | | 1 | Civil servant | 55,000 |
| 3-069 | Mkanda | Chang' amba | Good | S | Good | 10 | Yes | Area Mech. | PSW | N/A | Yes | Lighten Labour | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 2 | Agri. | 120,000 |
| 3-070 | Mkanda | Kuthethe | Good | S | Good | 6 | Yes | Area Mech. | Up SW | 6 | Yes | Lighten Labour | Exist | Good | Yes | 100K | Yes | 400 | Toilet | | 7 | Agri. | 40,000 |
| 3-070 | Mkanda | Kuthethe | Moderate | S | Good | 10 | Yes | Area Mech. | Up SW | 4 | Yes | Save Time | Exist | Good | Yes | 50K | Yes | 50 | Toilet | | 5 | Agri. | 38,000 |
| 3-071 | Mkanda | Dina | Very bad | S | Good | 6 | Yes | Village | R/D | 8 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 100 | Garden | Diarrhoea | 2 | Agri. | 32,000 |
| 3-071 | Mkanda | Dina | Good | S | Good | 4 | No | N/A | PSW | 4 | Yes | Secure Quality | Exist | Excellent | Yes | 150K | Yes | 200 | Toilet | | 4 | Merchant | N/A |
| 3-072 | Mkanda | Thengo | Good | S | Good | 3 | Yes | Area Mech. | R/D | 2 | Yes | Lighten Labour | Exist | Excellent | Yes | 300K | Yes | 300 | Toilet | | 3 | Agri.Labourer | N/A |
| 3-072 | Mkanda | Thengo | Moderate | IS | Salty | 8 | Yes | Donor | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 50K | No | N/A | Toilet | | 5 | Agri. | 23,000 |
| 3-073 | Mkanda | Lameki | Not-good | IS | Salty | 4 | Yes | Village | PSW | 10 | Yes | Save Time | Exist | Good | Yes | 100K | Yes | 500 | Toilet | Diarrhoea | | Agri. | 200,000 |
| 3-073 | Mkanda | Lameki | Excellent | S | Good | 10 | Yes | Village | PSW | 3 | Yes | Secure Quality | Exist | Good | Yes | 300K | Yes | 100 | Toilet | Diarrhoea | 3 | Agri. | 80,000 |
| 3-074 | Mkanda | Kaledza | Good | S | Good | 6 | Yes | Village | BH | 3 | Yes | Lighten Labour | Exist | Excellent | Yes | 100K | Yes | 100 | Toilet | | 2 | Merchant | 140,000 |
| 3-074 | Mkanda | Kaledza | Good | S | Good | 10 | Yes | Village | PSW | 4 | Yes | Lighten Labour | Exist | Moderate | Yes | 200K | Yes | 250 | Toilet | Eye disease | 4 | Civil servant | 56,000 |
| 3-075 | Mkanda | Malungo | Excellent | IS | Good | 8 | Yes | Village | BH | 4 | N/A | Save Time | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 5 | Merchant | 200,000 |
| 3-075 | Mkanda | Malungo | Good | S | Good | 5 | Yes | Area Mech. | R/D | 3 | Yes | Lighten Labour | Exist | Good | Yes | 200K | Yes | 250 | Toilet | Dysentery | 4 | Agri. | 40,000 |
| 3-076 | Mkanda | Mphunda | Good | S | Good | 4 | Yes | Village | BH | 2 | Yes | Lighten Labour | Exist | Good | Yes | 100K | Yes | 250 | Toilet | Diarrhoea | 6 | Agri. | 60,000 |
| 3-076 | Mkanda | Mphunda | Moderate | S | Good | 4 | Yes | Village | PSW | N/A | Yes | Secure Quality | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | N/A | 5 | Agri. | N/A |
| 3-077 | Mkanda | Kadewele-Mbewa | Very bad | S | Good | 4 | Yes | Village | BH | 3 | Yes | Secure Quality | Exist | Good | No | N/A | No | N/A | Toilet | Skin disease | 8 | Agri. | 64,000 |
| 3-077 | Mkanda | Kadewele-Mbewa | Not-good | S | Good | 12 | Yes | Village | BH | 8 | Yes | Lighten Labour | Exist | Moderate | Yes | 50K | Yes | 25 | Toilet | | 6 | Agri. | 38,000 |
| 3-078 | Mkanda | Kangulu | Moderate | S | Good | 15 | Yes | Village | Up SW | 10 | Yes | Save Time | Exist | Not-Good | Yes | 150K | Yes | 50 | Toilet | Diarrhoea | 10 | Agri. | 168,000 |
| 3-078 | Mkanda | Kangulu | Good | S | Good | 6 | Yes | Village | BH | 5 | Yes | Lighten Labour | Exist | Moderate | Yes | 50K | Yes | 100 | Toilet | Diarrhoea | 6 | Merchant | 30,000 |
| 3-079 | Mkanda | Mkanda | Moderate | S | Good | 12 | Yes | Area Mech. | Up SW | 7 | Yes | Save Time | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 8 | Agri. | 61,000 |
| 3-079 | Mkanda | Mkanda | Moderate | S | Salty | 10 | Yes | Village | PSW | 3 | Yes | Save Time | Exist | Good | Yes | 400K | Yes | 350 | Toilet | | 4 | Agri. | 200,000 |

| General | | | JICA Borehole | | | | | | Alternative Water source | | | | Willings/Affordability | | | | | | Hygine & Sanitation | | | Socio-Economic Situation | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BH No. | TA | Village | rating | Satisfaction | | Daily use buckets /day | Trial repair | Repaired by | Alternative Water source | Times a day | Need of rehab | Expectations | WPC | Evaluation WPC activities | Willingness to pay | Affordability to pay pump maintenance per hh | money contribution for maintenance of JICA BH | How much (MK) | Excretion place | Type of illness | No. of person in family | Occupation | Total income |
| | | | | Volume | Quality | | | | | | | | | | | | | | | | | | |
| 3-080 | Mkanda | Mkanda | Good | S | Good | 2 | Yes | WMA | PSW | N/A | Yes | Lighten Labour | Exist | Good | Yes | 150K | Yes | 600 | Garden | Eye disease | 1 | AgriLabourer | 6,000 |
| 3-080 | Mkanda | Mkanda | Good | S | Good | 8 | Yes | Village | R/D | 8 | Yes | Save Time | Exist | Excellent | Yes | 200K | Yes | 100 | Toilet | Diarrhoea | | Agri. | N/A |
| 3-081 | Mkanda | Mazombwe | Good | S | Good | 7 | Yes | WMA | Up SW | 5 | Yes | Secure Quality | Exist | Good | Yes | 200K | Yes | 200 | Toilet | Diarrhoea | 7 | Agri. | 84,000 |
| 3-081 | Mkanda | Mazombwe | Very bad | S | Good | 5 | Yes | Village | Up SW | 2 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Toilet | Skin disease | 4 | Agri. | 46,000 |
| 3-082 | Mkanda | Chimkolokota | Very bad | IS | Good | 4 | Yes | Village | Up SW | 8 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Skin disease | 8 | Agri. | 102,000 |
| 3-082 | Mkanda | Chimkolokota | Good | IS | Good | 10 | Yes | Area Mech. | BH | 3 | No | N/A | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 3 | Wage Earner | 50,800 |
| 3-083 | Mkanda | Masiwa | Good | S | Good | 5 | Yes | Village | PSW | 5 | Yes | Less Expense | Exist | Excellent | Yes | 500K | Yes | 500 | Toilet | Eye disease | 1 | Merchant | 11,000 |
| 3-083 | Mkanda | Masiwa | Excellent | S | Good | 4 | Yes | Village | BH | 3 | Yes | Lighten Labour | Exist | Not-Good | Yes | 30K | Yes | 20 | Toilet | N/A | 4 | Agri. | 2,000 |
| 3-084 | Mkanda | Kambandekha | Good | S | Good | 8 | Yes | Village | R/D | 3 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Toilet | Skin disease | 6 | Agri. | 270,000 |
| 3-084 | Mkanda | Kambandekha | Very bad | S | Good | 14 | Yes | Village | Up SW | 8 | Yes | Secure Quality | Exist | Moderate | Yes | 50K | Yes | 200 | Toilet | | 4 | Agri. | 60,000 |
| 3-085 | Mkanda | Jimu | Moderate | S | Salty | 6 | Yes | Donor | BH | 10 | No | N/A | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Dysentery | 11 | Agri. | 150,000 |
| 3-085 | Mkanda | Jimu | Good | IS | Salty | 4 | Yes | WMA | BH | 5 | No | N/A | Exist | Not-Good | Yes | 50K | Yes | 60 | Toilet | Skin disease | 5 | Agri. | 44,000 |
| 3-086 | Mkanda | Lupiya | Very bad | S | Good | 5 | Yes | Donor | Up SW | 8 | Yes | Lighten Labour | Not exist | N/A | Yes | 200K | Yes | 200 | Toilet | Cholera | 7 | Civil servant | 144,000 |
| 3-086 | Mkanda | Lupiya | Good | S | Good | 5 | Yes | Village | Up SW | 6 | No | N/A | Exist | Good | Yes | 30K | Yes | 20 | Toilet | Diarrhoea | 3 | Agri. | 65,000 |
| 3-087 | Mkanda | Chisauka | Moderate | IS | Good | 4 | Yes | Donor | Up SW | 5 | No | N/A | Exist | Moderate | Yes | 150K | Yes | 150 | Toilet | Dysentery | 3 | Agri. | 20,000 |
| 3-087 | Mkanda | Chisauka | Good | IS | Good | 4 | Yes | Village | Up SW | 12 | Yes | Secure Quality | Exist | Excellent | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 3 | Agri. | 87,500 |
| 3-088 | Mkanda | Kawere | Not-good | S | Good | 8 | Yes | Village | BH | 4 | Yes | Lighten Labour | Exist | Excellent | Yes | 30K | Yes | 20 | Toilet | Typoid | 5 | Merchant | 252,000 |
| 3-088 | Mkanda | Kawere | Moderate | S | Good | 5 | Yes | Village | Up SW | 3 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 5 | Agri. | 300,000 |
| 3-089 | Mkanda | Msanda | Very bad | S | Good | 7 | No | N/A | PSW | 4 | Yes | Save Time | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Eye disease | 7 | Civil servant | 268,000 |
| 3-089 | Mkanda | Msanda | Not-good | IS | Coloour | 4 | Yes | Village | R/D | 8 | No | N/A | Exist | Moderate | Yes | 200K | Yes | 200 | Toilet | Eye disease | 12 | Wage Earner | 131,000 |
| 3-090 | Mkanda | Zandana | Good | S | Good | 8 | Yes | Area Mech. | R/D | 10 | Yes | Lighten Labour | Exist | Not-Good | Yes | 200K | Yes | 100 | Toilet | Dysentery | 7 | Agri. | 50,000 |
| 3-090 | Mkanda | Zandana | Excellent | S | Good | 6 | Yes | Village | R/D | 2 | Yes | Lighten Labour | Exist | Good | Yes | 300K | Yes | 100 | Toilet | N/A | 6 | Agri. | 7,000 |
| 3-091 | Dambe | Khwere | Moderate | IS | Salty | 12 | Yes | Village | R/D | 4 | Yes | Lighten Labour | Exist | Not-Good | Yes | 100K | Yes | 50 | Toilet | Diarrhoea | 7 | Agri. | 45,000 |
| 3-091 | Dambe | Khwere | Good | S | Good | 8 | Yes | Area Mech. | R/D | 2 | Yes | Lighten Labour | Exist | Excellent | Yes | 300K | Yes | 300 | Toilet | | 3 | AgriLabourer | N/A |
| 3-092 | Dambe | Khwere T.C. | Not-good | IS | Good | 10 | Yes | Village | BH | 4 | Yes | Lighten Labour | Exist | Excellent | Yes | 30K | Yes | 20 | Toilet | Typoid | 5 | Merchant | 252,000 |
| 3-092 | Dambe | Khwere T.C. | Good | S | Good | 4 | Yes | Village | R/D | 3 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Toilet | Skin disease | 6 | Agri. | 270,000 |
| 3-093 | Dambe | Mkumbi | Good | S | Good | 1 | Yes | Village | BH | 1 | Yes | Lighten Labour | Exist | Good | Yes | 100K | No | N/A | Toilet | | 1 | Civil servant | 55,000 |
| 3-093 | Dambe | Mkumbi | Moderate | IS | Good | 6 | Yes | Village | PSW | 3 | Yes | Save Time | Exist | Good | Yes | 400K | Yes | 350 | Toilet | | 4 | Agri. | 200,000 |
| 3-094 | Dambe | Kambuwe | Very bad | S | Salty | 3 | Yes | Village | PSW | 3 | Yes | Secure Quality | Exist | Not-Good | Yes | 100K | Yes | 300 | Toilet | | 1 | Agri. | 95,000 |
| 3-094 | Dambe | Kambuwe | Moderate | S | Good | 15 | Yes | Village | Up SW | 10 | Yes | Save Time | Exist | Not-Good | Yes | 150K | Yes | 50 | Toilet | Diarrhoea | 10 | Agri. | 168,000 |
| 3-095 | Dambe | Kambuwe | Very bad | IS | Good | 4 | No | N/A | PSW | 4 | Yes | Save Time | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | Eye disease | 7 | Civil servant | 268,000 |
| 3-095 | Dambe | Kambuwe | Very bad | S | Good | 6 | Yes | Village | Up SW | 8 | Yes | Secure Quality | Exist | Moderate | Yes | 50K | Yes | 200 | Toilet | | 4 | Agri. | 60,000 |
| 3-096 | Dambe | Kankhwende | Good | IS | Good | 4 | Yes | Area Mech. | PSW | N/A | Yes | Lighten Labour | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 2 | Agri. | 120,000 |
| 3-096 | Dambe | Kankhwende | Good | S | Good | 5 | Yes | Village | BH | 2 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Garden | N/A | 2 | Agri. | 23,000 |
| 3-096 | Dambe | Kankhwende | N/A | IS | Good | 8 | Yes | Village | PSW | 6 | Yes | Less Expense | Exist | Moderate | Yes | 50K | Yes | 20 | Toilet | N/A | 6 | Agri. | N/A |
| 3-097 | Dambe | Mndaka | Good | IS | Good | 6 | N/A | N/A | PSW | N/A | Yes | Less Expense | Exist | N/A | Yes | 50K | Yes | 30 | Toilet | N/A | 4 | Agri. | 50,000 |
| 3-097 | Dambe | Mndaka | Moderate | S | Good | 5 | N/A | N/A | PSW | 3 | Yes | N/A | Exist | Moderate | Yes | 50K | Yes | 30 | Garden | N/A | 4 | Agri. | 73,000 |
| 3-098 | Dambe | Jowelo | Good | IS | Good | 2 | Yes | Area Mech. | BH | 5 | Yes | Secure Quality | Exist | Good | No | N/A | Yes | 100 | Toilet | Skin disease | 3 | Agri. | 25,000 |
| 3-098 | Dambe | Jowelo | Very bad | S | Good | 8 | Yes | Village | Up SW | 8 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Skin disease | 8 | Agri. | 102,000 |
| 3-099 | Dambe | Mtulira | Very bad | S | Good | 5 | Yes | Village | BH | 6 | Yes | Secure Quality | Exist | N/A | Yes | 100K | Yes | 100 | Toilet | Diarrhoea | 4 | Agri. | 80,000 |
| 3-099 | Dambe | Mtulira | Very bad | S | Good | 4 | Yes | Village | Up SW | 2 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Toilet | Skin disease | 4 | Agri. | 46,000 |
| 3-100 | Dambe | Kalonga | Good | S | Good | 2 | N/A | N/A | PSW | 2 | Yes | Secure Quality | Exist | Moderate | Yes | 100K | Yes | 100 | Toilet | N/A | 6 | Agri. | 51,000 |
| 3-100 | Dambe | Kalonga | Good | S | Good | 4 | Yes | Donor | PSW | 2 | Yes | Secure Quality | Exist | Good | Yes | 150K | Yes | 150 | Garden | Diarrhoea | 4 | Agri. | 41,000 |
| 3-101 | Dambe | Diti | Moderate | S | Good | 10 | Yes | Donor | BH | 10 | No | N/A | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Dysentery | 11 | Agri. | 150,000 |
| 3-101 | Dambe | Diti | Good | S | Good | 6 | Yes | WMA | BH | 5 | No | N/A | Exist | Not-Good | Yes | 50K | Yes | 60 | Toilet | Skin disease | 5 | Agri. | 44,000 |
| 3-102 | Dambe | Chitonde | Good | IS | Good | 3 | Yes | Village | PSW | 5 | Yes | Less Expense | Exist | Excellent | Yes | 500K | Yes | 500 | Toilet | Eye disease | 1 | Merchant | 11,000 |
| 3-102 | Dambe | Chitonde | Moderate | IS | Coloour | 4 | Yes | Area Mech. | Up SW | 4 | Yes | Save Time | Exist | Good | Yes | 50K | Yes | 50 | Toilet | | 5 | Agri. | 38,000 |
| 3-103 | Dambe | Kalulu Sch | Very bad | S | Salty | 4 | Yes | Village | Up SW | 4 | Yes | Less Expense | Exist | Excellent | Yes | 300K | Yes | 50 | Toilet | Dysentery | 14 | Agri. | 30,000 |
| 3-103 | Dambe | Kalulu Sch | Excellent | S | Salty | 6 | Yes | Village | BH | 3 | Yes | Lighten Labour | Exist | Not-Good | Yes | 30K | Yes | 20 | Toilet | N/A | 4 | Agri. | 2,000 |
| 3-104 | Dambe | Kalulu T.C. | Good | S | Good | 9 | Yes | Area Mech. | BH | 3 | No | N/A | Exist | Good | Yes | 50K | Yes | 50 | Toilet | Diarrhoea | 3 | Wage Earner | 50,800 |
| 3-104 | Dambe | Kalulu T.C. | Good | S | Salty | 10 | Yes | Village | BH | 5 | Yes | Lighten Labour | Exist | Moderate | Yes | 50K | Yes | 100 | Toilet | Diarrhoea | 6 | Merchant | 30,000 |
| 3-105 | Dambe | Katsompho | Excellent | S | Good | 5 | Yes | Neiborings | R/D | 4 | Yes | Less Expense | Exist | Good | Yes | 100K | Yes | 100 | Toilet | Dysentery | 7 | Agri. | 2,000 |
| 3-105 | Dambe | Katsompho | Good | S | Good | 5 | Yes | WMA | Up SW | 5 | Yes | Secure Quality | Exist | Good | Yes | 200K | Yes | 200 | Toilet | Diarrhoea | 7 | Agri. | 84,000 |
| 3-106 | Dambe | Msalanyama | Good | S | Good | 10 | Yes | Area Mech. | Up SW | 6 | Yes | Lighten Labour | Exist | Good | Yes | 100K | Yes | 400 | Toilet | | 7 | Agri. | 40,000 |
| 3-106 | Dambe | Msalanyama | Good | S | Salty | 5 | Yes | WMA | PSW | N/A | Yes | Lighten Labour | Exist | Good | Yes | 150K | Yes | 600 | Garden | Eye disease | 1 | AgriLabourer | 6,000 |
| 3-107 | Dambe | Mchonkwe | Moderate | S | Ferrous | 6 | Yes | Area Mech. | Up SW | 7 | Yes | Save Time | Exist | Good | Yes | 100K | Yes | 100 | Toilet | | 8 | Agri. | 61,000 |
| 3-107 | Dambe | Mchonkwe | Good | S | Good | 3 | No | N/A | PSW | 4 | Yes | Secure Quality | Exist | Excellent | Yes | 150K | Yes | 200 | Toilet | | 4 | Merchant | N/A |
| 3-108 | Dambe | Chiti | Good | S | Good | 7 | Yes | Village | BH | 2 | Yes | Secure Quality | Exist | Good | Yes | 50K | Yes | 100 | Garden | N/A | 2 | Agri. | 23,000 |
| 3-108 | Dambe | Chiti | N/A | IS | Good | 3 | Yes | Village | PSW | 6 | Yes | Less Expense | Exist | Moderate | Yes | 50K | Yes | 20 | Toilet | N/A | 6 | Agri. | N/A |
| 3-109 | Dambe | Chiti | Good | S | Good | 6 | N/A | N/A | PSW | N/A | Yes | Less Expense | Exist | N/A | Yes | 50K | Yes | 30 | Toilet | N/A | 4 | Agri. | 50,000 |
| 3-109 | Dambe | Chiti | Moderate | S | Good | 5 | N/A | N/A | PSW | 3 | Yes | N/A | Exist | Moderate | Yes | 50K | Yes | 30 | Garden | N/A | 4 | Agri. | 73,000 |
| 3-110 | Dambe | Mphako | Very bad | S | Good | 10 | Yes | Village | R/D | 8 | Yes | Save Time | Exist | Excellent | Yes | 100K | Yes | 100 | Garden | Diarrhoea | 2 | Agri. | 32,000 |
| 3-110 | Dambe | Mphako | Not-good | S | Good | 10 | Yes | Village | BH | 8 | Yes | Lighten Labour | Exist | Moderate | Yes | 50K | Yes | 25 | Toilet | | 6 | Agri. | 38,000 |

略語

[JICA Borehole Volume satisfaction] S:Satisfaction IS:Insatisfaction

[Alternative Water Source] BH: Borehole PSW:Protected Shallow Well Up SW:Unprotected Shallow Well R/D:River/Dambo

# 表 A7 - 9 - 30　結果一覧表（村長用）

| Geberal information | | | | Village Information | | Village Health Water Committee | | | | | | | | Water Supply Facilities | | | | | | | | | | | Hygine and Sanitation | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | WPC | | | | | Way of payment | current amount of the reserve for maintenance | place of safe keeping of the money collected | Infrastructure of water supply in the village except JICA's BH under functioning | | | plans to install/rehabilitation BH by own effort/external support | Condition of JICA BH | | | | capacity maintain JICA BH | need training | necessary categories | No. of toilets in village | No. of garbage pits in village | communal wash basin at water point |
| ID No. | BH No. | Village Name | T.A. | No. of HH | HH year 2010 | WPC establishment | year of establishment | men | women | way of establishment | | | | No. of BH | No. of SP | No. of PSW | | conditio n of BH | reason why JICA BH not functioning | JICA BH got repaired before | repaired by | | | | | | |
| 1 | 1-001 | Chidambo | Mlonyeni | 412 | | Yes | 01.01.93 | 4 | 6 | elected | Fixed fee | 0 | Treasure | 2 | 0 | 0 | No | No | 15 | Yes | Villager | Yes | Yes | 1 | 350 | | Yes |
| 2 | 1-002 | Chiute | Mlonyeni | 108 | | Yes | 01.01.95 | 6 | 3 | elected | Piece Work | 12,000 | Treasure | 0 | 0 | 7 | Yes | Yes | 2 | Yes | Villager | Yes | Yes | 13 | 35 | 40 | No |
| 3 | 1-003 | Tsamphale | Mlonyeni | 99 | | Yes | 01.01.93 | 5 | 3 | elected | | 0 | Treasure | 0 | 0 | 3 | Yes | Yes | 2 | Yes | Villager | Yes | Yes | 8 | 30 | 20 | No |
| 4 | 1-004 | Chamveka | Mlonyeni | 237 | | Yes | | 2 | 3 | elected | When repair necessary | 0 | Treasure | 1 | 0 | 5 | Yes | Yes | | Yes | Other | Yes | Yes | 7 | 150 | 0 | Yes |
| 5 | 1-005 | Maliwane | Mlonyeni | | | | | | | | | | | | | | | Yes | 2 | Yes | Villager | Yes | Yes | 7 | 100 | 90 | Yes |
| 6 | 1-006 | Maliwane | Mlonyeni | 325 | | Yes | 01.01.94 | 6 | 3 | elected | Fixed fee | 0 | Treasure | 1 | 0 | 0 | Yes | Yes | 1 | Yes | Villager | Yes | Yes | 8 | 20 | 10 | No |
| 7 | 1-007 | Mlonyeni | Mlonyeni | 240 | | Yes | 01.01.94 | 4 | 6 | elected | | 200 | Treasure | 0 | 0 | 0 | | No | 2 | Yes | Villager | No | Yes | 1 | 63 | | Yes |
| 8 | 1-008 | Zunguze | Mlonyeni | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 1-009 | Mkangeni | Mlonyeni | 81.4 | | Yes | 01.01.96 | 6 | 4 | elected | When repair necessary | | Treasure | | 0 | 1 | No | Yes | 2 | Yes | Villager | No | Yes | 10 | 40 | 9 | |
| 10 | 1-010 | Maganga | Mlonyeni | 50 | 55 | Yes | 01.01.95 | 6 | 4 | elected | Fixed fee | 0 | Treasure | 1 | 0 | 0 | Yes | Yes | 2 | Yes | Villager | No | Yes | 10 | | | Yes |
| 11 | 1-011 | Chiwaula | Mlonyeni | 78 | | Yes | 01.01.96 | 5 | 5 | elected | Fixed fee | 500 | Treasure | 0 | 0 | 0 | Yes | Yes | 8 | Yes | Area Mechani | No | Yes | 1 | 28 | 30 | Yes |
| 12 | 1-012 | Chabwela | Mlonyeni | 80 | | Yes | 01.01.95 | 5 | 5 | elected | When repair necessary | 0 | Treasure | 0 | 0 | 0 | Yes | Yes | 5 | Yes | | No | Yes | 1 | 80 | 55 | Yes |
| 13 | 1-013 | Mbeza | Mlonyeni | 115 | 170 | Yes | 01.01.95 | 5 | 5 | elected | Fixed fee | 100 | Treasure | 0 | 0 | 2 | No | Yes | 1 | Yes | Villager | No | Yes | 8 | 45 | | Yes |
| 14 | 1-014 | Chaonongeka | Mlonyeni | 85 | | Yes | 01.01.93 | 8 | 2 | elected | Fixed fee | 0 | Treasure | 3 | 0 | 6 | Yes | Yes | 2 | | | Yes | Yes | 10 | 100 | 80 | Yes |
| 15 | 1-015 | Mgwende | Mlonyeni | 50 | 150 | Yes | | 5 | 5 | elected | Fixed fee | | Treasure | 1 | 0 | 2 | No | Yes | | Yes | WMA | No | Yes | 7 | 37 | 50 | No |
| 16 | 1-016 | MWandawala | Mlonyeni | 100 | | Yes | 01.01.10 | 6 | 4 | elected | | 200 | | | | | | No | | Yes | Donor | Yes | Yes | 3 | 26 | 330 | Yes |
| 17 | 1-017 | Kadzakurnanja | Mlonyeni | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 1-018 | Milonga | Mlonyeni | 65 | | Yes | 01.01.94 | 4 | 6 | elected | Piece Work | 0 | Treasure | 0 | 0 | 0 | No | No | 2 | Yes | Villager | No | | 1 | 63 | | |
| 19 | 1-019 | Mzikaola II | Mlonyeni | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | 1-020 | Mkhala | Mlonyeni | 276 | | Yes | 01.01.93 | 5 | 5 | elected | Fixed fee | 0 | Treasure | 0 | 0 | 0 | Yes | Yes | 2 | Yes | Villager | No | Yes | 9 | | | Yes |
| 21 | 1-021 | Chibonyola(B) | Mlonyeni | | | Yes | 01.01.93 | 4 | 6 | | Fixed fee | 0 | Treasure | 0 | 0 | 0 | No | No | 10 | Yes | Villager | No | Yes | 8 | | | Yes |
| 22 | 1-022 | Mwanayumo | Mlonyeni | 61 | 45 | Yes | 01.01.95 | 6 | 4 | | Fixed fee | 1,300 | Treasure | | 0 | 1 | Yes | Yes | 11 | Yes | Villager | Yes | Yes | 7 | 7 | 21 | Yes |
| 23 | 1-023 | Mphindu | Mlonyeni | 135 | | Yes | 01.01.93 | 8 | 4 | elected | Fixed fee | 4,000 | Treasure | 0 | 0 | 4 | Yes | Yes | 5 | Yes | Villager | No | Yes | 7 | 150 | | |
| 24 | 1-024 | Chibonyola (A) | Mlonyeni | 124 | | Yes | 01.01.93 | 6 | 4 | elected | Fixed fee | 0 | Treasure | 0 | 0 | 0 | Yes | Yes | 2 | Yes | Villager | No | Yes | 7 | | | Yes |
| 25 | 1-025(a) | Chibonyola (A) | Mlonyeni | | | | | | | | | | | | | | | | | | | | | | | | |
| 26 | 1-026 | Thukuta | Mlonyeni | 55 | | Yes | 01.01.92 | 5 | 5 | elected | When repair necessary | | Treasure | 0 | 0 | 0 | Yes | Yes | 2 | No | Villager | Yes | Yes | 10 | 55 | 70 | No |
| 27 | 1-027 | Kapita | Mlonyeni | 19 | 240 | Yes | 01.01.97 | 4 | 4 | elected | Piece Work | 1,000 | Treasure | 0 | 0 | 0 | No | Yes | 2 | Yes | Villager | Yes | Yes | 1 | 19 | 0 | Yes |
| 28 | 1-028 | Maganga | Mlonyeni | 208 | | Yes | | 3 | 7 | elected | Fixed fee | | Treasure | 0 | 0 | 5 | Yes | Yes | 5 | Yes | Villager | Yes | Yes | 6 | | | Yes |
| 29 | 1-029 | Alfred | Mavwere | 75 | | Yes | 01.01.95 | 3 | 5 | elected | Piece Work | 8,000 | Treasure | 0 | 0 | 0 | Yes | Yes | 2 | Yes | Villager | No | Yes | 10 | | | Yes |
| 30 | 1-030 | Pembere | Mavwere | 84 | 78 | Yes | 01.01.94 | 4 | 6 | elected | Piece Work | 0 | Treasure | 0 | 0 | 3 | Yes | Yes | 8 | Yes | Area Mechani | No | Yes | 10 | 32 | 18 | Yes |

*７－10　井戸修繕・建設計画*

## 表 A7 – 10 – 1 井戸修繕・建設計画表

凡例　：F:稼働、N: 不稼働、L:揚水量減少(<10L/min)、R: 応急修理、ICWP: 人口千人当りの給水点数。 *: 人口は衛生施設数等からの推定値に基づく網掛け(F-N, N-R-N, L-R,など)： 2010 年 10 月～2011 年 5 月に一時的に不稼働あるいは揚水量不足であったが、調査団の応急修理あるいはエリアメカニック等による修理で機能回復が可能と判断される井戸。 故障の原因はポンプの老朽化によるものと推定され、エアリフトとポンプの更新で修復可能。

| S/N | Borehole No. | Village Name | Functionality | | | Rehabilitation Plan: **A:** Air lifting and pump renewal, **B:** Replacing pump Stand, **C:** Drilling substitute borehole unless trial rehabilitation is successful **D:** Drilling substitute borehole, **E:**.Excluded from rehabilitation plan, **Construction of additional borehole: F** | | | | | | Projected Population (2015) | ICWP (2015) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st visit Overview | 2nd visit Inspection | 3rd visit Water Sampling | | | | | | | | |
| | | | Sep. – Oct. 2010 | | May 2011 | A | B | C | D | E | F | | |
| 1 | 1-001 | Chidambo | N | - | N | | | | ◎ | | ◎ | 2,451 | 1.2 |
| 2 | 1-002 | Chiute | F | - | F | ◎ | | | | | | 643 | 3.1 |
| 3 | 1-003 | Tsamphale | F | - | F | ◎ | | | | | | 589 | 3.4 |
| 4 | 1-004 | Chamveka | F | - | F | ◎ | | | | | ◎ | 1,410 | 2.1 |
| 5 | 1-005 | Maliwane | F | - | F | ◎ | | | | | ◎ | 1,934 | 2.1 |
| 6 | 1-006 | Maliwane | F | - | F | ◎ | | | | | | | |
| 7 | 1-007 | Mlonyeni | N | - | N | ◎ | | | | | ◎ | 1,428 | 2.1 |
| 8 | 1-008 | Zunguze | F | - | N | ◎ | | | | | | | |
| 9 | 1-009 | Mkangeni | F | - | F | ◎ | | | | | | 484 | 2.1 |
| 10 | 1-010 | Maganga | F | - | F | ◎ | | | | | | 298 | 10.1 |
| 11 | 1-011 | Chiwaula | N | R | F | ◎ | | | | | | 464 | 4.3 |
| 12 | 1-012 | Chabwela | N | R | F | ◎ | | | | | | 476 * | 4.2 |
| 13 | 1-013 | Mbeza | N | R | F | ◎ | | | | | ◎ | 684 | 1.5 |
| 14 | 1-014 | Chaonongeka | F | - | F | ◎ | | | | | | 506 | 9.9 |
| 15 | 1-015 | Mgwende | F | - | F | ◎ | | | | | | 298 | 6.7 |
| 16 | 1-016 | MWandawala | F | - | F | ◎ | | | | | ◎ | 595 | 1.7 |
| 17 | 1-017 | Kadzakurnanja | F | - | N | ◎ | | | | | | | |
| 18 | 1-018 | Milonga | N | - | N | ◎ | | | | | | 387 | 2.6 |
| 19 | 1-019 | Mzikaola II | F | - | F | ◎ | | | | | | | |
| 20 | 1-020 | Mkhala | F | - | F | ◎ | | | | | ◎ | 1,642 | 1.8 |
| 21 | 1-021 | Chibonyola(B) | F | - | F | ◎ | | | | | | | |
| 22 | 1-022 | Mwanayumo | F | - | F | ◎ | | | | | | 363 | 5.5 |
| 23 | 1-023 | Mphindu | F | - | F | ◎ | | | | | | 803 | 2.5 |
| 24 | 1-024 | Chibonyola (A) | F | - | F | ◎ | | | | | | 738 | 4.1 |
| 25 | 1-025 | Chibonyola (A) | F | - | F | ◎ | | | | | | | |

| S/N | Borehole No. | Village Name | Functionality | | | Rehabilitation Plan: **A:** Air Lifting and Pump Renewal, **B:** Replacing Pump Stand, **C:** Drilling substitute borehole unless trial rehabilitation is successful **D:** Drilling substitute borehole, **E:**.Excluded from rehabilitation plan, **Construction of additional borehole: F** | | | | | | Projected Population (2015) | ICWP (2015) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st visit Overview | 2nd visit Inspection | 3rd visit Water Sampling | | | | | | | | |
| | | | Sep. – Oct. 2010 | | May 2011 | A | B | C | D | E | F | | |
| 26 | 1-026 | Thukuta | F | - | N | ◎ | | | | | | 327 * | 6.1 |
| 27 | 1-027 | Kapita | F | - | F | ◎ | | | | | | 119 * | 8.4 |
| 28 | 1-028 | Maganga | F | - | F | ◎ | | | | | ◎ | 1,238 | 1.6 |
| 29 | 1-029 | Alfred | L | R | F | ◎ | | | | | | 446 | 4.5 |
| 30 | 1-030 | Pembere | L | R | F | ◎ | | | | | | 500 | 4.0 |
| 31 | 1-031 | Mtsiliza | F | - | F | ◎ | | | | | | 440 | 6.8 |
| 32 | 1-032 | Mkonda | F | - | F | ◎ | | | | | | 268 * | 3.7 |
| 33 | 1-033 | Katsenga | F | - | F | ◎ | ◎ | | | | ◎ | 595 | 1.7 |
| 34 | 1-034 | Luka-Luciano | N | N | F | ◎ | | | | | | 119 * | 16.8 |
| 35 | 1-035 | Chimteteka | F | - | F | ◎ | | | | | | 119 * | 16.8 |
| 36 | 1-036 | Chaluma, Kalombo | F | - | F | ◎ | | | | | | 357 | 5.6 |
| 37 | 1-037 | Mkwezendumba | N | R | F | ◎ | | | | | | | |
| 38 | 1-038 | Galawe | F | - | F | ◎ | | | | | | 238 | 8.4 |
| 39 | 1-039 | Chikaza | L | R | F | ◎ | | | | | ◎ | 904 | 1.1 |
| 40 | 1-040 | Kunjawa | F | - | F | ◎ | | | | | | 637 | 4.7 |
| 41 | 1-041 | Kunjawa | N | - | F | ◎ | | | | | | | |
| 42 | 1-042 | Msukwala | F | - | F | ◎ | | | | | | 202 * | 9.9 |
| 43 | 1-043 | Mtukwa | F | - | N | ◎ | | | | | | 119 * | 25.2 |
| 44 | 1-044 | Mtukwa | F | - | N | ◎ | ◎ | | | | | | |
| 45 | 1-045 | Mwenyeanthu | F | - | F | ◎ | | | | | | 500 | 4.0 |
| 46 | 1-046 | Dambo | F | - | F | ◎ | ◎ | | | | | 476 | 4.2 |
| 47 | 1-047 | Mwanzika | L | R | F | ◎ | | | | | | 226 | 8.8 |
| 48 | 1-048 | Chiganizo | N | - | F | ◎ | ◎ | | | | | 351 | 5.7 |
| 49 | 1-049 | Chimkoka | F | - | F | ◎ | | | | | | 161 * | 12.4 |
| 50 | 1-050 | Gambatula | N | R | F | ◎ | | | | | | 268 * | 7.5 |
| 51 | 1-051 | Misale T. C. | F | - | F | ◎ | ◎ | | | | | 595 | 3.4 |
| 52 | 1-052 | John | L | R | F | ◎ | ◎ | | | | | | |
| 53 | 1-053 | Mselela | F | - | N | ◎ | | | | | | 625 | 6.4 |
| 54 | 1-054 | Mselela | F | - | F | ◎ | | | | | | | |
| 55 | 1-055 | Ngalule | F | - | F | ◎ | | | | | | 1,190 * | 3.4 |
| 56 | 1-056 | Masitala | F | - | F | ◎ | | | | | | 405 | 4.9 |

| S/N | Borehole No. | Village Name | Functionality | | | Rehabilitation Plan: **A:** Air Lifting and Pump Renewal, **B:** Replacing Pump Stand, **C:** Drilling substitute borehole unless trial rehabilitation is successful **D:** Drilling substitute borehole, **E:**.Excluded from rehabilitation plan, **Construction of additional borehole: F** | | | | | | Projected Population (2015) | ICWP (2015) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st visit Overview | 2nd visit Inspection | 3rd visit Water Sampling | | | | | | | | |
| | | | Sep. – Oct. 2010 | | May 2011 | A | B | C | D | E | F | | |
| 57 | 1-057 | Mzingo | F | - | F | ◎ | | | | | | 119 * | 16.8 |
| 58 | 1-058 | Nathyola | L | R | F | ◎ | | | | | | | |
| 59 | 1-059 | Kachere | F | - | F | ◎ | | | | | | 119 * | 16.8 |
| 60 | 1-060 | Simoko | F | - | F | ◎ | | | | | | 119 * | 8.4 |
| 61 | 1-061 | Bua T･C | F | - | F | ◎ | | | | | | 928 | 2.2 |
| 62 | 1-062 | Nkhuzu | N | N | F | ◎ | | | | | | 119 * | 16.8 |
| 63 | 1-063 | Kazule | N | R | F | ◎ | | | | | | 500 | 4.0 |
| 64 | 1-064 | Kaole | F | - | F | ◎ | | | | | | 1,309 | 2.3 |
| 65 | 1-065 | Kaole | F | - | F | ◎ | | | | | | 809 | 2.5 |
| 66 | 1-066 | Kamphemvu | F | - | N | ◎ | | | | | | 411 | 9.7 |
| 67 | 1-067 | Kamphemvu | F | - | F | ◎ | | | | | | | |
| 68 | 1-068 | Katsenga A | N | - | N | | | | ◎ | | | | |
| 69 | 1-069 | Mlamba | F | - | F | ◎ | | | | | ◎ | 1,261 | 1.6 |
| 70 | 1-070 | Nyongani | F | - | F | ◎ | | | | | | 1,131 | 2.7 |
| 71 | 1-071 | Mtonya | F | - | F | ◎ | | | | | | 333 | 9.0 |
| 72 | 1-072 | Waliranji | N | - | F | ◎ | | | | | | 208 * | 9.6 |
| 73 | 1-073 | Likungwi | F | - | F | ◎ | | | | | | 631 | 6.3 |
| 74 | 1-074 | Mnamizana | N | - | N | | | | ◎ | | | 464 * | 4.3 |
| 75 | 1-075 | Kankhande | F | - | F | ◎ | | | | | | 119 * | 25.2 |
| 76 | 1-076 | Kankhande | F | - | F | ◎ | | | | | | | |
| 77 | 1-077 | Mkusa | F | - | F | ◎ | | | | | | 250 | 8.0 |
| 78 | 1-078 | Kajiwa | F | - | F | ◎ | | | | | | 595 * | 3.4 |
| 79 | 1-079 | Mnamizana | F | - | F | ◎ | ◎ | | | | | | |
| 80 | 1-080 | Kanyindula | N | R | F | ◎ | | | | | | | |
| 81 | 2-001 | Kambamd-zuwa | N | R | N | ◎ | | | | | | 208 | 9.6 |
| 82 | 2-002 | Pinda | N | R | F | ◎ | | | | | ◎ | 1,434 | 1.4 |
| 83 | 2-003 | Lupenga-Ndulama | N | N | N | ◎ | | | | | | 488 | 8.2 |
| 84 | 2-004 | Chikuta | N | N | F | ◎ | | | | | | 428 | 16.3 |
| 85 | 2-005 | Chikuta | N | R | F | ◎ | | | | | | | |
| 86 | 2-006 | Kamgwanga | F | - | F | ◎ | | | | | | 179 * | 11.2 |
| 87 | 2-007 | Nkhumba | F | - | F | ◎ | | | | | | 333 | 6.0 |

| S/N | Borehole No. | Village Name | Functionality | | | Rehabilitation Plan: **A:** Air Lifting and Pump Renewal, **B:** Replacing Pump Stand, **C:** Drilling substitute borehole unless trial rehabilitation is successful **D:** Drilling substitute borehole, **E:**.Excluded from rehabilitation plan, **Construction of additional borehole: F** | | | | | | Projected Population (2015) | ICWP (2015) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st visit Overview | 2nd visit Inspection | 3rd visit Water Sampling | | | | | | | | | |
| | | | Sep. – Oct. 2010 | | May 2011 | A | B | C | D | E | F | | | |
| 88 | 2-008 | Makanda | F | - | F | ◎ | | | | | | 619 | | 6.5 |
| 89 | 2-009 | Makanda | F | - | F | ◎ | | | | | | | | |
| 90 | 2-010 | Wisikoti | F | - | F | ◎ | | | | | | 476 | * | 8.4 |
| 91 | 2-011 | Manthalu | F | - | F | ◎ | | | | | | 655 | | 4.6 |
| 92 | 2-012 | Manthalu | N | N | N | | | | ◎ | | | | | |
| 93 | 2-013 | Chamosola | N | - | N | | | | ◎ | | | 244 | | 4.1 |
| 94 | 2-014 | Kafunsa-Chalimba | F | - | F | ◎ | | | | | | | | |
| 95 | 2-015 | Mbwerera | F | - | F | ◎ | | | | | | 119 | * | 16.8 |
| 96 | 2-016 | Kamwaza | F | - | F | ◎ | | | | | | 595 | * | 5.0 |
| 97 | 2-017 | Papa | L | R | F | ◎ | | | | | | 119 | * | 16.8 |
| 98 | 2-018 | Guwende | F | - | F | ◎ | | | | | | 149 | * | 13.4 |
| 99 | 2-019 | Kamlilika | N | R | F | ◎ | | | | | | 137 | * | 21.9 |
| 100 | 2-020 | Tankhule | N | R | F | ◎ | | | | | | 179 | * | 11.2 |
| 101 | 2-021 | Welesani | F | - | F | ◎ | | | | | | 440 | | 6.8 |
| 102 | 2-022 | Temanim-wendo | N | N | N | | | ◎ | | | | 417 | * | 9.6 |
| 103 | 2-023 | Temanim-wendo | F | - | F | ◎ | | | | | | | | |
| 104 | 2-024 | Nkhono | F | - | F | ◎ | | | | | | 280 | | 7.2 |
| 105 | 2-025 | Geni | F | - | F | ◎ | | | | | | 173 | * | 11.6 |
| 106 | 2-026 | Sinunbe | F | - | F | ◎ | | | | | | 345 | * | 8.7 |
| 107 | 2-027 | Sinunbe | F | - | F | ◎ | | | | | | | | |
| 108 | 2-028 | Chikwan-bani | F | - | F | ◎ | | | | | | 928 | | 3.2 |
| 109 | 2-029 | Mweso | F | - | F | ◎ | | | | | | 440 | | 9.1 |
| 110 | 2-030 | Njiwa | F | - | N | ◎ | | | | | | 833 | | 3.6 |
| 111 | 2-031 | Chitumba | N | - | N | | | | ◎ | | | 315 | | 9.5 |
| 112 | 2-032 | Chinyata | F | - | F | ◎ | | | | | | 268 | * | 3.7 |
| 113 | 2-033 | Lanadi | L | R | F | ◎ | | | | | | 357 | * | 5.6 |
| 114 | 2-034 | Lumelo | N | R | N | ◎ | | | | | | 250 | * | 12.0 |
| 115 | 2-035 | Lumelo | F | - | F | ◎ | | | | | | | | |
| 116 | 2-036 | Silombe | F | - | F | ◎ | | | | | | 1,190 | | 5.0 |
| 117 | 2-037 | Silombe | F | - | F | ◎ | | | | | | | | |
| 118 | 2-038 | Chinyata | F | - | F | ◎ | | | | | | 238 | * | 8.4 |

| S/N | Borehole No. | Village Name | Functionality | | | Rehabilitation Plan: **A:** Air Lifting and Pump Renewal, **B:** Replacing Pump Stand, **C:** Drilling substitute borehole unless trial rehabilitation is successful **D:** Drilling substitute borehole, **E:**.Excluded from rehabilitation plan, **Construction of additional borehole: F** | | | | | | Projected Population (2015) | ICWP (2015) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st visit Overview | 2nd visit Inspection | 3rd visit Water Sampling | | | | | | | | | |
| | | | Sep. – Oct. 2010 | | May 2011 | A | B | C | D | E | F | | | |
| 119 | 2-039 | Nkokeza | N | R | F | ◎ | | | | | | 381 | | 5.3 |
| 120 | 2-040 | Mkonkha | F | - | F | ◎ | | | | | | 994 | | 3.0 |
| 121 | 2-041 | Mkonkha T.C. | F | - | F | ◎ | | | | | | 167 | * | |
| 122 | 2-042 | Mabvere | N | - | N | | | | ◎ | | | 506 | | 4.0 |
| 123 | 2-043 | Chinkota | F | - | F | ◎ | | | | | | 119 | * | 25.2 |
| 124 | 2-044 | Mumba | F | - | F | ◎ | | | | | | 595 | | 3.4 |
| 125 | 2-045 | Kadzombe | N | N | N | ◎ | | | | | | | | |
| 126 | 2-046 | Kadzombe | F | - | F | ◎ | | | | | | | | |
| 127 | 2-047 | Chimbala-me | F | - | F | ◎ | | | | | | | | |
| 128 | 2-048 | Chiyese-lana | F | - | F | ◎ | | | | | | 149 | * | 13.4 |
| 129 | 2-049 | Chamani | N | R | F | ◎ | | | | | | 262 | | 11.5 |
| 130 | 2-050 | Chamani | F | - | F | ◎ | | | | | | | | |
| 131 | 2-051 | Kabuthu | F | - | F | ◎ | | | | | | 666 | | 3.0 |
| 132 | 2-052 | Kabuthu-Chifuca | F | - | F | ◎ | | | | | | 119 | * | 16.8 |
| 133 | 2-053 | Mphonde | N | R | N | ◎ | | | | | | 238 | * | 8.4 |
| 134 | 2-054 | Nkhompho-la | F | - | F | ◎ | | | | | | 536 | | 5.6 |
| 135 | 2-055 | Manyengo | F | - | F | ◎ | | | | | | | | |
| 136 | 2-056 | Kamlilika | F | - | F | ◎ | | | | | | 125 | * | 8.0 |
| 137 | 2-057 | Mjolomobe | F | - | F | ◎ | | | | | | 119 | * | 8.4 |
| 138 | 2-058 | M'manja | N | N | N | | | ◎ | | | | | | |
| 139 | 2-059 | Gomani 1 | F | - | F | ◎ | | | | | ◎ | 1,369 | | 1.5 |
| 140 | 2-060 | Jusi | L | R | F | ◎ | | | | | | 346 | | 5.8 |
| 141 | 2-061 | Mailosi | N | R | N | ◎ | | | | | | 256 | | 7.8 |
| 142 | 2-062 | Mtamad-zongo | F | - | F | ◎ | | | | | | 232 | | 8.6 |
| 143 | 2-063 | Nwandawa-ra | F | - | N | ◎ | | | | | | | | |
| 144 | 2-064 | Kachokam-komero | N | - | F | ◎ | | | | | | 119 | * | 16.8 |
| 145 | 2-065 | Mkumba | F | - | F | ◎ | | | | | | 238 | * | 8.4 |
| 146 | 2-066 | Jamu | F | - | F | ◎ | | | | | | 179 | | 5.6 |
| 147 | 2-067 | Chimpanba | N | R | F | ◎ | | | | | | 309 | | 9.7 |
| 148 | 2-068 | Chiwoko | F | - | F | ◎ | | | | | | 530 | | 5.7 |
| 149 | 2-069 | Chiwoko | F | - | F | ◎ | | | | | | | | |

| S/N | Borehole No. | Village Name | Functionality | | | Rehabilitation Plan: **A:** Air Lifting and Pump Renewal, **B:** Replacing Pump Stand, **C:** Drilling substitute borehole unless trial rehabilitation is successful **D:** Drilling substitute borehole, **E:**.Excluded from rehabilitation plan, **Construction of additional borehole: F** | | | | | | Projected Population (2015) | ICWP (2015) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st visit Overview | 2nd visit Inspection | 3rd visit Water Sampling | | | | | | | | | |
| | | | Sep. – Oct. 2010 | | May 2011 | A | B | C | D | E | F | | | |
| 150 | 2-070 | Mazawa | F | - | F | ◎ | | | | | ◎ | 893 | | 2.2 |
| 151 | 2-071 | Mbachunda | F | - | F | ◎ | | | | | | 184 | | 21.7 |
| 152 | 2-072 | Mbachundu | F | - | F | ◎ | | | | | | | | |
| 153 | 2-073 | Chintanda | N | N | N | | | ◎ | | | ◎ | 512 | | 2.0 |
| 154 | 2-074 | Kachikon-do | F | - | F | ◎ | | | | | ◎ | 619 | | 1.6 |
| 155 | 2-075 | Chiphala | N | - | N | | | | ◎ | | | 595 | | 3.4 |
| 156 | 2-076 | Mthawira | N | R | F | ◎ | | | | | | 119 | * | 16.8 |
| 157 | 2-077 | Dzidzwa | F | - | F | ◎ | | | | | | 2,678 | * | 1.5 |
| 158 | 2-078 | Chalema | F | - | F | ◎ | | | | | | 238 | * | 8.4 |
| 159 | 2-079 | Kalilang-we | N | R | N | ◎ | | | | | | 173 | * | 11.6 |
| 160 | 2-080 | Msemwe | F | - | F | ◎ | | | | | ◎ | 3,868 | * | 1.6 |
| 161 | 2-081 | Msemwe | L | R | F | ◎ | | | | | | | | |
| 162 | 2-082 | Mando | F | - | F | ◎ | | | | | | 595 | * | 8.4 |
| 163 | 2-083 | Gereta | F | - | F | ◎ | | | | | | 893 | * | 2.2 |
| 164 | 2-084 | Matimba | F | - | F | ◎ | | | | | ◎ | 1,785 | | 2.2 |
| 165 | 2-085 | Matimba | F | - | F | ◎ | | | | | | | | |
| 166 | 2-086 | Jenjewa | N | R | F | ◎ | | | | | | 357 | | 8.4 |
| 167 | 2-087 | Kanjeleng | N | R | N | ◎ | | | | | | 179 | | 11.2 |
| 168 | 2-088 | Kamndaya | N | N | F | ◎ | | | | | | 155 | | 19.4 |
| 169 | 2-089 | Mzati | N | R | F | ◎ | | | | | | 119 | * | 16.8 |
| 170 | 2-090 | Zefalino | F | - | F | ◎ | | | | | | 369 | | 5.4 |
| 171 | 2-091 | Chipha-la A | F | - | F | ◎ | | | | | | 387 | * | 5.2 |
| 172 | 2-092 | Chamveka | F | - | F | ◎ | | | | | | 381 | | 5.3 |
| 173 | 2-093 | Kamwendo T. C. | F | - | | ◎ | | | | | | 2,202 | | 0.9 |
| 174 | 2-094 | Kamwendo T. C. | F | - | F | ◎ | | | | | | | | |
| 175 | 2-095 | Chidewa | F | - | F | ◎ | | | | | | 1,785 | * | 1.7 |
| 176 | 2-096 | Chikomani | F | - | F | ◎ | | | | | | 440 | * | 4.5 |
| 177 | 2-097 | Mdawa | F | - | F | ◎ | | | | | | 1,488 | * | 1.3 |
| 178 | 2-098 | Kwachau-name | N | N | N | | | ◎ | | | | 393 | | 7.6 |
| 179 | 2-099 | Mando | F | - | F | ◎ | | | | | | | | |
| 180 | 2-100 | Chikoyi-Jombo | F | - | F | ◎ | | | | | | 143 | * | 14.0 |

| S/N | Borehole No. | Village Name | Functionality | | | Rehabilitation Plan: **A:** Air Lifting and Pump Renewal, **B:** Replacing Pump Stand, **C:** Drilling substitute borehole unless trial rehabilitation is successful **D:** Drilling substitute borehole, **E:**.Excluded from rehabilitation plan, **Construction of additional borehole: F** | | | | | | Projected Population (2015) | ICWP (2015) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st visit Overview | 2nd visit Inspection | 3rd visit Water Sampling | | | | | | | | |
| | | | Sep. – Oct. 2010 | | May 2011 | A | B | C | D | E | F | | |
| 181 | 2-101 | Chimteka | F | - | F | ◎ | | | | | | 893 * | 2.2 |
| 182 | 2-102 | Chetamba-la | F | - | F | ◎ | | | | | | 250 | 8.0 |
| 183 | 2-103 | Chiwenkha | N | R | F | ◎ | | | | | ◎ | 577 | 1.7 |
| 184 | 2-104 | Mphanga | F | - | F | ◎ | | | | | | 268 | 11.2 |
| 185 | 2-105 | Durira | F | - | F | ◎ | | | | | | 446 | 4.5 |
| 186 | 2-106 | Mphanga | F | - | F | ◎ | | | | | | 119 * | 33.6 |
| 187 | 2-107 | Butawo | F | - | N | ◎ | | | | | | 202 | 4.9 |
| 188 | 2-108 | Mndunga | N | R | F | ◎ | | | | | | 179 * | 11.2 |
| 189 | 2-109 | Kaligwen-je | F | - | F | ◎ | | | | | | 345 * | 2.9 |
| 190 | 2-110 | Kolona | F | - | F | ◎ | | | | | | | |
| 191 | 3-001 | Kachaje | F | - | F | ◎ | | | | | | 1,666 | 2.4 |
| 192 | 3-002 | Mchambo-Gunda | N | R | N | ◎ | | | | | | 119 * | 25.2 |
| 193 | 3-003 | Geresono | F | - | F | ◎ | | | | | | 268 * | 7.5 |
| 194 | 3-004 | Mchambo | F | - | F | ◎ | | | | | ◎ | 1,964 | 1.0 |
| 195 | 3-005 | Chikoloka | F | - | F | ◎ | | | | | | 309 | 9.7 |
| 196 | 3-006 | Tika | F | - | F | ◎ | | | | | | 298 | 6.7 |
| 197 | 3-007 | Chimwere | F | - | F | ◎ | | | | | | 446 * | 4.5 |
| 198 | 3-008 | Kathyuka | F | - | F | ◎ | | | | | | 595 * | 3.4 |
| 199 | 3-009 | Chiwete | F | - | F | ◎ | | | | | | 774 | 2.6 |
| 200 | 3-010 | Changata | F | - | F | ◎ | | | | | | 220 * | 9.1 |
| 201 | 3-011 | Langwani | F | - | F | ◎ | | | | | | 256 * | 11.7 |
| 202 | 3-012 | Sinosi | F | - | F | ◎ | | | | | | 250 | 8.0 |
| 203 | 3-013 | Kanyimbo | F | - | F | ◎ | | | | | | 274 * | 7.3 |
| 204 | 3-014 | Machilika | N | R | F | ◎ | | | | | | 446 | 4.5 |
| 205 | 3-015 | Chikwekwe | F | - | F | ◎ | | | | | | 315 | 6.3 |
| 206 | 3-016 | Kanyenda | N | N | N | | | | ◎ | | ◎ | 714 | 1.4 |
| 207 | 3-017 | Mberere | F | - | F | ◎ | | | | | | 565 | 3.5 |
| 208 | 3-018 | Mikundi T.C. | N | N | N | | | | ◎ | | ◎ | 4,760 | 1.7 |
| 209 | 3-019 | Kalombo Sch | F | - | F | ◎ | | | | | | 476 | 6.3 |
| 210 | 3-020 | Tongole | F | - | F | ◎ | | | | | | 714 | 2.8 |
| 211 | 3-021 | Kalinde | F | - | F | ◎ | | | | | | 714 | 2.8 |

| S/N | Borehole No. | Village Name | Functionality | | | Rehabilitation Plan: **A:** Air Lifting and Pump Renewal, **B:** Replacing Pump Stand, **C:** Drilling substitute borehole unless trial rehabilitation is successful **D:** Drilling substitute borehole, **E:**.Excluded from rehabilitation plan, **Construction of additional borehole: F** | | | | | | Projected Population (2015) | ICWP (2015) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st visit Overview | 2nd visit Inspection | 3rd visit Water Sampling | | | | | | | | | |
| | | | Sep. – Oct. 2010 | | May 2011 | A | B | C | D | E | F | | | |
| 212 | 3-022 | Jasi | F | - | F | ◎ | | | | | | 684 | | 4.4 |
| 213 | 3-023 | Chipuntiko-Chimutu | F | - | F | ◎ | | | | | | 768 | | 2.6 |
| 214 | 3-024 | Kadiso | N | R | N | ◎ | | | | | | 309 | | 6.5 |
| 215 | 3-025 | Makumbi | N | R | F | ◎ | | | | | | 208 | | 9.6 |
| 216 | 3-026 | Mkangala | F | - | F | ◎ | | | | | | 565 | | 3.5 |
| 217 | 3-027 | Mng'ona | N | R | F | ◎ | | | | | | 422 | | 7.1 |
| 218 | 3-028 | Lezani | F | - | F | ◎ | | | | | | 298 | | 6.7 |
| 219 | 3-029 | Goseni | F | - | F | ◎ | | | | | | 446 | | 4.5 |
| 220 | 3-030 | Timoti | F | - | F | ◎ | | | | | | 833 | | 4.8 |
| 221 | 3-031 | Sigereta | F | - | F | ◎ | | | | | | 190 | | 10.5 |
| 222 | 3-032 | Chisamba | F | - | F | ◎ | | | | | | 155 | | 12.9 |
| 223 | 3-033 | Maole | F | - | F | ◎ | | | | | | 446 | | 4.5 |
| 224 | 3-034 | Saidi | F | - | F | ◎ | | | | | ◎ | 952 | | 2.1 |
| 225 | 3-035 | Mikuwa ii | F | - | F | ◎ | | | | | | 666 | | 3.0 |
| 226 | 3-036 | Sundwe | F | - | F | ◎ | | | | | | 214 | | 9.3 |
| 227 | 3-037 | Mphomwe | F | - | F | ◎ | | | | | ◎ | 893 | | 2.2 |
| 228 | 3-038 | Laisi | F | - | F | ◎ | | | | | | 167 | | 12.0 |
| 229 | 3-039 | Kabungwe-Drawo | F | - | F | ◎ | | | | | | 357 | | 5.6 |
| 230 | 3-040 | Machakulo | N | R | F | ◎ | | | | | | 196 | | 10.2 |
| 231 | 3-041 | Kapiri | F | - | F | ◎ | | | | | | 119 | * | 25.2 |
| 232 | 3-042 | Mthema T.C. | F | - | F | ◎ | | | | | | 1,101 | | 2.7 |
| 233 | 3-043 | Chalunda T.C. | F | - | F | | | | | ◎ | | 393 | | 5.1 |
| 234 | 3-044 | Kasanda | F | - | F | ◎ | | | | | ◎ | 1,595 | | 1.3 |
| 235 | 3-045 | Mfelankhope | N | R | F | ◎ | | | | | | 298 | | 6.7 |
| 236 | 3-046 | Katonda Sch | F | - | F | ◎ | | | | | | 230 | | 4.4 |
| 237 | 3-047 | Kamera | N | N | F | ◎ | | | | | | 238 | * | 4.2 |
| 238 | 3-048 | Chisenga | N | - | N | ◎ | | | | | | 131 | | 7.6 |
| 239 | 3-049 | Kamphanbale | F | - | F | ◎ | | | | | | 125 | | 16.0 |
| 240 | 3-050 | Kabvuta | F | - | F | ◎ | | | | | | 357 | | 8.4 |
| 241 | 3-051 | Nkhunmbu | N | R | F | ◎ | | | | | | 422 | | 4.7 |
| 242 | 3-052 | Mphonda-Masinja | N | N | N | ◎ | | | | | | 238 | | 4.2 |

| S/N | Borehole No. | Village Name | Functionality | | | Rehabilitation Plan: **A:** Air Lifting and Pump Renewal, **B:** Replacing Pump Stand, **C:** Drilling substitute borehole unless trial rehabilitation is successful **D:** Drilling substitute borehole, **E:**.Excluded from rehabilitation plan, **Construction of additional borehole: F** | | | | | | Projected Population (2015) | ICWP (2015) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st visit Overview | 2nd visit Inspection | 3rd visit Water Sampling | | | | | | | | | |
| | | | Sep. – Oct. 2010 | | May 2011 | A | B | C | D | E | F | | | |
| 243 | 3-053 | Kampando | F | - | F | ◎ | | | | | | 253 | | 7.9 |
| 244 | 3-054 | Marten | F | - | F | ◎ | | | | | | 488 | | 4.1 |
| 245 | 3-055 | Kanzimbi | F | - | N | ◎ | | | | | ◎ | 1,012 | | 2.0 |
| 246 | 3-056 | Gandali | F | - | F | ◎ | | | | | | 315 | | 6.3 |
| 247 | 3-057 | Chinkolokota | N | R | N | ◎ | | | | | | 440 | | 4.5 |
| 248 | 3-058 | Elesani | F | - | N | ◎ | | | | | | | | |
| 249 | 3-059 | Kapiri Hosp. Miss. | N | - | N | | | | | ◎ | ◎ | 1,369 | | 2.2 |
| 250 | 3-060 | Japana | N | R | F | ◎ | | | | | | 119 | * | 16.8 |
| 251 | 3-061 | Gong' ontha | N | R | N | ◎ | | | | | | | | |
| 252 | 3-062 | Kavunguti School | F | - | F | ◎ | | | | | ◎ | 893 | | 1.1 |
| 253 | 3-063 | Kachere | N | N | N | ◎ | | | | | | 119 | * | 16.8 |
| 254 | 3-064 | Kakunga | F | - | F | ◎ | | | | | | 298 | | 10.1 |
| 255 | 3-065 | Kamenya | N | R | N | ◎ | | | | | ◎ | 506 | | 2.0 |
| 256 | 3-066 | Nthema T.C. | F | - | F | ◎ | | | | | ◎ | 1,160 | | 1.7 |
| 257 | 3-067 | Lubani | N | R | N | ◎ | | | | | | 476 | | 6.3 |
| 258 | 3-068 | Chinkhali | F | - | F | ◎ | | | | | | 595 | * | 8.4 |
| 259 | 3-069 | Chang' amba | F | - | F | ◎ | | | | | | 458 | | 4.4 |
| 260 | 3-070 | Kuthethe | F | - | F | ◎ | | | | | ◎ | 1,309 | | 1.5 |
| 261 | 3-071 | Dina | N | R | N | ◎ | | | | | | 208 | * | 9.6 |
| 262 | 3-072 | Thengo | N | R | F | ◎ | | | | | | 387 | | 5.2 |
| 263 | 3-073 | Lameki | N | R | F | ◎ | | | | | ◎ | 1,273 | | 1.6 |
| 264 | 3-074 | Kaledza | N | R | N | ◎ | | | | | ◎ | 547 | | 1.8 |
| 265 | 3-075 | Malungo | N | R | N | ◎ | | | | | | 179 | * | 11.2 |
| 266 | 3-076 | Mphunda | F | - | F | ◎ | | | | | ◎ | 928 | | 2.2 |
| 267 | 3-077 | Kadewele-Mbewa | F | - | F | ◎ | | | | | | 518 | | 3.9 |
| 268 | 3-078 | Kangulu | F | - | F | ◎ | | | | | ◎ | 952 | | 2.1 |
| 269 | 3-079 | Mkanda | F | - | N | | | | | ◎ | | 619 | * | 6.5 |
| 270 | 3-080 | Mkanda | N | N | N | | | | | ◎ | | | | |
| 271 | 3-081 | Mazombwe | N | R | F | ◎ | | | | | | 250 | | 8.0 |
| 272 | 3-082 | Chimkolokota | N | R | F | ◎ | | | | | ◎ | 1,488 | | 1.3 |
| 273 | 3-083 | Masiwa | F | - | F | ◎ | | | | | ◎ | 1,071 | | 1.9 |

| S/N | Borehole No. | Village Name | Functionality | | | Rehabilitation Plan: **A:** Air Lifting and Pump Renewal, **B:** Replacing Pump Stand, **C:** Drilling substitute borehole unless trial rehabilitation is successful **D:** Drilling substitute borehole, **E:**.Excluded from rehabilitation plan, **Construction of additional borehole: F** | | | | | | Projected Population (2015) | ICWP (2015) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1st visit Overview | 2nd visit Inspection | 3rd visit Water Sampling | | | | | | | | |
| | | | Sep. – Oct. 2010 | | May 2011 | A | B | C | D | E | F | | |
| 274 | 3-084 | kambandekha | F | - | F | ◎ | | | | | | 446 | 4.5 |
| 275 | 3-085 | Jimu | F | - | N | ◎ | | | | | | 595 * | 5.0 |
| 276 | 3-086 | Lupiya | N | R | F | ◎ | | | | | | 506 | 4.0 |
| 277 | 3-087 | Chisauka | N | R | F | ◎ | | | | | | 446 | 4.5 |
| 278 | 3-088 | Kawere | F | - | N | ◎ | | | | | | 226 * | 8.8 |
| 279 | 3-089 | Msanda | N | R | N | ◎ | | | | | | 190 | 5.3 |
| 280 | 3-090 | Zandana | N | - | N | | | | ◎ | | | 131 * | 15.3 |
| 281 | 3-091 | Khwere | F | - | F | ◎ | | | | | | 488 | 6.1 |
| 282 | 3-092 | Khwere T.C. | F | - | F | ◎ | | | | | ◎ | 1,190 | 1.7 |
| 283 | 3-093 | Mkumbi | F | - | F | ◎ | ◎ | | | | | | |
| 284 | 3-094 | Kambuwe | N | R | N | ◎ | | | | | | 1,529 | 2.6 |
| 285 | 3-095 | Kambuwe | N | N | F | ◎ | | | | | | | |
| 286 | 3-096 | Kankhwende | F | - | N | ◎ | | | | | | 309 | 3.2 |
| 287 | 3-097 | Mndaka | N | R | F | ◎ | | | | | | 238 | 8.4 |
| 288 | 3-098 | Jowelo | N | R | F | ◎ | | | | | | 518 | 11.6 |
| 289 | 3-099 | Mtulira | F | - | N | ◎ | | | | | ◎ | 482 | 2.1 |
| 290 | 3-100 | Kalonga | N | R | F | ◎ | | | | | | 565 | 3.5 |
| 291 | 3-101 | Diti | N | R | F | ◎ | | | | | | 389 | 5.1 |
| 292 | 3-102 | Chitonde | F | - | F | | | | | ◎ | | 238 | 8.4 |
| 293 | 3-103 | Kalulu Sch | N | N | N | ◎ | | | | | | 440 | 9.1 |
| 294 | 3-104 | Kalulu T.C. | F | - | F | ◎ | | | | | | 440 | 9.1 |
| 295 | 3-105 | Katsompho | F | - | F | ◎ | | | | | | 214 | 9.3 |
| 296 | 3-106 | Msalanyama | F | - | F | ◎ | | | | | | 833 | 2.4 |
| 297 | 3-107 | Mchonkwe | F | - | F | ◎ | | | | | | 119 | 16.8 |
| 298 | 3-108 | Chiti | F | - | F | ◎ | | | | | | 196 | 15.3 |
| 299 | 3-109 | Chiti | F | - | F | ◎ | | | | | | | |
| 300 | 3-110 | Mphako | N | - | N | ◎ | | | | | | 595 | 5.0 |