

## Rural Water Supply Operation and Maintenance Series 11

## User Guide Manual on Monitoring and Evaluation Database for Water Points



Ministry of Agriculture, Irrigation and Water Development

March 2015



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#### PREFACE

The National Decentralization Policy, instituted in 1998 by the Malawi Government, emphasizes community empowerment through the transfer of power and responsibility to the local authorities. Since then, there has been an increasing emphasis on developing community ownership through the adoption of practices like Community Based Management (CBM) training.

However, many district government offices are facing limited operating budgets allocated from central government, and financial assistance from donor agencies is not always guaranteed. This often limits the ability of the district to effectively support the community-led operation and maintenance (O&M) activities on a wider scale. The key strategies in overcoming this challenge are both to use available resources effectively, and to leverage additional funds for O&M.

Monitoring activities are often carried out by a range of different actors at the national level, including the Ministry, NSO, Donor Agencies and Non-Governmental Organizations with the aim of coming up with a sector wide information system that could provide vital data and information for programme/project planning and implementation as well as resource allocation and prioritization in the sector. Regular data collection and analysis will provide a robust monitoring and evaluation (M&E) and management information system (MIS) systems that inform performance of the sector.

Malawi has through the M&E Technical Working Group built a National WASH M&E Framework since the beginning of 2014 which included the WASH M&E database tool at the district level. This tool was further tested in Mchinji district in late 2014 and additional indicators related to the O&M for water points such as CBM training, Area Mechanics and spare parts supply chain were incorporated into this tool based on the O&M framework developed through the "the Project for Enhancement of O&M for Rural Water Supply in the Republic of Malawi".

It is hoped that the experiences compiled in this manual may provide useful information all over Malawi as the districts continue to develop strategies and plans for the effective O&M service delivery.

Any substantive comments for improvement of the manual are welcome and should be directed to the secretary responsible for Water Development.

Sandram C. Y. Maweru SECRETARY FOR IRRIGATION AND WATER DEVELOPMENT

#### ACKNOLEDGEMENT

This manual was produced by the "Project for Enhancement of Operation and Maintenance for Rural Water Supply in the Republic of Malawi" under the technical cooperation by Japan International Cooperation Agency (JICA).

A series of workshops were held in the project, and a lot of stakeholders in Malawi technically contributed in the formulation of the manual. The Ministry of Agriculture, Irrigation and Water Development therefore, extends special thanks to these stakeholders for allowing their personnel to participate in the elaboration of this manual.

The Ministry is also indebted to JICA and Engineers without Borders Canada (EWB) for assisting in the development of the manual, and many who have not been mentioned here but who have contributed in different ways.

#### ACRONYMS

AEHO	Assistant Environmental Health Officer
AM(s)	Area Mechanic(s)
CBM	Community Based Management
CLTS	Community-led total sanitation
DCT	District Coordination Team
DDEHO	Deputy District Environmental Health Officer
DEHO	District Environmental Health Officer
DHC	Drop Hole Cover
DMEO	District Monitoring and
DWDO	District Water Development Officer / District Water Development Office
DWO	District Water Officer
Ecosan	Ecological Sanitation
ЕНО	Environmental Health Officer
EWB	Engineers Without Borders
GVH	Group Village Head
HSA	Health Surveillance Assistant
ЛСА	Japan International Cooperation Agency
M&E	Monitoring and Evaluation
MEO	Monitoring and Evaluation Officer
MoAIWD	Ministry of Agriculture, Irrigation and Water Development
МоН	Ministry of Health
MS	Microsoft
NGO	Non-Governmental Organization
O&M	Operation and Maintenance
ODF	Open-Defecation Free
RWSS	Rural Water Supply and Sanitation
SHSA	Senior Health Surveillance Assistant
SPR	Sector Performance Report
SWG	Sector Working Group
ТА	Traditional Authority

TWG	Technical Working Groups
VHWC(s)	Village Health and Water Committee(s)
WASH	Water Sanitation and Hygiene
WES	Water and Environmental Sanitation
WMA	Water Monitoring Assistant

#### Introduction

This manual has been developed to support the M&E component related to the operation and maintenance (O&M) for water points at district level which is harmonized with a National Water Sanitation and Hygiene (WASH) Monitoring and Evaluation (M&E) framework developed through M&E Technical Working Group (TWG) in the beginning of 2014.

The contents of the manual include materials regarding the M&E data collection system<sup>1</sup>, and WASH M&E indicators<sup>1</sup> including the additional ones related to the O&M for water points such as CBM training, area mechanics and spare parts supply chains, M&E data templates, and definitions of these indicators, as well as guidelines on how to:

- Use the WASH M&E database<sup>1</sup> including the additional indicators related to the O&M for water points
- Use the basic Excel and Pivot table skills for data analysis and advanced WASH M&E database<sup>1</sup>
- Prepare the hands on WASH database training

In this manual, a CD is also attached at the end of the book which includes the following materials:

- WASH M&E database (original version for 28 districts as a national standard)
- WASH M&E database including the additional indicators related to the O&M for water points (revised version for Mchinji district as a example)
- Area mechanic and spare parts retail shop database
- Data collection templates and tally sheets
- Definitions of the WASH indicators
- Introduction of the National WASH M&E Framework

<sup>&</sup>lt;sup>1</sup> These contents are re-edited based on National WASH M&E Framework developed through M&E TWG in beginning of 2014.

## Part I M&E data collection system

# A. What is the Rural Water Supply and Sanitation (RWSS) M&E System?<sup>2</sup>

The Rural Water Supply and Sanitation M&E system is a joint approach shared by the Ministry of Health and the Ministry of Water Development and Irrigation to collect and analyze basic data on WASH that can help improve service delivery in Malawi. The data is stored in an MS Excel database where it is analyzed and used to produce a simple map of district coverage rates as shown below figures. This approach has been rolled out for use across all districts in Malawi.

This data is collected using recurring government resources and is freely available to organizations that request it from districts.



<sup>&</sup>lt;sup>2</sup> This section is re-edited based on "Guide to the National Rural Water Supply and Sanitation M&E System, May 2014".



Figure I-1: Data collection, analysis and visualisation tools

#### B. What data does it include?

The approach collects data at the community level, as well as some information on public premises, learning institutions, health centres as National WASH M&E indicators and some additional data such as Area Mechanic and spare parts supply chain for the management of the operation and maintenance of water points. Details of these indicators are described as follows.

In addition, data collection templates and definition of each indicator is shown in **Appendix 1** and **Appendix 2** respectively.

## **B.1 Community indicator**

Gen	eral	Sanitation/Hyg	iene and Waste	Water	Supply	CLTS and ODF	
Date of Data Collection	ТА	Unsatisfactory Latrines	Hand Washing Facilities without Soap	F BHs With Clean Surroundings	NF Individual Taps	Triggered in CLTS (Yes = Y, No = N)	Awaiting Verificiation? (Yes = Y, No = N)
Name of HSA	TA Code	Basic Latrines (Permeable Floor, No DHC)	Hand Washing Facilities with Soap	F BHs Without Clean Surroundings	F Protected Shallow Wells With Clean Surroundings	Date Triggered	Verified ODF (Yes = Y, No = N)
HSA Phone Number	Health Center	Basic Latrines (Permeable Floor, with DHC)	Number of Households with Properly Functioning Waste Management System	NF BHs	F Protected Shallow Wells Without Clean Surroundings	Triggering Funded by:	Date Declared ODF
Name of Village	Health Center Code	Basic Latrines (Impermeable Floor, No DHC)		F Communal Taps/Kiosks With Clean Surroundings	NF Protected Shallow Wells	Date of Follow-up 1	Verified ODF ++ (Yes = Y, No = N)
Village Code	Village Population	Improved Latrines (Impermeable Floor, with DHC)		F Communal Taps/Kiosks Without Clean Surroundings	F Protected Springs With Clean Surroundings	Date of Follow-up 2	Date Declared ODF ++
GVH	Number of Households	Composting Latrines (EcoSan)		NF Communal Taps/Kiosks	F Protected Springs Without Clean Surroundings	Date of Follow-up 3	
GVH Code		Households With Flush Toilets		F Individual Taps	NF Protected Springs	Date of Follow-up 4	

General	Sanit	ation	Hygiene and Waste	Water Supply	ODF
Village Population	Total Basic Latrines	Improved Latrines (Impermeable Floor, with DHC) coverage	Handwashing Facilities without soap coverage	Water Coverage (Functional w/ Clean Surroundings)	Triggered in CLTS
Number of Households	Total Improved Latrines	Composting Toilet (EcoSan) coverage	Handwashing Facilities with soap coverage	Water Coverage (Functional)	Awaiting Verification
	Total Latrines	Flush Toilet coverage	Total Handwashing Facilities	Water Point Functionality Rate (w/ Clean Surroundings)	Verified ODF
	Unsatisfactory Latrines Coverage	Total Basic Latrine coverage	Total Handwashing Facilities coverage	Water Point Functionality Rate	Verified ODF++
	Basic Latrine (Permeable Floor, no DHC) coverage	Total Improved Latrine coverage	Waste Management System Coverage		
	Basic Latrine (Permeable Floor, with DHC) coverage	Total Latrine coverage			
	Basic Latrine (Impermeable Floor, no DHC) coverage				

#### (2) Additional indicators under 0&M framework

CE	СВМ				
35. No. of WPC/VHWC	38. Year trained in initial CBM	41. No.of preventive maintenance contract between AM and WPC			
36. No. of functioning and/or active WPC/VHWC at this moment	39. No. of WPC/VHWC trained in CBM refresher	42. Year.of preventive maintenance contract between AM and WPC			
37. No. of WPC/VHWC trained in initial CBM	40. Year trained in CBM refresher course				

## **B.2 Learning Institutions Indicators**

Gen	eral		Sanit	ation		Hygiene	Water and Waste
		Male Students	Female Students	Male Teachers	Female Teachers	5	
Date of Data Collection	School Number	Number of Functional Basic Latrines	Number of Functional Basic Latrines	Number of Functional Basic Latrines	Number of Functional Basic Latrines	Number of Handwashing Facilities without Soap	Number of Functioning Protected Water Sources
Name of Data Collector	School Name	Number of Functional Improved Latrines	Number of Functional Improved Latrines	Number of Functional Improved Latrines	Number of Functional Improved Latrines	Number of Handwashing Facilities with Soap	Main Source of Water (Pick from List)
Position of Data Collector	Total Boys Enrolment	Number of Urinals	Number of Urinals	Number of Urinals	Number of Flushing Toilets		Is there a Clean Surrounding Area for the Main Water Source?
Zone Name	Total Girls Enrolment	Number of Flushing Toilets	Number of Flushing Toilets	Number of Flushing Toilets			Main Solid Waste Disposal Method (Pick from list)
Traditional Authority	Total number of Male Teachers	Number of Toilets with access for the Physically Challenged	Number of Toilets with access for the Physically Challenged	Water Source List 1. Piped Water / T 2. Borehole 3. Protected Shall	Solid Waste Disposal List           1. Disposal in Rubbish P           / Tap         2. Disposal in Bin/Baske           3. Composting           allow Well         4. Burning		
	Total number of Female Teachers			4. Unprotected Shalow Well 5. Bu 5. Protected Spring 6. Pit 6. Unprotected Spring 7. Pu		rying underground Latrine blic Dumping Site	
				7. River/Stream/Li 8. Other	ake/Dam 8. Op 9. Ot	en Dumping her	

General	Sanitat	ion	Hygiene and Waste	Water Coverage			
Number of Schools	Schools with Total Sanitation	Boys per Latrine	Waste Disposal Technologies	Waterpoint Technologies			
Total Boys Enrolment	Schools with access for the Physically Challenged	Girls per Latrine	Schools without Handwashing Facilities				
Total Girls Enrolment	Schools with Urinals						

### **B3. Indicators for Public Premises**

General	s	Water Supply and Waste		
	MALE	FEMALE		
Date of data collection	Number of Functional Basic Latrines	Number of Functional Basic Latrines	Number of Handwashing Facilities without Soap	Number of Functioning Protected Water Sources
Name of Data Collector	Number of Functional Improved Latrines	Number of Functional Improved Latrines	Number of Handwashing Facilities with Soap	Main Source of Water
Traditional Authority	Number of Urinals	Number of Flushing Toilets		Is there a Clean Surrounding Area for the Main Water Source? (Yes=1, No=0)
Name of Public Premises	Number of Flushing Toilets	Number of Toilets with access for the Physically Challenged		Main Solid Waste Disposal Method
Type of Public Premises	Number of Toilets with access for the Physically Challenged			If there is animal waste, Properly Functioning Animal Waste Pit
Approximate Number of Patrons per Day				

Public Premesis List
1. Market
2. Bus Depot
3. Fishing Dock
4. Church
5. Other
Water Source List
1. Piped Water / Tap
2. Borehole
3. Protected Shallow Well
4. Unprotected Shalow Well
5. Protected Spring
6. Unprotected Spring
7. River/Stream/Lake/Dam
8. Other
Solid Waste Disposal List
1. Disposal in Rubbish Pit
2. Disposal in Bin/Basket
3. Composting
4. Burning
5. Burying underground
6. Pit Latrine
7. Public Dumping Site
8. Open Dumping
9. Other

General	Sani	tation	Hygiene and Waste	Water Coverage
Patrons per Day	# Male Latrines	% Female Latrines - Basic	Totals for Waste Disposal Methods	Water Coverage Rate
Number of Public Premises	# Female Latrines	% Female Latrines - Improved	# With a Properly Functioning Animal Waste Pit	% Waterpoints with Clean Surroundings
	Patrons per Latrine	% Female Latrines - Flush	# HWF with soap	
	% Male Latrines - Basic	# Toilets (M) w/ Access for the Physically Challenged		
	% Male Latrines - Improved	# Toilets (F) w/ Access for the Physically Challenged		
	% Male Latrines - Flush		-	

#### **B4. Health Centres indicators**

General			Sanit	ation		Hygiene	Water Supply and Waste
		Male Patrons	Female Patrons	Male Staff	Female Staff		
Date of Data Collection	Type of Facility (Health Center, Dispensary)	Number of Functional Basic Latrines	Number of Functional Basic Latrines	Number of Functional Basic Latrines	Number of Functional Basic Latrines	Number of Handwashing Facilities without Soap	Functional Reticulated Water System Available? (Yes=1, No=0)
Name of Data Collector	Operator (Gov't, Private, CHAM)	Number of Functional Improved Latrines	Number of Functional Improved Latrines	Number of Functional Improved Latrines	Number of Functional Improved Latrines	Number of Handwashing Facilities with Soap	Functioning Stand-Alone Water Point (Yes=1, No=0)
ТА	Aproximate Number of Female Patrons per Day	Number of Urinals	Number of Flushing Toilets	Number of Urinals	Number of Functional Flushing Toilets	Number of Bath Shelters in a usable state	Stand Alone Water Source (Pick from List)
Name Health Facility	Aproximate Number of Male Patrons per Day	Number of Flushing Toilets	Number of Toilets with access for the Physically Challenged	Number of Functional Flushin Toilets	g		Is there a Clean Surrounding Area for the Stand Alone Water Source?
Health Facility Code	Total number of Male Staff	Number of Toilets with access for the Physically	Water Source List		Solid Waste Disposal List		Main Solid Waste Disposal Method (Pick from list)
		Challenged	1 Rigad Water / Tap		2. Disposal in Bin/Ba	asket	
	Total number of Female Staff		2. Borehole	/ Tap	3. Composting		Functioning Incinerator (Yes=1, No=0)
			3. Protected Sh	allow Well	4. Burning	12.7	Bronorly Eunctioning
			4. Unprotected	Shalow Well	5. Burying undergrou	nd	Placenta Pits (Yes=1, No=0)
			5. Protected Spring		6. Pit Latrine		
			6. Unprotected	Spring	7. Public Dumping Si	te	Properly Functioning Liquid
			7. River/Stream	n/Lake/Dam	8. Open Dumping		Waste Management
			8. Other		9. Other		System (Yes=1, No=0)

General	Sanitation	Hygiene and Waste	Water Coverage
Number of Health Facilities	Latrines with Access for the Physically Challenged	Functioning Placenta Pits	Number of Functional Reticulated Water Systems
Male Patrons per Day	Male Patrons per Toilet	Functioning Liquid Waste Management	Number of Stand-Alone Waterpoints
Female Patrons per Day	Female Patrons per Toilet	Functioning Incinerators	
		Bath Shelters	
		Handwashing Facilities with Soap	

#### **B5. Area mechanic database**

Area No.	Name	Sex	Village	Traditional Authority	Contact	Date of Registration
1	Eftone ****	Male	Mikundi	Mduwa	0991 *** ***	1/1/2013
2	Edward ****	Male	Chakhalira	Mduwa	0996 *** ***	1/1/2013
3	Andrew ****	Male	Mkanda	Mkanda	0999 *** ***	1/6/2012
4	Fanuel ****	Male	Gumba	Mkanda	0884 *** ***	1/6/2012
5	George ****	Male	Chimombo	Mkanda	0993 *** ***	1/10/2013
6	Nelson ****	Male	Chipumi	STA Kapondo	0993 *** ***	1/10/2013

#### B6. Spare parts retail shop database

NO.	NAME OF SHOP	VILLAGE	TRADITIONAL AUTHORITY	Contact	CURRENT SITUATION
1	Pagwanji Enterprise	Bua Trading Centre	Mlonyeni	0991 *** ***	Selling
2	R.K. Hardware	Matutu Trading Centre	Mduwa	0996 *** ***	Selling
3	Angoni Grocery	Kaigwazanga	Mkanda	0999 *** ***	Stopped selling
4	Zuze General Suppliers	Waliranji Trading Centre	Mavwele	0884 *** ***	Selling
5	Give and Take	Mikundi Trading Centre	Mduwa	0993 *** ***	Selling
6	Yanu Yanu	Kapiri	Dambe	0993 *** ***	Selling

#### **C.** How is data collected?<sup>3</sup>

Data is collected by district government extension agents, primarily Health Surveillance Assistants (HSAs) with support from Water Monitoring Assistants (WMAs).

Data is aggregated in Health Centres and passed up to the District Coordinating Team (DCT) where data is entered in the database and shared across members of the district.

<sup>&</sup>lt;sup>3</sup> This section is re-edited based on "Guide to the National Rural Water Supply and Sanitation M&E System, May 2014".

District Environmental Health and Water Development Offices then communicate this information to their respective line Ministries.



#### Figure I-2: M&E Information Flow Diagram

#### Box 1: Pilot test in Mchinji district in 2014

Mchinji district tried to carry out the data collection excise in late 2014. The district environmental health office and district water development office took full responsibility for all processes such as below.

No.	Work process	Responsible person/office	No.	Work process	Responsible person/office
1	Data collector orientation	AEHOs	6.	Data validation	AEHOs
2	Distributing forms	AEHO	7.	Data compilation	DDEHO
3.	Data collection		8.	Data analysis	
3.1	Data collection for community indicators	HSAs	8.1	Data analysis- Local	AEHOs
3.2	Data collection for Learning Institutions	HSAs	8.2	Data analysis-District	DDEHO
3.3	Data collection for Public Premises	HSAs	9.	Present to DCT	DDEHO, DWDO
3.4	Data collection for health centres	SHSAs and/or	10	Keep official version of	DDEHO, MEO
	indicators	AEHOs		database	
3.5	Data collection for area mechanic database	WMAs	11.	Report data	
3.6	Data collection for spare parts supply chain	WMAs	11.1	Report data to RWDIO / MoAIWD	DWDO
4.	Collecting Forms at HC	AEHOs	11.2	Report data to MoH	DEHO
5.	Entering data	AEHOs			
Abbr	: Assistant Environmental Health Officers Health Surveillance Assistants (HSAs), Senior Health Surveillance Assistants (SH District Environmental Health Officer (D Ministry of Agriculture, Irrigation and Wa	s (AEHOs), HSAs), EHO), ater Development	W Di De (MoAIV	ater Monitoring Assistants (WMAs strict Water Development Officer ( eputy District Environmental Health Monitoring and Evaluation Of VD), Ministry of Health (MoH)	) DWDO) o Officer (DDEHO) fficer (MEO)

#### **D.** How frequently is it updated?<sup>4</sup>

Verification exercises have found that data collected presents a good overall picture of a district that can highlight areas for more targeted follow up. While not perfect, accessing this existing and freely available information can help interventions to more efficiently and effectively prioritize their efforts.

#### E. Reporting

Field reports help the responsible Sector to build a bigger picture of what is happening in the subsector. It also helps the Sector to learn which strategies and methods are helpful or not, what is working and what is not working.

The information in the reports goes into Management Information Systems (MIS). It is added to and compared with information from the other reports. This information helps the Sector to improve the understanding of how the project is running at the district level. The information in reports should be numerically aggregated with other information to compile statistics. While numerical information is not enough, it gives a wider picture of the programme to guide decision making.<sup>5</sup>

Sample report format is shown in Appendix 3 as a reference.

<sup>&</sup>lt;sup>4</sup> This section is re-edited based on "Guide to the National Rural Water Supply and Sanitation M&E System, May 2014".

<sup>&</sup>lt;sup>5</sup> This description is re-edited based on "Water Supply and Sanitation District Operational Manual, July 2010, Ministry of Irrigation and Water Development".

## Part II WASH M&E Database

Note: These contents are re-edited based on National WASH M&E Framework developed through M&E TWG in beginning of 2014.

Part II – 1 Basic Microsoft Excel 2007

#### A. Introduction

This section is an introduction to the basic functions in Microsoft Excel 2007.

It covers the following topics:

- Basic Parts of the Excel Screen
- Moving Around a Worksheet
- Office Button Menu
- Entering and Changing Data
- Basic Formatting
- Formulas
- Sorting Data
- Filtering Data

#### A1. Common Keyboard and Mouse Commands

Throughout this manual, the following terminology and notation is used to represent commands using the keyboard or mouse.

**Click:** Press the left button of the mouse.

**Right-click:** Press the right button of the mouse.

**Double-click:** Press the left button of the mouse twice. This should be a quick motion of two taps in a row.

**Click and drag:** Press the left button of the mouse and keep holding it as you drag the mouse in the direction you wish to go.

**Select:** For one cell, click on the cell. For multiple cells, click on the cell in the top-left part of the range that you wish to select, hold the mouse, and drag across the remaining cells to the bottom-right part of the range. The selected data will be highlighted in a thick black box and shaded in grey. An example of a selected range of cells is shown below.

	A1	•	(*	f <sub>x</sub> Nam	e		
	А	В	С	D	E	F	G
1	Name	Coke	Fanta	Sobo	Total	Price	Total \$
2	Chisomo	1	2		3	120	360
3	Thomas			2	2	120	240
4	Mphatso	2		3	5	120	600
5	Sarah	1	1	1	3	120	360
6							
7							
8							
9							

<Enter>, <Tab>, <->, etc.: Press the key indicated within the <> brackets.

<**Ctrl+\_\_>**, <**Alt+\_\_>**, <**Shift+\_\_>**, etc.: Press and hold the key shown left of the + sign, then press the key after the + sign. E.g. <**Ctrl+s>** means press and hold the **Ctrl** key, then press the s key.

#### **B. Basic Parts of the Excel Screen**

2. Office Button 3. Save Butte	on	1. Ribbon	4. Help Button
Home Insert Page Layout Formulas	Book1 - Microso Data Review View Developer	t Excel	- ° ×
Calibri 11 - A x Calibri 11 - A x Porte 2 Format Painter Chichaerd 5 Format Painter	■ ■ ● ※ · · · · · · · · · · · · · · · · · ·	tal and a construction of the state of	Delete Format Cells Edition
A B C D E	G H I J	K L M N O	P Q R S
8. Name Cell	9. Formula	<b>←</b> 7. Column	
5 5. Active Cell			
9	4	11. Scroll Bars	
11 12 13	6. Row		12. Zọom
14 15			
16 17 <b>10. Sheet</b> 19			
20			

- 1. **Ribbon:** Highlighted in the red box in the above, this is where you can find a menu of functions for Excel. There are different tabs, such as Home, Insert, Page Layout, etc. Each tab has a different set of functions. You can access the tabs by clicking on them.
- **2. Office Button:** When you click on this button, it will open up a menu of common functions, such as opening, saving, and printing files.
- **3.** Save Button: Click on this button to save your work (see more detailed description in the Office Button Menu section).
- **4.** Help Button: If you want to look up how to perform a task, or have a problem, click on this button to access a help menu. You can search in the help menu for answers about how to use Excel.
- **5.** Active Cell: This shows up as a thick black box around a cell. In Excel, a cell is a single box of the spreadsheet that can store data. The Active Cell is the cell that you are currently on, and can manipulate the data inside of it.
- 6. Row: One row of data is a horizontal set of cell (see yellow box). Rows are labelled with numbers (e.g. row 7).
- **7. Column:** One column of data is a vertical set of cells (see green box). Columns are labelled with letters (e.g. column K).
- 8. Name Cell: This tells you where your active cell is. In this case, it is A1. This means it is in Column A, Row 1.
- **9.** Formula Bar: This displays the data or formula that is stored in the Active Cell. You can type in this formula bar to add, change, or remove the data or formula in the Active Cell.

- **10. Sheet Name:** This is the name of the worksheet in Excel. In each Excel workbook (the name for an Excel file), you can have multiple worksheets. Each tab is a different worksheet. You can access each sheet by clicking on the tab.
- **11. Scroll Bars:** The scroll bar on the right hand side moves up and down. The scroll bar at the bottom moves side to side.
- **12. Zoom:** Click on the + or to zoom in (make text on screen appear bigger) or zoom out (make text on screen appear smaller).

#### C. Moving Around a Worksheet

There are different ways to move around a worksheet in Excel.

**Using your mouse**: Move the mouse pointer around the screen to the cell that you wish to change and then click on that cell to make it the Active Cell.

**Using scroll bars:** If you need to see parts of the worksheet not shown on the screen, you can move around the worksheet by clicking on the arrows on the ends of the scroll bars to go in the direction you wish. You can also click and drag the grey box inside the scroll bar to move around the worksheet.

**Using arrow keys:** Starting from the current Active Cell, use the arrow keys  $(\uparrow, \downarrow, \leftarrow, \text{ or } \rightarrow)$  to move around the worksheet. If you press the key once, it will move the Active Cell up, down, left, or right by one position. If you hold down the arrow key, then it will keep moving in that direction.

#### **D. Office Button Menu**



When you click on the Office Button, it will show a menu of common functions and a list of Recent Documents. The Recent Documents are the most recent files that were opened. These files can be accessed by clicking on them. The basic functions are:

- 1. New: Create a new, blank Excel workbook.
- **2. Open:** Open an existing Excel workbook. Find the file that you wish to open in the file explorer window that pops up and double-click to open it.
- **3.** Save: Save the current workbook. The <u>first time</u> you save, a file explorer window will pop up (see below).

Save As				<u>?</u> ×
Save in:	My Documents	*	😔 - 🔰	× 🖬 🖬 •
My Recent Documents Desktop My Documents My Computer My Computer My Notwork Flaces	My Music My Pictures DreNore Natebooks			
	File game: Data			
	Save as type: Excel Workbook	_		
Tools +			Save	Cancel

You need to give the worksheet a file name and a location. Find and click on the folder that you want to save to in the file explorer.

Type a name into the Filename box and **<Enter>** or press the **Save button**. After the first time, when you press the Save button, it will save the workbook under the filename assigned to it. You can also use the Save button at the top of the screen, or **<Ctrl+s>**.

<u>Save frequently, about every 10 minutes</u> so you do not lose your work when the computer fails or power is lost.

- **4. Save As:** Save the current workbook under a different name. This will take you through the same process as if you were saving a workbook for the first time. This function is helpful if you wish to have multiple versions of a file. For example, you have changed some data and want to keep the old and new version of the file.
- **5. Print:** Print the workbook file. This will open a Print menu with multiple options, such as number of copies, sections to print, etc. Print menus change depending on the type of printer you have.
- 6. Close: Close the current workbook.
- 7. Exit Excel: Close Excel.

#### E. Entering and Changing Data

The following example will demonstrate how to enter and change data in a workbook.

1. Go to the cell where you want to enter data. It will become highlighted with a thick black box. In this case, we are starting with A2.

	A2		- (	f <sub>x</sub>				
	А	В	С	D	E	F	G	Τ
1	Name	Coke	Fanta	Sobo	Total	Price	Total \$	
2		1						
3								
4								
5								
6								
7								
8								
9								

2. Type in your data. You will see this appear in the cell, as well as the formula bar. Press <Enter> when you have completed entering the data. This will take you to the next row, where you can continue to enter data.

A2		- (	✓ f <sub>x</sub> Chi	isomo				A3		- ( ×	✓ <i>f</i> <sub>x</sub> Th			
А	В	С	D	E	F	G		А	В	С	D	E	F	
ame	Coke	Fanta	Sobo	Total	Price	Total \$	1	Name	Coke	Fanta	Sobo	Total	Price	
hisomo							2	Chisomo						
	Ī						3	Th						
							4							
							5							
							6							
							7							
							8							
							9							

3. Optionally, you may use **<Tab>** to move to the right, instead of down, if you want to enter data across the row.

	B2		• ()	$f_x$ 1			
	А	В	С	D	E	F	G
Ν	lame	Coke	Fanta	Sobo	Total	Price	Total \$
Chi	somo		1				
Tł	nomas		1				
Μ	phatso						
S	arah						

4. To change data, go to the cell that you want to change. Either double-clicks on the cell or on the formula bar. Type in your change, then <Enter> or **<Tab>**.



#### **F. Basic Formatting**

In Excel, the look of the worksheet can be customized using different types of formatting. Basic formatting options are located under the Home tab, in the groups Cells, Number, Alignment, and Font. These groups will be described with examples to demonstrate some common basic formatting options. More advanced formatting options are available in the Style group.

#### F1. Cells

This group includes options to modify the look of each cell. The key button is the Format button. Click on this button to see the drop down menu. Under Cell Size, you may set a row height or column width, or let Excel automatically fit the size of the row or column according to the data.

Home Home Paste JFo Clipbos	e Insert t Py rmat Painter rd G	Page L Calibri B Z	ayout F • 11 U • Ent	ormulas • A* A • <u>A</u> * A	Data R	eview Vi = (>-) = (# () Align	ew Der Wrag E Merg ament	Boo veloper o Text ge & Center ~ G	General S - 9 No	oft Excel	Condit Condit Format	ional Form ting * as Tab Styles	at Cell lie * Styles *	Insert D	elete Format Cells	Σ Auto Diffi 2 Clea	oSum * Sort r * Filte Editing	<ul> <li>-</li> <li>A</li> <li>Find a</li> <li>Find a</li> <li>Select *</li> </ul>	x	 Insert	Delete Cells	Forma Cell :	∑ AutoSum ~
A1 A 1 2 3 4 5 6 7	В	c	5. D	E	F	G	н	1	J	K	L	М	N	0	P	Q	R	S	3	0		÷∟ *≛ Visib	Row Height ∆utoFit Row Height Column Width Qefault Width Befault Width Hide & Unhide ►
8 9 10 11 12 13																			1			Orga	nize Sheets Bename Sheet Move or Copy Sheet Tab Color
14 15 16 17 18 19 20 ₩ 4 ► ₩ She	cell / Sheet	2 / Sheet	3./9/																			Prot	grotect Sheet Lock Cell Format Cglis

Column widths and row heights can also be set by clicking and dragging the edge of the column or row to the desired size. In the example below, the text in cell A1 is too big to fit in the column width, so it was adjusted to make it wider.



#### F2. Number

Data may be formatted in different ways, depending on the data type. In the Number group, there are different options for how data will be presented. There are options for currency (\$), percentages (%), and to add a comma (,) for thousands separator. There are also options to add or take away decimal places. In the drop down menu in the Number group, there are more formats and advanced options. To assign or change the number formatting for data, select the cells that you wish to apply the format to. Then select a format with one of the buttons or selecting from the drop-down menu.



Some key types of number formats are:

Number: General numeric data. By default, it will assign two decimal places.

**Percentage**: For percentages. The data needs to be entered as the decimal number (e.g. 0.85), and will be automatically formatted into a percent (85%). Do not enter the percent number (e.g. 85), as that will result in it being multiplied by 100 in the display (e.g. 8500%).

**Short Date or Long Date**: For automatic formatting of dates. These will put dates into a specific format, depending on the setting of the computer.

**Text**: For normal text (e.g. names, villages). Examples of these formats in an Excel worksheet:

	А	В
1	Type of Data	Example
2	Number	24.50
3	Percentage	20%
4	Short Date	3/31/2013
5	Text	Malawi

#### F3. Alignment

This group contains options to change how the text is aligned inside the cell. It can be aligned in different ways vertically (top, middle, bottom), and horizontally (left, centre, right). The text in a cell can also be wrapped. This means that if the data typed in the cell takes up more space than one line, it will automatically go to the next line. By default, numbers are aligned to the right, while text is aligned to the left.

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An example of wrapping text for cells A11 and A12 because the text is too long for the column width and we don't want to make the column too wide.

Paste Format F	Calibr	τ <u>υ</u> -	• 11 • ( 	A* A*	= <b>_</b>	≫~ i 律律	🚰 Wrap Text 🛃 Merge & Cent	ter *
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Type of Data	Example							
2 Number	24.50							
Percentage	20%							
Short Date	3/31/2013							
5 Text	Malawi							
Format								
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o usdadtas	Malawi							
JUnderline	Malawi							
Different Cold	ur							
2 Different Cell	tolour							

#### F4. Font

Fonts are different styles of text. This group contains options to change the look of the text. , and they each have a name. In this spreadsheet, the font name is Calibri. The font size is 11, which is how big the font appears. The bigger the number, the larger the font. Underneath the font name and size boxes are options for formatting the font, borders, colour of the cell, and colour of the font.

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Examples of changing the font colour, cell colour, and border:

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	811	-	()	ſx	Malawi	Theme Colors
	A	E	3	с	D	
1	Type of Data	Exam	ple			
2	Number		24.50			
3	Percentage		20%			
4	Short Date	3/31	2013			Standard Colors
5	Text	Mala	vi			
6						ere Colors
7	Format					
8	Bold	Mala	wi			
9	Italic	Mala	wi			
10	Underline	Mala	vi			
11	Different Colour	Mala	wi			
12	Different Cell Colour					
13	All Borders					

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_	B12	-	0	$f_x$	Mala						
	А	8	3	С	1						
1	Type of Data	Exam	ple				123				
2	Number		24.50								
3	Percentage		20%			Sta	indard	Colors		_	_
4	Short Date	3/31	/2013			Ц				_	-
5	Text	Mala	wi				No				
6						-	Mo	Colors			
7	Format							_	-	_	1
8	Bold	Mala	wi								
9	Italic	Mala	wi								
10	Underline	Mala	wi								
11	Different Colour	Mala	wi				-				
	Different Cell										
12	Colour	Mala	wi								
13	All Borders		-								

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1	Type of Data	Exam	ple		111	Left Border
2	Number		24.50		EH.	Bight Border
3	Percentage		20%			No Border
4	Short Date	3/31	2013		Ħ	All Borders
5	Text	Mala	wi			Outside Borders
6						Thick Box Border
7	Format					Rottom Double Rouder
8	Bold	Mala	wi			Contrain Double Doroth
9	Italic	Mala	wi		-	Dick Bottom Border
10	Underline	Mala	Ni		12	Top and Bottom Border
	Different				-	Top and Thigk Bottom Border
11	Colour	Mala	Ni			Top and Double Bottom Border
	Different Cell				Dra	w Borders
12	Colour	Mala	Ni		18	Draw
13	With Border	Mala	vi		1	Draw B er Grid
14					5	frate filmer
15					1	line for
16					-	due co
17						Line St
18					B	More 8 ers

#### G. Formulas

You can do calculations, similar to using a calculator, inside of a cell. These are called formulas. The following example will show how to use basic formulas in Excel.

If you wish to add together multiple cells to get a total, you can use the SUM function. In this case, we want to know how many bottles each person has ordered.

- 1. Go to the cell where you wish to calculate the sum. In this case, it is E2.
- 2. Type =**SUM** (in the cell or in the formula bar.

	SUM	-	(° × ✓	fx =SUN	۸(		
	А	В	С	D	E	F	G
1	Name	Coke	Fanta	Sobo	Total	Price	Total \$
2	Chisomo	1	2		=SUM(		
3	Thomas			2	SUM(nun	nber1, (num	ber2],)
4	Mphatso	2		4			
5	Sarah	1	1	1			
6							
7							
8							
9							

 Click on the cells you want to sum together, they will be highlighted and you see something like the picture below. Optionally, you may type in the locations of the cells yourself. The way it works is to type in the location of the first cell (B2), then :, then the location of the last cell (D2). B2:D2 means "from B2 to D2", so it includes B2, C2, and D2.

	SUM	•	(• × ✓	fx =SUN	1(B2:D2		
	А	В	С	D	E	F	G
1	Name	Coke	Fanta	Sobo	Total	Price	Total \$
2	Chisomo	1	2		=SUM(B2:	D2	
3	Thomas			2	SUM(nun	nber1, [nu	mber2],)
4	Mphatso	2		4			
5	Sarah	1	1	1			
6							
7							
8							
9							

4. Type) so that the formula reads =SUM (B2:D2), then <Enter> or <Tab>.

	SUM	•	(• X 🗸	fx =SUN	/(B2:D2)		
	А	В	С	D	E	F	G
1	Name	Coke	Fanta	Sobo	Total	Price	Total \$
2	Chisomo	1	2		=SUM(B2:	D2)	
3	Thomas			2	1R x 3C		
4	Mphatso	2		4			
5	Sarah	1	1	1			
6							
7							
8							
9							

5. Rather than typing the same formula for the rest of the rows, you may copy the formula by clicking on the + at the bottom right corner of the Active Cell, then dragging it down the column. In this case, you click and drag from E2 to E5. Excel automatically changes

the formulas to refer to the cells in the same row as the formula. So for row 3 is **=SUM** (B3:D3), row 4 is **=SUM** (B4:D4), and so on.

	E2	-		f <sub>x</sub> =SUN	/(B2:D2)		
2	A	В	С	D	E	F	G
	Name	Coke	Fanta	Sobo	Total	Price	Total \$
	Chisomo	1	2		3		
	Thomas			2			
	Mphatso	2		4			
	Sarah	1	1	1			
į							
9							

You can do a basic calculation by typing "=" and then numbers and symbols. Use brackets to group calculations. Excel follows order of operations brackets, exponents, division, multiplication, addition, subtraction. The signs used are: + for addition, - for subtraction, \* for multiplication, / for division, and () for brackets.

In this example, to calculate the total price for all drinks for Chisomo, the formula is **=E2\*F2**.

	SUM	•	( ×	<i>f<sub>x</sub></i> =E2*	F2		
	А	В	С	D	E	F	G
1	Name	Coke	Fanta	Sobo	Total	Price	Total \$
2	Chisomo	1	2		3	120	=E2*F2
3	Thomas			2	2	120	
4	Mphatso	2		4	6	120	
5	Sarah	1	1	1	3	120	
6							
7							
8							
9							

#### H. Sorting Data

The sort function is used to arrange data based on the values presented. Sort can be used on numeric data, dates and times, or text. Sorting data helps you quickly visualize and understand your data better, organize and find the data that you want, and ultimately make more effective decisions. The following example will show how to use the sort function in Excel.

- 1. Select the data in the worksheet that you wish to sort.
- 2. Click on **Data tab** of the Ribbon, then click on **Sort**.



- 3. A pop up window will appear. Make sure the box that says "My data has headers" is checked so that your header row (i.e. Name, Coke, etc.) is not included with the data to sort.
- 4. Do one of the following (in this example, we choose option c for the Name column):
  - a. To sort from low numbers to high numbers, click Sort Smallest to Largest.
  - b. To sort from high numbers to low numbers, click Sort Largest to Smallest.
  - c. To sort in alphabetical order, click **Sort from A to Z**.
  - d. To sort in reverse alphabetical order, click Sort from Z to A.



5. To sort by multiple columns, click **"Add Level"**, then use the **"Then By"** fields in the sort window to select additional rows and orders. For example, we can first sort by ascending order of Total \$, then ascending order for Name.
|   |                     | ? ×                      |   | A1      | •    | . (   | <i>f</i> <sub>x</sub> Nan | ne    |       |     |
|---|---------------------|--------------------------|---|---------|------|-------|---------------------------|-------|-------|-----|
| I Add Level 🗙 Qelete Level 🖏 Qopy Level 🔉 🔹 | Qptions V My        | data has <u>h</u> eaders |   | А       | В    | С     | D                         | E     | F     |     |
| umn Sort On                                 | Order               |                          | 1 | Name    | Coke | Fanta | Sobo                      | Total | Price | Tot |
| by Total \$ Values                          | Smallest to Largest | <u> </u>                 | 2 | Thomas  |      |       |                           | 2 2   | 120   |     |
| by Name Values                              | A to Z              |                          | 3 | Chisomo | 1    |       | 2                         | 3     | 120   |     |
|   |                     |                          | 4 | Sarah   | 1    |       | 1 :                       | 1 3   | 120   |     |
|   |                     |                          | 5 | Mphatso | 2    |       | 1                         | 3 5   | 120   |     |
|   |                     |                          | 6 |         |      |       |                           |       |       |     |
|   |                     |                          | 7 |         |      |       |                           |       |       |     |
|   | OK                  | Cancel                   | 8 |         |      |       |                           |       |       |     |
|   | Linner              | //                       | 9 |         |      |       |                           |       |       |     |

# I. Filtering Data

Filtered data displays only the rows that meet criteria that you specify and hides rows that you do not want displayed. You can filter by more than one column to produce a smaller subset of data. The following example will show how to use the filter function in Excel.

- 1. Select the data in the worksheet that you wish to filter.
- 2. Click on the Data tab of the ribbon, then click on Filter.

0		- (" - ) -	Ŧ					Data - Microsoft Excel
	Home	e Insert	Page La	yout		Data Rev	iew View	Dester
Fr	rom From ccess Web	From Fro Text So Get Extern	m Other ources * Co al Data	Existing	Refresh All + Conr	Connection Properties Edit Links nections	<sup>5</sup> Ž↓ <u>A</u> Z Z↓ Sort	Filter Advanced Columns Duplicates Validation - Otata Columns Duplicates Validation - Otata Tools
	A1	-	• (•	fx Nam	e			Filter (Ctrl+Shift+L)
1	А	В	С	D	E	F	G	Enable filtering of the selected
1	Name	Coke	Fanta	Sobo	Total	Price	Total \$	Ei pertenters oper Ei gertenters telet
2	Thomas			2	2	120	240	Once filtering is turned on, click
3	Chisomo	1	2		3	120	360	the arrow in the column header to     choose a filter for the column.
4	Sarah	1	1	1	3	120	360	
5	Mphatso	2		3	5	120	600	
6								
7								Press F1 for more help.
8								
9								

- 3. Click the arrow in the column header that you wish to **filter**.
- 4. Select the criteria that you wish to filter by. Use the check boxes to select or unselect values that you wish to include. For more advanced functions (see below), you can set criteria, such as **"equals"**, **"does not equal"**, **"is greater than"**, etc. Click OK to apply the selected filter.



5. To use criteria to filter, click the drop-down menu that says "\_\_\_\_\_ Filters". If it is text, it will say "Text Filters", if it is numbers it will say "Number Filters". In this example, we will use the number filters for the Total column.

	A3		- (	$f_x$	Chiso	omo					
	А	В	С		D	E		F		G	Н
1	Name 💌	Coke	<ul> <li>Fanta</li> </ul>	Sob	• •	Total	-	Price	-	Total \$ 💌	
2	Thomas	2↓	Sort Smal	lest to La	argest			1	120	240	
3	Chisomo	Z↓	Sort Large	est to Sm	allest			1	120	360	
4	Sarah		Sort by C	olor				- 1	120	360	
5	Mphatso	X	Clear Filte	er From "	Total"				120	600	
6			Eilter by (	Color				-			
7			Number Dy C								
8			Number r	inters				E	qual	s	
9			- 🖌 (Se	elect All)				D	oes	Not Equal	
10			2					G	reat	er Than	
11								G	reat	er Than <u>O</u> r Eq	ual To
12							1	Le	ess T	han	
13				OK		Cancel		Le	ess T	han Or Egual	То
14							.:	В	etwe	en	19952201
15								-			
16								10	ob T	J	
17								A	bove	Average	
18								В	el <u>o</u> w	Average	
19								C	usto	m <u>F</u> ilter	
20									-		

6. Click the criteria that you want. A pop-up box will appear. Set the **criteria** accordingly and click **OK**. In this case, we are setting the filter for Total greater than 2.

Custom AutoFilter	1		A3			<i>f</i> ∗ Chise	omo		
Show rows where:			А	В	С	D	E	F	G
Sobo		1	Name 💌	Coke 🔽	Fanta 💌	Sobo 💌	Total 🖓	Price 💌	Total \$ 💌
is greater than		3	Chisomo	1	2		3	120	360
Card Cor		4	Sarah	1	. 1	1	3	120	360
		5	Mphatso	2	2	3	5	120	600
		6							
Lice 2 to represent any single character		7							
Use * to represent any single character		8							
		9							
OK Cancel									

7. To remove a filter, click the arrow in the column heading that you wish to remove the filter from, and select **"Clear Filter From ..."**.

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Part II – 2 PivotTables in Microsoft Excel 2007

# **A. Introduction**

This manual is an introduction to PivotTables in Microsoft Excel 2007. It covers the following topics:

- Background on PivotTables
- Creating a PivotTable
- Manipulating a PivotTable
- Performing Calculations in a PivotTable

# **B. Background on PivotTables**

A PivotTable report is an interactive way to quickly summarize large amounts of data. Use a PivotTable report to analyze, explore, and present data. PivotTable reports enable you to make informed decisions about critical data. A PivotTable report is generated based on a set of data in an Excel worksheet. Different categories of data from the Excel worksheet can be displayed in the PivotTable report, and arranged in different ways, such as counting, summing, or averaging values.

# C. Creating a PivotTable

- 1. Select the data you wish to summarize in the **PivotTable report**, or the entire worksheet.
- 2. On the Insert tab, in the Tables group, select PivotTable.

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In	sert PivotTable		∫x T/A									
:	Summarize data	using a PivotTable.		с		D	E	F		G	н	
	PivotTables mak	e it easy to arrange	Vil	lage	Pop	ulation	Household	s Data A	A [	Data B	Data C	
	and summarize	complicated data	Majawa			1808	38	30	3	C	) (	0
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8	Chimwala	Nikisi	Bonongw	/e		1455	24	16	1	C	) (	0
9	Chimwala	Nikisi	Kafoteza			916	18	34	1	C	) (	3
10	Chimwala	Nikisi	Donosi			706	13	37	1	C	) (	0
11	Chimwala	Affick	Gwaza			1346	28	30	1	C	) (	0
12	Chimwala	Mtonda	Malenga			2860	40	50	4	C	) (	0
13	Chimwala	Makunula	Makunul	a		2207	44	12	5	C	) (	0
14	Chimwala	Ntonda	Malopa I			1229	23	77	2	C	)	1
15	Chimwala	Mlongoti	Mkundi			642	18	39	1	C	) (	0
16	Chimwala	Ntonda	Ntonda			1058	2	53	2	C	) (	0
17	Chimwala	Ntonda	Chiutira			449	10	05	2	C	) (	0
18	Chimwala	Ntonda	Mlongoti			668	15	51	3	C	) (	0
19	Chimwala	Ntonda	Bello			1200	24	41	2	C	) (	0
20	Chimwala	Ntonda	Karonga			557		37	0	0		0

3. In the Create **PivotTable window**, verify that the range is correct, and that New Worksheet is selected as the location for the PivotTable report to be placed, and click **OK**.



4. In the new sheet, drag PivotTable fields to the desired locations to create your PivotTable.

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4	Row Labels		Sum of Population	Sum of Households									GVH	
5	■ Chimwala	1	66739	1362	7								Village	
6	Affick		1346	280	0								Population	
7	Jekete		1808	380	0								Data A	
8	Makunu	la	2207	442	2								Data B	
9	Mkuchir	ra	4700	671	L								Data C	
10	Mlongo	ti	642	189	9									
11	Mthiran	nanja	11828	2333	3									
12	Mtonda		2860	460	)								orag fields between areas	below:
13	Mwatak	ata	7150	1553	7								Report Filter	Column pels
14	Ngatala		11371	2553	3									∑ Values 💌
15	Nikisi		9233	1590	0									
16	Ntonda		7426	1601	L								Row Labels 2	Values
17	Songa		6168	1571	L	_							T/A T	Sum of Pooul
18	■ Chowe		23428	5179	)								GVH V	Sum of House V
19	Ligika		2676	548	3									
20	Lijika	A Cheati	5317 Sheet2 Sheet2	1423	3		14					× [	Defer Layout Update	Sum of Households
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- 5. To change the way that values are calculated, click on the desired **field in the Values area** and select **Value Field Settings**. In the Value Field Setting window, select how you want the values to be summarized, and click **OK**. A few common types of Value Field Settings are:
  - a. **Sum:** Adds together the values of each field within that category

(e.g. Sum of Population for GVH = 100 from village A + 200 from village B + 300 from village C+ 80 from village D = 680).

b. Count: Counts the number of values that exist within that category

(e.g. Count of Population for GVH is 4 because 4 villages are within that GVH).

c. Average: Average of the values of each field within that category

(e.g. Average of Population for GVH = (100+200+300+80)/4 = 170).



**Tip:** Check your Value Field Setting is set to the correct type of value. Otherwise, your summarized data may be incorrect (e.g. having a Count of Population instead of a Sum).

6. If you click outside of the PivotTable, or go to another worksheet, the PivotTable Field List will automatically disappear. To view the PivotTable Field List at anytime, simply click in a cell on the PivotTable.

**Important Reminder:** If you change the source data after the pivot table is created, remember to refresh data in the pivot table, by clicking the **Refresh button** on the PivotTable Toolbar.



# D. Manipulating a PivotTable

Once a PivotTable is created, you can change how data is displayed by functions such as sorting, filtering, and expanding or collapsing according to different fields.

To access sorting or filtering functions, click on the arrow beside Row Labels. A drop-down menu will appear. Select the field that you wish to apply this to (in this case, it can be the T/A or GVH). Sorting and filtering options in PivotTables are the same as the standard Sort and Filter functions in Excel (see **Part II -1**).

In the first example, the T/A is filtered for Chimwala, so only Chimwala will appear. In the second example, the Sum of Population of GVH are filtered for values greater than 10,000. Note that for Label and Value Filters, only one filter can be applied at a time.

3	Values	3		Values				
4	Row Labels Sum of Po	pul 4	Row Labels	Sum of Population	Sum of Households	Sum of Data A	Sum of Data B	Sum of Data C
Se	lect field:	5	■Chimwala	66739	13627	94	5	4
T//	A 🗾	6	Affick	1346	280	1	0	0
A↓	Sort A to Z	7	Jekete	1808	380	3	0	0
ZJ	Sort Z to A	8	Makunula	2207	442	5	0	0
	More Sort Options	9	Mkuchira	4700	671	5	0	0
X	Clear Filter From "T/A"	10	Mlongoti	642	189	1	0	0
-	Label Eilterr	11	Mthiramar	nja 11828	2333	16	0	0
	Laber Filters	12	Mtonda	2860	460	4	0	0
	Value Filters	13	Mwatakata	a 7150	1557	6	1	0
	(Select All)	14	Ngatala	11371	2553	13	0	0
	Chimwala	15	Nikisi	9233	1590	13	4	3
	Katuli	16	Ntonda	7426	1601	14	0	1
		17	Songa	6168	1571	13	0	0
	OK Cancel	18	Grand Total	66739	13627	94	5	4

Value Filter (GVH)					? ×
Show items for which					
Sum of Population	▼ is greater than	▼ 10	0000		_
, .					
				ж	ancel
		1			
		1			
Valu	es	•			
Row Labels 🛛 🛃 Sum	of Population Sum o	f Households Sum o	of Data A Sum	of Data B Sum	of Data C
Chimwala	23199	4886	29	0	0
Mthiramanja	11828	2333	16	0	0
Ngatala	11371	2553	13	0	0
■ Chowe	15435	3208	11	542	0
M'baluku	15435	3208	11	542	0
🗏 Katuli	10312	2108	29	0	23
Katuli	10312	2108	29	0	23
Nankumba	10315	1954	30	0	14
Mwalembe	10315	1954	30	0	14
Grand Total	59261	12156	99	542	37

The Row Labels can be expanded or collapsed to show more or less detail in the PivotTable using the + or – signs to the left of the label. Click on the <u>+ signs to expand, and the - signs to collapse</u>. In this case, the PivotTable can be expanded to show GVHs (e.g. in Katuli, Makanjira, and Mponda), or collapsed to only show the T/As (e.g. in Chimwala and Chowe).

3		Values				
4	Row Labels	Sum of Population	Sum of Households	Sum of Data A	Sum of Data B	Sum of Data C
5	Chimwala	66739	13627	94	5	4
6		23428	5179	27	554	0
7	🗏 Katuli	29188	6626	101	0	47
8	Katuli	10312	2108	29	0	23
9	Kwitunji	2806	669	10	0	3
10	Mpita	5400	1512	19	0	9
11	Msalule	2270	494	8	0	1
12	Mtelera	3586	770	15	0	2
13	Nsalule	4814	1073	20	0	9
14	Makanjira	20307	4013	41	1	1
15	Hamisi Makanjira	8157	1509	20	0	0
16	Lulanga	9425	1914	15	0	1
17	Mambo	2725	590	6	1	0
18	Mponda	21156	4071	48	3	0
19	John Mapata	5189	1010	10	0	0
20	Kalino	8339	1652	16	0	0

## E. Performing Calculations in Pivot Tables

If summary functions in a Pivot Table don't provide the data that you need to make a decision, you can create your own formulas in calculated fields. Use a calculated field when you want to use the data from another field in your formula. The PivotTable report would then automatically include this rate in the subtotals and grand totals. For example, you could add a calculated item with the formula for number of people per household, using the population, and the number of households. This example is used in the steps below.

- 1. Click the PivotTable report
- 2. On the Options tab, in the Tools group, click Formulas, and then click Calculated Field.

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PivotTable1	GVH	tings = Collapse Ent	ire Field	group oup Field		ort Refresh	Change Data	Clear	Select	Move	PivotChar	Formula	s OLAP	Field	
PivotTable	2	Active Field		Group	Sor	t	Data		Action	s			alculated Fi	eld	ho
A15	- (9	<i>f</i> ∗ Nikisi									_	5	Insert Calcu	lated Fie	Id
A		В	С		D	E	F		G	H		S	olve Order	•	T
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2										_				_	Ŧ

 In the Name box, type a name for the field. In the Formula box, enter the formula for the field. To use the data from another field in the formula, click the field in the Fields box, and then click Insert Field. Click Add.



4. You may change the look of the number format in the Calculated Field by selecting the column with the Calculated Field, going to the Home tab, then selecting a number format in the Number group. In this example, the Calculated Field is rounded to one decimal place.

	Values					
Row Labels	Sum of Population	Sum of Households	Sum of Data A	Sum of Data B	Sum of Data C	Sum of PeoplePerHH
Chimwala	66739	13627	94	5	4	4.9
Affick	1346	280	1	0	0	4.8
Jekete	1808	380	3	0	0	4.8
Makunula	2207	442	5	0	0	5.0
Mkuchira	4700	671	5	0	0	7.0
Mlongoti	642	189	1	0	0	3.4
Mthiramanja	11828	2333	16	0	0	5.1
Mtonda	2860	460	4	0	0	6.2
Mwatakata	7150	1557	6	1	0	4.6
Ngatala	11371	2553	13	0	0	4.5
Nikisi	9233	1590	13	4	3	5.8
Ntonda	7426	1601	14	0	1	4.6
Songa	6168	1571	13	0	0	3.9
■Chowe	23428	5179	27	554	0	4.5
Ligika	2676	548	7	12	. 0	4.9
Lijika	5317	1423	9	0	0	3.7

Part II – 3 Malawi National WASH M&E Database Guide

# A. Notes on Graphics Used In This Guide



# **B. System Overview**

The 3 parts of this M&E program:

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#### Data:

Contains all the information or data regarding each village



Analysis:

Summarized information in a table



#### Map:

Displays a map of the district. Colours change depending on the data collected.

All three sections can be accessed using the tabs at the bottom of the screen:



# C. Enable Macros

First please check to see if Macros are enabled. The database will not work unless Macros are enabled.

## Step 1

If you see the "security warning" at the top of the screen:

a. Click the Options Button

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I15	• (* f <sub>x</sub>		

#### Step 2

After clicking the Options Button this window should show up.

Click "Enable this content"

Click the OK button

This window should close and the security warning should disappear.



# **D. Data Entry**

# **D.1 Finding the Datasheet and Its Important Parts**

## Step 1

Click on the tab that says: "[District Name] Data"



## Note

The data sheet will now be shown.

This is where you will see and enter village data

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Date of Data Collection	Name of HSA	Name of Village	Village Code	GVH	GVH Code	TA	TA Code	Health Center	Health Center Code	Village Population	Number of Households	Basic Latrines (Permeable Floor, No DHC)	Basic Latrines (Permeable Floor, with DHC)	Basic La (Impere Floor, Ne
2		Village 1		GVH 1		Kalonga			1	612	2	13	0	1
3	100	Village 2		GVH 2		Kambalame			1	1963	6	14	0	0
4		Village 3		GVH 3		Kambwiri			0	1644	6	5	1	0
5	- C (	Village 4		GVH 4		thombedza			0	878	21	1	0	1
6	- C (	Village S	1.00	GVH 5		Kuluunda			Q	1221		9	1	1
7		Village 6		GVH 6		Maganga			0	283	8	13	0	1
1		Village 7		GVH 7		Msosa			0	806	6	6	1	1
9	- CC	Village 8	1.1	GVH 8		Mwanza .			0	457	6	6	1	0
50		Village 9	-	GVH 9		Ndindi	-		1	1895	71	0	0	0
11	- CC	Village 10		GVH 10		Pemba				779	2	2	1	1
12	- C	Village 11	-	GVH 11	-	Kalonga	-			844		35	1	1
13	- C.	Village 12	-	GVH 12	-	Kambalame	-	-		1595	34	2	0	0
34	-	Village 13	-	GVH 13	_	Kambwiri	-		-	925	4	11	0	
15	- C.	Village 14		GVH 14	-	Chombedza			-	1145	6	34	1	0
16	- C.	Village 15	-	GVH 15	-	Kuluunda		-		846	3.	3	0	0
17	-	Village 16	-	GVH 16	_	Maganga	-		-	1355	3	9	1	
18	- CC	Village 17	-	GVH 17		Msosa			-	1260	3	6	1	0
19	1	Village 18		GVH 18		Mwanza			10000	1361	71	0	0	1
20		Village 19		GVH 19		Ndindi		1.00	1	931	4,	1.5	1	0
21	-	Village 20		GVH 20		Pemba	-	_	-	323	5	1	0	0
22		Village 21		GVH 21		Kalonga			1.000	418	6	9	0	1
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Not all headings will be on your screen. Additional headings can be seen by "scrolling" to the right.

#### Step 2

**Click and hold** the mouse onto the **rectangle** (or bar) and move the **mouse left and right**.

This is called "click and dragging"



## Note

More Headers become available after the scroll bar has been moved to the right



#### Step 3

Return to the beginning of the data by **scrolling** the bar back to the **left** 



## **D.2 Data as rows**

#### Note

Each row of the datasheet represents 1 village.

When entering data for one village, it should all be in one A Row\_\_\_\_\_ row

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1		A	В			D	E	F	G
	1	Date of Data Collection	Name of HSA	Name of	Village	Village Code	GVH	GVH Code	Kalonga
	2		[	Village 1			GVH 1		Kalonga
- 1	3			Village 2			GVH 2		Kambalame
- 1	4			Village 3			GVH 3		Kambwiri

# **D.3 Tips for Entering Data for a Village**

D.3.1 Enter the Date

## Step 1

To enter the date first **click** on **the box** (or cell) where you want to enter it.

#### Step 2

**Type** in the date using the following format:

DD-MM-YYYY

# Date of Data Collection 05-03-2013 22-03-2013

#### Note

If you **correctly** enter the date you will see it shift to the **right** side of the box as shown.

#### Note

If the date was entered **incorrectly** it will remain on the **left** of the box



This row was not entered correctly

## D.3.2 Enter a TA

#### Step 1

To enter a TA you must first **click** the **cell** (also known as a box) **where you would like to enter** the TA info.

You will see a button with the arrow pointing down appear right beside the box where you clicked.



#### Step 2

**Click** on the **button with the arrow pointing down** and a menu of TA's will appear.

If you click on Msosa afterward, it will enter it into the cell.





After clicking on Msosa you will see it entered into the cell



#### Note

If you try to enter a name that is not in the list or do not spell the TA correctly you will see this error.

Click on Cancel and try to enter again.



## D.3.3 Entering data into a Yes or No (Y/N) Column

#### Note

Some columns will ask you to enter a Yes or No in the form of a "Y" or "N"

They will always have a "(Yes = Y, No = N)" note as part of their Name

The Y or N must be capital letters



X

#### Note

If you enter a value that is not a capital Y or N, you will see this error message.

Click on Cancel and try to enter again.

## D.3.4 Note on the Number "0" vs. The Letter "0"

#### Note

Watch for the mistake of the letter "0" or "o" being entered instead of the number 0. The letter and number keys are very close together.

Microsoft Office Excel

The value you entered is not valid.

<u>R</u>etry

A user has restricted values that can be entered into this cell.

Help

Cancel

You will see letters shifted to the left side of the box or cell. Numbers will be on the right.



# D.4 Entering New Data to a Village Already In the List

Date of Data Collection	21-01-2013
Name of HSA	Luyando
Name of Village	Village 37
Village Code	222
GVH	GVH 12
GVH Code	111
ТА	Msosa
TA Code	222
Health Center	Chipata
Health Center Code	444
Village Population	1203
Number of Households	80

As an example, we have received the following information:

#### Step 1

Click on the "Find and Select" button on the top left



Click on "Find"



## Step 3

Find the row that matches the data we have. For this example we will assume the villages have already been filled in.

Type in "Village 37" and click "Find Next"



#### Note

After clicking "Find Next" it will bring you to where it matches.

Otherwise it will tell you that there is nothing that matches

29			Village 28		GVH 3	Mwanza	
30		village 50				Mdiadi	? ×
31				=`=	place	Puesta	
32		Village 37			Replace		
33				=¢-			
34	ىلىپ	1:11 20			Vilage 37		
35							
36							Options >>
37			Village 36				
38			Village 37			Find All Eind Next	Close
39			Village 38		W111 AM		

what you were looking for.

## Step 4

On the same row as Village 37, enter the **appropriate values** under the **corresponding columns.** 

For example:

Under Date of Data Collection, type: 21-01-2013

Under Name of HSA, type: Luyando

of Data Name of HSA Name of Villag	GVH Code	G TA T	H FA Code	Real Conter	Health Center Code	Village Resultion	Number of Households	Basic Latrines (Permeable Floor, No DHC)	Basic Latrines (Permeable Floor, with DHC)	Basic Latrines (Impermeable Floor, No DHC)	lmp Lar (Impe Floo
Vilige 31 Vilige 32 Vilige 32 Vilige 33 Vilige 34 Vilige 35 Vilige 35 Vilige 37 Vilige 39 Vilige 40 Vilige 41	Date Col	e of Data llection		Name	of H	ISA	N	ame of	Villag	e	
Vilage 42 Vilage 43 Vilage 44							Village	31			
Village 45 Village 46 Village 47							Village	32			
Village 48 Village 49							Village	33			
Village 50 Village 51							Village	34			
Vilage 52 Vilage 53							Village	35		_	
Salma Community Data, Analysis Terrate, Map., She	-						Villago	36			-
$\mathbf{X}$		1_01_201	3 1 1	vando	_	_	Villago	37	_		
		1-01-201	JLU	yanuo	_	_	Village	20	_		
							vinage	20			

## Step 5

Continue entering data for this village across the row

# D.5. Copy and Paste Data from another workbook

## Step 1

Open spreadsheet that currently holds the data for WASH in the district

## Step 2

Highlight cells to be copied into the WASH database analysis template. (**Do not include the title cell**). Copy cells (**Ctrl+C**)

## Step 3

Return to the WASH Database you want to copy to, on the '*District*' Data tab. Select first cell in the row where the data will be pasted by left clicking on the cell

## Step 4

Go to the Home tab. Click the arrow under the paste option.

Select Paste Special

Select Values and press the Enter Button.

Note: Do not paste directly or the data validation features will not function

## Step 5

Repeat steps 1-4 for each row to be copied and pasted until all data have been transferred to the District WASH database spreadsheet



# E. Data Analysis

To view the table to analyse data:

Step 1

**Click** on the **Data Analysis** tab at the bottom of the spreadsheet



#### Note

You can now see the data analysis sheet. It should look similar to this.

Here you'll see data for all Traditional Authorities and villages.

2	10-	(x + ) a				Simple SEM	1 Platform - Salim	a Community Da								_ 0	×
2	Hone	Insert F	age Layout	Formulat	Data	Review	View Dev	eloper								<b>9</b> -	a x
Visi	aal Macros	Record Macro Use Relative I Macro Securi Code	References ty	Insert Des	Controls	ew Code In Dialog	Map Pro Map Pro Expansion Mag Refresh I XM	perties 📑 Impo in Packs 📑 Expo Data IL	ert Document Panel Modify								
	H22	- (a	fx.														¥
4	A	В	С	D	E	F	G	н	1	1	К	L	M	N	0	Р	-
							Collapse to TA		Expand TA:								E
i.		Values		22											-	1	
	Row Labels	Village_	Number_of_ Households	Total Basic Latrines	Total Improved Latrines	Total Latrines	Basic Latrine (Permeable Floor, no DHC) coverage	Basic Latrine (Permeable Floor, with DHC) coverage	Basic Latrine (Impermeable Floor, no DHC) coverage	Improved Latrines (Impermeable Floor, with DHC) coverage	Composting Toilet (EcoSan) coverage	Flush Toilet	Total Basic Latrine coverage	Total Improved Latrine coverage	Total Latrine	Handwashing Facilities without soap coverage	Hand Facili 5010
	* Kalonga	54869	2755	5 410	74	484	13%	1%	1%	19	6 1%	1%	15%	3%	18%	1%	
	- Kambalan	ne 52408	2582	427	77	504	15%	1%	1%	19	6 1%	1%	17%	3%	20%	1%	
	* Kambwiri	52997	2600	460	79	539	16%	1%	1%	19	6 1%	1%	18%	3%	21%	1%	
	± Khombed	za 51657	2570	5 397	78	475	14%	1%	1%	19	6 1%	1%	15%	3%	18%	1%	
	• Kuluunda	48150	2642	2 404	78	482	13%	1%	1%	19	6 1%	1%	15%	3%	18%	1%	
0	+ Maganga	49437	2439	5 466	84	550	17%	1%	1%	19	6 1%	1%	19%	3%	23%	1%	
1	* Msosa	47493	2388	436	69	505	16%	1%	1%	17	6 1%	1%	18%	3%	21%	1%	
2	Mwanza	50003	2081	43/	73	510	14%	1%	176	17	b 176	176	10%	576	19%	1%	
	Bomba	50045	2473	420	60	403	14%	1%	170	19	176	176	19%	376	21%	1%	
	Grand Total	522020	2564	430	763	5011	10%	1%	1%	15	196	1%	10%	3%	20%	1%	
	oranic rotar	322020	23543	46.70			1010		4.79			A/4	A	-	2070	1.00	_
7																	
2																	
4	V C	na Community	Data Ar	nalysis Tem	plate / N	lap (P)								(000)	100% 🕤	0	•

## Step 3

Change between "**Expanded**" "Collapsed" views

**Click** on the **buttons at the top** to show different views.



#### Step 4: Collapse to TA

Click the "Collapse to TA" button.

Summarized information for each TA will be shown.



#### Step 5: Expand each TA

Click "Expand TAs" button.

Detailed information of each village under each TA will be shown.



## F. Maps

#### Step 1

**Click** on the "**Map**" tab at the bottom of the sheet



#### Step 2

Always click on the "Update Map Option List" button first



#### Step 3

**Click** on the **button with the arrow pointing down** under "Select Mapping Option"

This will open a **drop-down menu**, where you can click on a map to see the data.

After **clicking** on **the menu** the map will update to show the information you clicked on.



Part II – 3 Malawi National WASH M&E Advanced Database Guide

# A. Reminders:

#### Always Enable Macros



## B. Inserting a new indicator

In this example we will be adding the indicator "**Non-Functional Water Source (Broken)**" This is from the definition:

Non-Functional: A water point is considered non-functional if it is not providing water at the time of a spot check. There are several possible reasons for non-functionality which should be used for standard reporting;

- i. Broken: The water point is not producing water but could be repaired or rehabilitated.
- **ii.** *Disconnected:* The water point has been disconnected due to other factors, but could be reconnected.

**iii.** *Vandalized:* The water point is not producing water because of vandalism or theft but could be repaired or rehabilitated.

**iv.** *Abandoned:* The water point is not producing water or is not being used due to water quality reasons and should not be repaired or rehabilitated.

## **B1. Adding the New Data**

1. Move to the right of the spreadsheet. All new indicators must be placed <u>on the right</u> <u>side of the table</u>. In this example we will be adding the indicator to column BB.



2. Type in "Non-Functional Water Source (Broken)" as the header.

Styn	es	Cells	2 B
AZ	BA	BB	BC
/erified )DF ++ Yes = Y, Io = N) ▼	Date Declared ODF ++	Non- Functional Water Source (Broken)	

3. Enter data and format the colour and borders of the column. Data here is not real and used only as an example.



## **B2. Adding New Data to the Pivot Table**

1. Select the Analysis Table



2. Right-click the Analysis Table then select Unprotect sheet

			Numb _of_H	er o To	Total otal Improve		Unsatisfacto	Basi (Peri Floo
Row Labels 🔄	Villages	Village_ Population	useh s		Insert	trines	ry Latrines Coverage	DHC
🗉 (blank)	1	1300	1		Delete	170	0%	
<b>TA Ndindi</b>	92	53085	113		Rename	9636	0%	
🗄 SC Kambwiri	178	34554	88		Move or Copy	6839	0%	
<b>TA Pemba</b>	117	28550	115	<b>P</b>	<u>V</u> iew Code	5854	0%	
SC Kambalame	25	9960	21	2	Unprotect Sheet	1995	0%	
<b>TA Kuluunda</b>	42	16031	29		Tab Color	POQ	0%	
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	Row Labels  (blank)  TA Ndindi  SC Kambwiri  TA Pemba SC Kambalame TA Kuluunda SC Msosa TA Khombedza SC Mwanza	Row Labels     Villages       ① (blank)     1       ⑦ TA Ndindi     92       ⑦ SC Kambwiri     178       ⑦ TA Pemba     117       ⑦ SC Kambalame     25       ⑦ TA Kuluunda     42       ⑧ SC Msosa     1.5       ⑧ TA Khombedza     4.       ⑨ SC Mwanza     242	Row Labels       Villages       Villages         ⊕ (blank)       1       1300         ⊕ TA Ndindi       92       53085         ⊕ SC Kambwiri       178       34554         ⊕ TA Pemba       117       28550         ⊕ SC Kambalame       25       9960         ⊕ TA Kuluunda       42       16031         ⊕ SC Msosa       1.5       20042         ⊕ TA Khombedza       4.       59769         ⊕ SC Mwanza       242       124	Row Labels       Villages       Villages       useh         @ (blank)       1       1300       1         @ (blank)       1       1300       1         @ TA Ndindi       92       53085       11         @ SC Kambwiri       178       34554       88         @ TA Pemba       117       28550       11         @ SC Kambalame       25       9960       21         @ TA Kuluunda       42       16031       26         @ SC Msosa       1.5       20042       45         @ TA Khombedza       4.       9769       13         @ SC Mwanza       242       124       61	Number       Number         Row Labels       Villages       vellage_       useh         Population       s       s         1       1300       1         TA Ndindi       92       53085       11         SC Kambwiri       178       34554       8         TA Pemba       117       28550       11         SC Kambalame       25       9960       21         TA Kuluunda       42       16031       26         SC Msosa       1,5       20042       45         TA Khombedza       4       9769       135         SC Mwanza       242       124       61	Number       Total         normalization       of_Ho       Total         Row Labels       Villages       useh       Insert         Utilages       Population       s       Insert         (blank)       1       1300       1       Delete         TA Ndindi       92       53085       11:       Rename         SC Kambwiri       178       34554       88       Move or Copy         TA Pemba       117       28550       11:       Uprotect Sheet         TA Kuluunda       42       16031       22       Tab Color         SC Msosa       1       20042       4:       Tab Color         Hide       42       16031       24       Hide         SC Mwanza       242       124       61       Select All Sheets	Number       Total         nof_Ho       Total         Row Labels       Villages       useh         Improve       useh         Population       s         Improve       Insert         Improve       Improve         Improve       Improve         Villages       Population         Improve       Improve         Improve       Improve	Number       Total       Total       Unsatisfactory         Row Labels       Villages       vesh       Insert       useh       Insert         B (blank)       1       1300       1       Delete       170       0%         TA Ndindi       92       53085       11       Rename       9636       0%         SC Kambwiri       1778       34554       88       Move or Copy       6839       0%         TA Pemba       117       28550       11       Improve       1995       0%         SC Kambalame       25       9960       21       Ungrotect Sheet       1995       0%         SC Msosa       1.5       20042       45       Hide       3.       0%         SC Mwanza       242       124       61       Selet All Sheets       5343       34

3. Now the **Pivot Table fields pane** should appear on the right side.



4. Click Options, Change Source Data, Change Data Source.

mm	unity Mi	E Data B1	-2013.xls	m - N	licrosoft	Excel		PivotT	able To	ools	
nula	s D	ata	Review	Vie	ew [	Develop	er	Opti	ions	Design	
o Se oup o Fie	lection	A Z↓ A Z↓ So	Z A ort Re	efresh	Change Sourc	J Data e ▼	Clea	r Sel	ect Pit	Move votTable	PivotChart Fo
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þ	E	F	G		н		1		Pivot	Table Fiel	d List
		Collap	ise to TA	4		Ex	pand	TA:	Choo	se fields to	add to report:
iber Ho old	Total Basic Latrines 170	Total Improve d Latrines 0	Total Lat	trines 170	Unsatisf ry Latrin Coverage	Bi (P acto Fl es D 2 cc 0%	asic Lat ermea oor, no HC) vverage	tring ble e 89		erified OI erified OI ate of Dat ame of HS SA Phone I ame of V Ilage Code VH VH Code	DF average DF++ average a Collection A Number illage

 Make sure that the range selects all data in your community data sheet and includes the indicator you just added. In our example our new column is BB.
 You can select all columns with the mouse or change the equation below:

'Salima Community Data'!\$A:\$BB

0	) 🗄 🚽 · (* ·		Test - Sa	lima Cor	nmunity ME Data B1-20	)13.xlsm - Mic	rosoft Excel	-		_	D X
	Home In	isert Page Layout Fo	rmulas Data	Review	View Develope	r				0	_ = ×
Pa	ste B Z	$\begin{array}{c} \bullet 11 & \bullet \\ \hline \mathbf{A}^{\bullet} \mathbf{A}^{\bullet} \end{array}$ $\underline{\mathbf{U}} \bullet \left[ \boxed{\mathbf{A}^{\bullet} \mathbf{A}^{\bullet}} \right]$ Foot	(≡ = =)⊗··) (≡ ≡ ≡)(if if Alignment		Percentage	Condition Formattin	nal Format Cell ng + as Table + Styles - Styles	insert * insert * Delete * Format *	Σ · A Z · Z 2 · Filte Fd	T A Find & er * Select *	
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	E .	F	G		н	AZ	BA	BB	BC	BD	BE
1	Date of Data Collection	Name of HSA	HSA Phone Number	N	ame of Village	Verified ODF ++ (Yes = Y, No = N)	Date Declared ODF ++	Non- Functional Water Source (Broken)			
2	30/04/2013	F Chisepo		Phaka	<			2			
3	30/04/2013	F Chisepo		Mkwe	Move PivotTable			8 × 1			
4	30/04/2013	F C Lungu		Magu	Choose the data that yo	u want to analy	7ê	3			
5	30/04/2013	F C Lungu		Ching	Select a table or ra	nce		2			
6	30/04/2013	F C Lungu		chiler	Table/Rance:	Salima Comm	nity Data'IdE+dBR	1			
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8	30/04/2013	J W K Nkhata		Chiny	Doose Conn	ection		2			
9	30/04/2013			Njuzi	Connection nor	200		3			
10	30/04/2013	J W K Nkhata		Chad	connection ha	ile.		1	-		
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12	30/04/2013	G Jere		Nthiv		-		3			
13	30/04/2013	G Jere		Tamba	la			3			
14	30/04/2013	Gjere		YUNUSU				2			
14 4	Salima C	ommunity Data Analysis	Template / Map	eg and	a	•		3		14	
Poir	nt 🛅								100%	)	<b>.</b>

6. Now the new indicator should be available in the **Pivot Table field list.** 

	В	С	D	E	F	G	Н	1	PivotTable Field List
					Collap	se to TA		Expand TA	Choose fields to add to report:
s 🔽 di pwiri pa aalame unda a hbedza nza	Values Villages 9 12 13 14 24 24 munity D	Village_ Population 1 1300 2 53085 8 34554 NOT 5 20043 6 59765 2 27424	Number _of_Ho usehold 5 11388 8831 <b>1-FU</b> 13340 6131 breis Tai	Total Basic Latrines 170 6477 nctic 2011 10448 4008	Total Improve d Latrines 0 1466 362 0 0 0 0 0 1465 362 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1465 362 0 0 0 1465 362 0 0 1465 362 0 0 0 1465 362 0 0 0 1465 362 0 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 1465 362 0 0 0 1465 362 0 0 0 1465 362 0 0 0 1465 362 0 0 0 0 0 0 1465 362 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total Latrines 170 9636 6839 Water 10867 5343	Unsatisfacto ry Latrines Coverage 0% 0% r Sour	Basic Latrin (Permeable Floor, no DHC) rotterage 85 365 365 CCC 465 335	Date of Follow-up 3 Date of Follow-up 4 Awaiting Verification? (Yes = Verified ODF (Yes = Y, No = N) Date Declared ODF Verified ODF ++ (Yes = Y, No Date Declared ODF ++ Non-Functional Water Source Bate Declared ODF ++ Non-Functional Water Source Subter Non-Functional Water Source Subter Non-Functiona

7. Scroll down in the list showing Values. Notice how the order matches the order of the pivot table.

Triggered Awa in CLTS Verif	iting Ve fication O	erified DF	Verified ODF++		HSA Phone Number		Column Labels Σ Values
0%	0%	0% 1%	0%		GVH Code		
26%	0%	12%	0%		TA Code		TA TA
21% 100%	10% 0%	4% 8%	1% 0%		Village Population		Name of Village
88% 8%	0% 0%	26% 1%	0% 0%		Number of Households Unsatisfactory Latrines Basic Latrines (Permeable)	~	Σ Values Triggered in CLTS ▼
12% 40%	0% 0%	2% 7%	0% 0%		Basic Latrines (Permeabl Basic Latrines (Imperme	A	Awaiting Verification       Verified ODF       Verified ODF++
40%	0%	10%	0%	v	Composting Latrines (Ec		Defer L Update

8. Drag the Non-Functional Water Source field into the bottom of the values field.



9. The field will show up at the end of the table and set to "**Count**" the values entered in that field.



10. We want to change this to add the number of Broken water sources. So we will click the "down-arrow" beside the field on the right. Then click Value Field Settings.



11. Change the field from **count** to **sum**.

ource Name:	Non-Functional Water	r Source (Broken)	
Justom Name:	Sum of Non-Function	nal Water Source (Broken)	
Summarize by	Show values as		
Summarize	value field by		
Choose the ty the data from	pe of calculation that selected field	you want to use to summarize	
		=	
Count Average Max Min			

12. You will now see the table adding the total broken water sources in the table



13. You can modify the title and formatting to improve appearance.

	Verified	Verified	Non- Functional Water Sources (Broken)	
4	0%	0%	(broken)	-
6	1%	0%	125	-
6	12%	0%	28	
6	4%	1%	45	-
6	8%	0%	47	_
6	26%	0%	91	-
6	1%	0%	57	-
6	2%	0%	6	
6	7%	0%		_
6	10%	0%		
6	7%	0%		
6	6%	0%	399	

# C. Adding Formulas to the Pivot Table

This will allow you to have the Analysis Table perform calculations like this image below:



We will calculate this **NF WSource (Broken) Rate** by the following Equation:

= 'Non-Functional Water Sources (Broken)'/( 'Total Borehole'+ 'Total Tap'+ 'Total SW'+ 'Total PS')

\*Note that the data used in this example will be fake and thus, not reflective of reality.

In this example we will be using the indicator "**Non-Functional Water Source (Broken)**" This is from the definition:

Non-Functional: A water point is considered non-functional if it is not providing water at the time of a spot check. There are several possible reasons for non-functionality which should be used for standard reporting;

i. Broken: The water point is not producing water but could be repaired or rehabilitated.

**ii.** *Disconnected:* The water point has been disconnected due to other factors, but could be reconnected.

**iii.** *Vandalized:* The water point is not producing water because of vandalism or theft but could be repaired or rehabilitated.

**iv.** *Abandoned:* The water point is not producing water or is not being used due to water quality reasons and should not be repaired or rehabilitated.

The Data should already be entered like the following and the field should be available in the **pivot** table.

ed 🔽	Non- Functional Water Sources (Broken) 0		PivotTable Field List Choose fields to add to report:	
	1		Date Declared ODF ++	Г
	0	<u></u>	Non-Functional Water Sources (Broken)	
	0		Basic Lat	
# C1. Adding the formula to the Pivot Table (Analysis Template)

1. Right click the "Analysis Template" Tab and select unprotect sheet.



2. Click anywhere on the pivot table so the field list will appear on the right side of the screen.

С	AD	AE	AF	PivotTable Field List		
				Choose fields to add to report:		
0% 1% 2% 4%	Verified 00F++ 0% 0% 1%			Date of Follow-up 2 Date of Follow-up 3 Date of Follow-up 4 Awaiting Verification? (Yes = Y, No = N) Verified ODF (Yes = Y, No = N) Date Dedared ODF Verified ODF ++ (Yes = Y, No = N) Date Dedared ODF ++ Non-Functional Water Sources (Broken) Ø Basic Lat Ø BL (PF, no DHC) coverage Ø BL (PF, no DHC) coverage Ø BL (PF, no DHC) coverage	*	✓ Report Filter     ✓
8%	0%			Total BL coverage		Row Labels
5%	0%		_	▼ Total IL		TA
1%	0%			🗸 Total Lat		GVH
2%	0%			IL (IF,with DHC) coverage		Name of Village
7%	0%			EcoSan coverage	-	

3. Click anywhere on the table, then go to Options Tab, Formulas, Calculated Field.

ixcel	PivotTable To	ols	-	-	-	Sector of the	-		
Developer	Options	Design							
rt Refresh o	Change Data Source ▼ Data	Clear Se	lect Move PivotTab ctions	Pivo	Formu	Jias OLAP	Field List	+/- Buttons	Field Headers
						Calculated It	em [	Incert Cal	culated Field
Y	Z	АА	AB 4	AC AD	12	Solve Order.	 s eius to au	u to repor	t:
Water Point					-	Date o Date o Date o Awaiti	of Follow- of Follow- of Follow- ng Verifici	лр2 л лр3 лр4 ati	V Report
Functionality Rate (w/						Verifie	d ODF (Y	es	
Clean Surroundings	Water Point Functionalit		vaiting Ver	if Verified		Verifie	d ODF +-	+ (	Column
I)) ? #NAME?	y Rate	in CLTS Ve	nification OD	0% 0%	_	Non-F	unctional	w	Σ Values
? #NAME?	#NAME?	45%	0%	1% 0%		✓ Basic     ✓ BL (P	Lat F, no DH	c)	
? #NAME?	#NAME?	26%	0%	12% 0%		BL (P	F, with D	HC	

4. Name the field **NF WSource (Broken)** and build the formula. You will first insert the "**Non-Functional Water Sources (Broken)**" Field.

The full equation should read:

= 'Non-Functional Water Sources (Broken)'/( 'Tot BH'+ 'Tot Comm Tap'+ 'Tot SW'+ 'Tot PS')

Insert Calo	culated Field	-		? ×
Name:	NF WSource (Broken)	★ Add		
Formula:	= 'Non-Functional Water Sources (Broken)'	Delete		
Fields:				-
Date Dec Verified C	dared ODF DDF ++ (Yes = Y, No = N)	-		1
Date Dec	dared ODF ++ ctional Water Sources (Broken)			
BL (PF, n	o DHC) coverage			
BL (IF, no	o DHC) coverage	Travel Cald		
1		Insert Held	C	
			OK	Close

5. Since you will be dividing by a sum of a few fields now enter a "/" and an open bracket "("

dame:	NF WSource (Broken)	Add
or <u>m</u> ula:	='Non-Functional Water Sources (Bro	ken)' / (   Delete
ields: Triggered Awaiting Verified C Verified C Date of D Name of I	l in CLTS average Verification average DF average DF ++ average Data Collection HSA	n)'/(
	ne Number	

6. You can now add the first field as 'Total Boreholes', and at a plus sign "+" before adding the next field.

The full equation should read:

= 'Non-Functional Water Sources (Broken)'/ ('Total Borehole'+ 'Total Tap'+ 'Total SW'+ 'Total PS')

Name:     NF WSource (Broken)     Add       Formula:     nal Water Sources (Broken)' / ('Tot BH' +)     Delete	
Formula: nal Water Sources (Broken)' / ('Tot BH' +	
Fields:	
TL coverage Total HW facilities HW without soap coverage HW with soap Total HW coverage Waste Coverage F BH Tot BH Insert Field	
	OK Close

7. After adding the 'Total Tap'+ 'Total SW'+ 'Total PS' fields, you can **close the bracket**.

lame:	NF WSource (Broken)	Modify
or <u>m</u> ula:	3H' + 'Tot Comm Tap' + 'Tot SW' + 'To	t PS') Delete
ields:		
Friggered Awaiting Verified C Verified C	l in CLTS average Verification average DF average DF++ average	+ 'Tot PS')
Date of D	Data Collection HSA	
HSA Phor Name of	ne Number Village	
		The second secon

8. Now select **add**. After adding, you can press the **OK** Button.

insert Cald	ulated Field		8 X
Name:	NF WSource (Broken)	Add	
For <u>m</u> ula:	BH'+ 'Tot Comm Tap'+ 'Tot SW'+ 'Tot PS')	Delete	
Fields:	/	1	
Tot Comm F SW Tot SW F PS	п Тар		
Tot PS Water Co Water Co Total WP	verage (w/ Clean) verage (Func)	•	
		Insert Fi <u>e</u> ld	
		OK	Close

9. Now the field should appear in the pivot table Field list

PivotTable Field List Choose fields to add to report:		▼ ×
Tot BH F Comm Tap Tot Comm Tap	*	√ Report Filter
F SW Tot SW F PS		Column Labels           ∑ Values
Water Coverage (w/ Clean)		Row Labels
Total F, Clean WP Functional Rate Unsatisfactory Latrine Coverage		∑ Values Vilages ▼ ▲
Euroc with clean rate	* III	Village_Population
		100% 😑 – 🔍 🕂 ,;;

10. Drag the field to the bottom of the "Values" box. It will automatically display it as a sum.

m - Microsoft Excel PivotTable Tools				
w View Developer Options Des	sign	@ - = x		
tion 2↓ 2.7 1 Sort Change Data Sort Data	ear Select Move PivotChart Formulas OLAP Actions Tools	Field +/- Field List Buttons Headers Show/Hide		
		*		
AE	AI PivotTable Field List	▼ ×		
	Choose fields to add to report:	Report Filter		
Sum of NF WSource (Broken) 6 0 6 0.017123288 7 0.028037383 9 0.019900498	WW with soap Total HW coverage Waste Coverage F BH Tot BH Comm Tap F SW	Column Labels Σ Values		
% 0.008	Tot SW	Row Labels		
% 0.048951049	F PS	TA		
% 0.113043478	Water Coverage (w) Clean)	GVH Name of Village		
<mark>%</mark> 0.1	Water Coverage (Func)			
<mark>% 0.019198664</mark>	Total WP	Σ Values		
<mark>% 0.028213166</mark>	Total F, Clean WP	Verified ODF		
<mark>%</mark> 0	VI Unsatisfactory Latrine Coverage	Verified ODF++		
<b>%</b> 0	▼ Func with clean rate	Sum of NF WSource (Broken) 🔹 👻		
% 0.032500855	NF WSource (Broken)	Defer Layout Update Update		
		■■ ■ 100%		

 For this field we would like to display it as an average instead of sum. Click the "Sum of NF WSource (Broken)" field in the bottom of the Values box and click value field settings.

	Move <u>U</u> p	
	Move <u>D</u> own	
	Move to Beginning	
	Move to End	2
Y	Move to Report Filter	-
	Move to Row Labels	
	Move to Column Labels	-
Σ	Move to Values	
×	Remove Field	
0	Value Field Settings	Ŧ
Sum	of NF WSource (Broken)	ζ.,

12. In the **value field settings**, select **Average** under Summarize value field and change the name to "**NF WSource (Broken) Rate**"

urce Name: NF WSource (Broken)	
Summarize by Show values as Summarize value field by	
Choose the type of calculation that you want to use to summarize the data from selected field	
Count Average Max	
Product	

13. You will see the table updated to show the average.

Verifies ODF++ 0% 0%	ource (Broken) Rate 0 0.017123288 0.028037383	HW with soap Total HW coverage Waste Coverage FBH Tot BH F Comm Tap	Column Labels Σ Values
1% 0% 0% 0% 0%	0.019900498 0 0.008 0.048951049 0.113043478	Tot Comm Tap F SW Tot SW F PS Tot PS Water Coverage (w/ Clean)	Row Labels TA  GVH Name of Village
0% 0% 0% 0% 0%	0.1 0.019198664 0.028213166 0 0 0.032500855	V Water Coverage (Func) Total WP Total F, Clean WP Functional Rate V Insatisfactory Latrine Cov Func with clean rate NF WSource (Broken)	∑     Values       Awarang verincation     ▼       Verified ODF     ▼       Verified ODF++     ▼       NF WSource (Broken) Rate     ▼       Defer Layout Up     Update

# **C2. Formatting the Pivot Table**

1. To display these as percents and not decimals, highlight all the data and select **Percent Style** under the **Home tab**.

		- (P - ) ⇒		Salima Comi	munity M	E Data B	1-2013.xlsm - Microsoft Excel	PivotTable Tools
C	Home	Insert	Page Lay	/out For	mulas	Data	Review View Develop	er Options Design
Pa	iste	BIL-	+ 11 ·		E E	≫ ] ] [] [] [] [] [] [] [] [] [] [] [] []	Wrap Text Ger	heral % , tot sot sot sot sot sot sot sot sot sot
	AE5		0	fx 0				Percent Style (Ctrl+Shift+%)
4	Y	Z	AA	AB	AC	AD	AE	Display the value of the cell as a
ł	Water Point Functionality Rate (w/ Clean Surroundings ) #NAME?	Water Point Functionalit y Rate #NAME?	Triggered in CLTS 0%	Awaiting Verification	Verified ODF 0%	lerified	NF WSource (Broken) Rate	
5	#NAME?	#NAME?	45%	0%	1%	0%	0.017123288	
7	#NAME?	#NAME?	26%	0%	12%	0%	0.028037383	
3	#NAME?	#NAME?	21%	10%	4%	1%	0.019900498	
)	#NAME?	#NAME?	100%	0%	8%	0%	0	
0	#NAME?	#NAME?	88%	0%	26%	0%	0.008	
1	#NAME?	#NAME?	8%	0%	1%	0%	0.048951049	
2	#NAME?	#NAME?	12%	0%	2%	0%	0.113043478	
3	#NAME?	#NAME?	40%	0%	7%	0%	0.1	
4	#NAME?	#NAME?	40%	0%	10%	0%	0.019198664	
5	#NAME?	#NAME?	33%	6%	7%	0%	0.028213166	
6	#NAME?	#NAME?	20%	20%	0%	0%	0	
7	#NAME?	#NAME?	20%	20%	0%	0%	0	
8	#NAME?	#NAME?	30%	1%	6%	0%	0.032500855	

2. The data is now displayed as a percent.

ied •• NF WSourc	e (Broken) Rate
0%	0%
<mark>0%</mark>	2%
0%	3%
<mark>1%</mark>	2%
0%	0%
<mark>0%</mark>	1%
0%	5%
<mark>0%</mark>	11%
0%	10%
-04	-0/

3. Finally to change colours, Select the column, then under the home tab, select fill.

0		~ ( <b>~ •</b> ) :	Þ	Sali	ma Community M	1E Data B1-2013	3.xlsn
C	Home	Insert	Page	Layout	Formulas	Data Re	view
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		Callon		1	<b>A A</b> =		
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4	00/		00/		<u>N</u> o Fill	ate	-
5	0%	0%	10%	3	More Colors	0	-
7	4570	0%	12%	0%		0.029027292	-
2	2070	10%	12/0	1%		0.020037383	-
9	100%	0%	8%	0%		0.015500450	-
10	88%	0%	26%	0%		0.008	
11	8%	0%	1%	0%		0.048951049	
12	12%	0%	2%	0%		0.113043478	
13	40%	0%	7%	0%		0.1	
14	40%	0%	10%	0%		0.019198664	
15	33%	6%	7%	0%		0.028213166	
16	20%	20%	0%	0%		0	
17	20%	20%	0%	0%	a	0	
18	30%	1%	6%	0%		0.032500855	

Your column should look similar to the following.

### D. Adding a TA to the Map

In this example we will be splitting TA Maganga into two parts. TA Maganga will remain south; TA Maganga2 will be the north.

### **D1. Reminders:**

### Always Enable Macros



To edit the map you will need to unlock the map sheet, by right-clicking the tab that says map and selecting **unprotect sheet**.



### D2. Setting up the TA Maganga2 Data

1. Click any cell in the TA column. Go to the **Data Tab**, then Click **Data Validation** then again click **Data Validation**.

0		(u · ) ÷					S	alima Community	ME Data I	81-2013.xlsm - Mic	crosoft Exc	el
6	Home	Insert Page Layou	rt Formulas	Data Review	View	Developer						
Fr	From From From Other Existing Connections All*			Connections ⊉↓ Propertie sa Edit Links	AZA Sort	Filter	ced Co	AT TO- Jumns Despirates	Data falidation	colidate Wh	hat-If G	Sroup Ur
-	G	et External Data		Connections	So	rt & Filter			Data	Validation		
	L1501	• () fi	TA Maganga	í .					Circl	e Invalid Data		
	E	F	G	н		J	К	L	Clea	validation Circles	0	P
1	Date of Data Collection	Name of HSA	HSA Phone Number	Name of Village	Village Code	GVH	GVH Code	TA	TA Code	Health Center	Health Center Code	Villa Popula
1494	30/04/2013	M.Gulumba	999744237	Linyama	4	Maganga	8	TA Maganga	6	Maganga	1408	
1495	30/04/2013	C.Kaponda	999480069	Mnamba	2	m'manga	4	TA Pemba	10	Maganga	1408	
1496	30/04/2013	C.Kaponda	999480069	Mmanga	3	m'manga	4	TA Pemba	10	Maganga	1408	
1497	30/04/2013	497 30/04/2013 C.Kaponda			4 M'MANGA				10 Maganga			
<ul> <li>A set of the set of</li></ul>	498 30/04/2013 C.Kaponda		333490003	Mgwale	4	M'MANGA	4	TA Pemba	10	Maganga	1408	
1498	30/04/2013	C.Kaponda	999480069	Mgwale Zombe	4	M'MANGA M'MANGA	4	TA Pemba TA Pemba	10	Maganga Maganga	1408 1408	
1498	30/04/2013 30/04/2013	C.Kaponda C.Kaponda	999480069 999480069 999480069	Mgwale Zombe Kachepa	4 5 6	M'MANGA M'MANGA M'MANGA	4	TA Pemba TA Pemba TA Pemba	10 10 10	Maganga Maganga Maganga	1408 1408 1408	
1498 1499 1500	30/04/2013 30/04/2013 30/04/2013	C.Kaponda C.Kaponda C.Kaponda	999480069 999480069 999480069 999480069	Mgwale Zombe Kachepa Mawelu	4 5 6 7	M'MANGA M'MANGA M'MANGA Juma	4 4 4 14	TA Pemba TA Pemba TA Pemba TA Maganga	10 10 10 6	Maganga Maganga Maganga Maganga	1408 1408 1408 1408	
1498 1499 1500 1501	30/04/2013 30/04/2013 30/04/2013 30/04/2013 30/04/2013	C.Kaponda C.Kaponda C.Kaponda G. Kalimmawa G. Kalimmawa	999480089 999480069 999480069 999480069 9991210334 991210334	Mgwaie Zombe Kachepa Mawelu Mbulu Chilombo	4 5 6 7 1	M'MANGA M'MANGA M'MANGA Juma Mmbulu	4 4 14 6 6	TA Pemba TA Pemba TA Pemba TA Maganga TA Maganga	10 10 10 6	Maganga Maganga Maganga Maganga Maganga Maganga	1408 1408 1408 1408 1408 1408	
1498 1499 1500 1501 1502	30/04/2013 30/04/2013 30/04/2013 30/04/2013 30/04/2013 30/04/2013	C.Kaponda C.Kaponda C.Kaponda G. Kalimmawa G. Kalimmawa G. Kalimmawa	999480089 999480069 999480069 999480069 999480069 991210334 991210334	Mgwale Zombe Kachepa Mawelu Mbulu Chilombo Tembwe	4 5 6 7 1 2 3	M'MANGA M'MANGA Juma Mmbulu Mmbulu Mmbulu	4 4 14 6 6 6	TA Pemba TA Pemba TA Pemba TA Maganga TA Maganga TA Maganga TA Maganga	10 10 10 6 6 6 6	Maganga Maganga Maganga Maganga Maganga Maganga Maganga	1408 1408 1408 1408 1408 1408 1408	
1498 1499 1500 1501 1502 1503 1504	30/04/2013 30/04/2013 30/04/2013 30/04/2013 30/04/2013 30/04/2013 30/04/2013	C.Kaponda C.Kaponda C.Kaponda G. Kalimmawa G. Kalimmawa G. Kalimmawa G. Kalimmawa	999480089 999480069 999480069 999480069 9991210334 991210334 991210334	Mgwale Zombe Kachepa Mawelu Mbulu Chilombo Tembwe Chibwato	4 5 6 7 1 2 3 4	M'MANGA M'MANGA Juma Mmbulu Mmbulu Mmbulu Mmbulu	4 4 14 6 6 6 6 6 6	TA Pemba TA Pemba TA Pemba TA Maganga TA Maganga TA Maganga TA Maganga TA Maganga	10 10 6 • 6 6 6 6 6 6	Maganga Maganga Maganga Maganga Maganga Maganga Maganga Maganga	1408 1408 1408 1408 1408 1408 1408 1408	

2. Under Source, Type in **TA Maganga2**. Now change the villages that belong to TA Maganga2 to TA Maganga2.

crungs	Input Message	Error Alert	
alidation	criteria		
Allow:			
List		✓ Ignore blank	
Data:		In-cell dropdown	
betwee	n	*	
Source:			
TA Mag	angab, TA Magan	ga, TA Karonga, TA Pi 🔣	
		all attain calls with the same cottings	
Apply	tingen dispersed to a		

You can now add data under TA Maganga2, or switch villages to the new TA.

3. Check the Analysis Template to see if TA Maganga2 appears.



# D3. Setting up the Map



\*Before setting up the map be sure to unprotect the map sheet (see above)

1. For this example, move the TA Maganga Text Box so we can create the split.



2. Go to Insert, Shapes, Freeform Shape

C	(" - ) ₹	Salim	Salima Community ME Data B1-2013.xlsm - Microsoft Excel								Drawing Tools			
Home	Insert	Page Layout	Formulas	Data	Review	Vie	w	Develop	er	Format				
		P			٠	-		••.	0		Α			
PivotTable Table	Picture	Clip Shapes	SmartArt Col	umn Line	Pie	Bar	Area	Scatter	Other Charts *	Hyperlink	Text Box	Header W & Footer		
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		Rectar	Rectangles							-		U		
14		Basic S	Shapes $\land \land \land$	000	7 1 1	5								
<b>4</b> '	ar				) 0 6	)								

- 3. With your mouse draw in the new TA by clicking along the shape that you want. With each click, a new point will be added. A few tips for drawing shapes:
  - a. You don't need to make the shape perfect the first time, the points can be adjusted later (see below).
  - b. Zoom in to the area where you are drawing the shape (click the + on the Zoom toolbar on the bottom right corner) to get a better view.



4. Reduce the line weight by selecting the shape, go to **Format**, **Shape Outline**, **Weight**, then ¼ **pt**. Also select **Automatic** as the line colour



5. This is the result



6. To remove the blue colour, select the shape. Goto **Format**, **Shape Fill**, and select **Automatic** 



 \*Optional: You can make adjustments to the shape by selecting the shape, going to Format, then edit shape, edit points.



8. \*Optional: You will be able to click and move different points of the shape around to adjust.



9. \*Important: Be sure to change the shape name to exactly match the TA we are creating. Select the shape and click into the **name box** at the **top left corner**.



10. In this case rename the shape to TA Maganga2 (Be sure to press enter after typing)



11. Move the original TA Maganga label and copy it



12. Paste the text box and type in the new TA's Name in it



13. Now you will have to update map option list to test if it is working



14. Here we selected Basic Latrine and it changed the TAs colour based on the example data.



# E. Annex A: Solutions to Common Challenges

### 1. Enable Macros

All of the analysis and mapping functions rely on macros and they need to be turned on. You may see an error like this:

		X
Microsoft Office Excel		
Because of your security settings, macros have	been disabled. To run macros, you need to reopen this workbook, and	then choose to enable macros. For more
information about enabling macros, click Help.		
	OK Help	
TA Mduwa	1 0	

Note that by default, Excel will disable macros and the functions within the database will not work unless the macros are enabled.

If you have accidentally disabled macros, close the Excel workbook. Open it again and enable macros via the Security Warning Options (see below).

When you open the Excel workbook, a Security Warning will appear. Beside that Security Warning, click on the Options... box. A dialogue box will appear. To enable macros, select "Enable the content" then click OK.



### 2. Capitalization, Punctuation and Spacing When Entering Data

When entering data, make sure capitalization, spacing and punctuation is ALWAYS the same for names so that the data will be grouped together properly. For example, if you are entering the GVH name M'buka into the database, it needs to be entered exactly as **M'buka**. Examples of entries that will NOT be valid:

Exam	ples:		
<ul> <li>Image: A start of the start of</li></ul>	M'buka		
×	M buka		
×	Mbuka		
×	M'Buka		
×	M' Buka		

If you notice that your data has been split (e.g. there is GVH M'buka and Mbuka), go back into your Village Data tab and change all of the entries Mbuka to M'buka.

It is also easy to confuse **zero** with **O**. Check your data if you are having problems to ensure that data is correctly entered as **"O"** or **"O"**.

#### 3. Unprotect a Worksheet

When trying to edit a worksheet, you may receive a message like this:

1	$\langle \rangle$	
	Microsoft	t Office Excel
		The cell or chart that you are trying to change is protected and therefore read-only. To modify a protected cell or chart, first remove protection using the Unprotect Sheet command (Review tab, Changes group). You may be prompted for a password.
		OK
1		Export to Google Earth

To unprotect the worksheet so it can be edited, right-click the worksheet tab and select unprotect sheet.



#### 4. Unhide Worksheet

Certain worksheets for reference are hidden in the database. If you need to access one of these worksheets to, for example, change colours on the map, you can unhide worksheets as follows:

- 1. Right click on one of the worksheets
- 2. Select "Unhide"
- 3. Select the worksheet that to you want to be shown, then click OK.

ga TA Maga	nga		
owiri TA Pen	Insert Delete Rename Move or Copy View Code Unprotect Sheet	Unhide Unhide Seet: Salima Coordinates Options and Tools Setup Linkages IGNORE - Name Storage	×
dindi SC Kaml Plate Reference Map	Tab Color → Hide Unhide Select All Swents	OK Cancel	•

### 5. Sorting by Columns Only

When sorting data **all columns** in the table need to be selected. Otherwise, excel will only sort the column you select and the data in rows will no longer match correctly.

✓ **Correct:** Whole table is selected for sorting. Note the column labels at the top turn blue when they are selected.

	E	F	G	Н		J	K	L	M	N	0	P	Q
	Date of Data Collection	Name of HSA	HSA Phone Number	Name of Village	Village Code	GVH	GVH Code	TA	TA Code	Health Center	Health Center Code	Village Population	Number of Households
1	-	· · · · ·	-		-	-	-	-	-	-	-	-	-
2	30/04/2013	F Chisepo		Phaka	1	Phaka	9	TANdindi	9	Mchoka	1410	286	69
3	30/04/2013	F Chisepo		Mkwenembela	2	Phaka	9	TA Ndindi	9	Mchoka	1410	529	118
4	30/04/2013	FCLungu		Magumbwa	1	Magumbwa	3	TANdindi	9	Mchoka	1410	847	190
5	30/04/2013	FCLungu		Chingo	2	Magumbwa	3	TA Ndindi	9	Mchoka	1410	436	92
6	30/04/2013	FCLungu		chilembwe	3	Ndindi	4	TANdindi	9	Mchoka	1410	370	84
7	30/04/2013	JWKN khata		Mphunga	1	Mphunga	6	TANdindi	9	Mchoka	1410	1335	250
8	30/04/2013	J W K Nkhata		Chinyama	2	Mphunga	6	TANdindi	9	Mchoka	1410	814	183
9	30/04/2013			Njuzi	1	Mphunga	6	TA Ndindi	9	Mchoka	1410	436	81
10	30/04/2013	JWKN khata		Chadza	3	Mphunga	6	TA Ndindi	9	Mchoka	1410	307	75
11	30/04/2013	G Jere		Ndindi B	1	Ndindi	4	TANdindi	9	Mchoka	1410	372	90
12	30/04/2013	G Jere		Nthiw atiw a	2	Ndindi	4	TANdindi	9	Mchoka	1410	299	58
13	30/04/2013	G Jere		Tambala	3	Ndindi	4	TANdindi	9	Mchoka	1410	176	46
14	30/04/2013	G Jere		Yunusu	4	Ndindi	4	TANdindi	9	Mchoka	1410	37	12
15	30/04/2013	G Jere		Mponda	5	Magumbwa	3	TANdindi	9	Mchoka	1410	627	131
16	30/04/2013	M Chigudu		Ngwire	1	Kandulu	5	TANdindi	9	Mchoka	1410	861	231
17	30/04/2013	M Chigudu		Kalino	2	Kandulu	5	TANdindi	9	Mchoka	1410	398	90
18	30/04/2013	M Chigudu		Kalele	3	Kandulu	5	TANdindi	9	Mchoka	1410	210	44
19	30/04/2013	L Katsichi		Mzembela	1	Mzembela	1	SCKambwiri	3	Mchoka	1410	510	122
20	30/04/2013	L Katsichi		Senjele	2	Mzembela	1	SCKambwiri	3	Mchoka	1410	183	74
21	30/04/2013	L Katsichi		Mphere	3	Mzembela	1	SCKambwiri	3	Mchoka	1410	272	93
22	30/04/2013	1 Mwayiwanji		Mpundu	1	Kandulu	5	TA Ndindi	9	Mchoka	1410	870	201
23	30/04/2013	1 Mwayiwanji		Kandulu	2	Kandulu	5	TA Ndindi	9	Mchoka	1410	848	163
24	30/04/2013	1 Mwayiwanji		Mapiko	3	Kandulu	5	TANdindi	9	Mchoka	1410	503	113
H	<+>→ > Salir	na Community Da	ta Analysis	Template / Referen	ce / M	ap / 🞾			_				

 $\times$  Incorrect: Single column within table selected for sorting. Only column E (Date of Data Collection) is selected.

1000	E	F	G	Н		J	K	L	M	N	0	P	Q
	Date of Data Collection	Name of HSA	HSA Phone Number	Name of Village	Village Code	GVH	GVH Code	ТА	TA Code	Health Center	Health Center Code	Village Population	Number of Households
1	30/04/2013	EChicopo		Dhalea		Phaka	9	T0 Ndiedi	9	Mahaka	1410	286	69
- 2	30/04/2013	E Chicopo		Mkwanambala	2	Dhaka	9	TANdindi	9	Mohoka	1410	529	118
4	30/04/2013	ECLupgu		Magumbula		Magumbua	3	Tõ Ndiodi	9	Mohoka	1410	847	190
5	30/04/2013	ECLungu		Chipao	2	Magumbula	3	Tê Ndindi	9	Mohoka	1410	436	92
6	30/04/2013	ECLungu		chilembue	3	Ndiodi	4	TA Ndindi	9	Mohoka	1410	370	84
7	30/04/2013	I W K Mkhata		Mohunga	1	Mohunga	6	TA Ndindi	9	Mohoka	1410	1335	250
8	30/04/2013	JWK Nkhata		Chinuama	2	Mohunga	6	TA Ndiodi	9	Mohoka	1410	814	183
9	30/04/2013	o w renkriata		Niuzi		Mohunga	6	TANdindi	9	Mohoka	1410	436	81
10	30/04/2013	JWK Nkhata		Chadza	3	Mohunga	6	TANdindi	9	Mohoka	1410	307	75
11	30/04/2013	Gulere		Ndiodi B	1	Ndindi	4	TANdindi	9	Mchoka	1410	372	90
12	30/04/2013	G Jere		Nthiwatiwa	2	Ndindi	4	TANdindi	9	Mchoka	1410	299	58
13	30/04/2013	G Jere		Tambala	3	Ndindi	4	TA Ndindi	9	Mchoka	1410	176	46
14	30/04/2013	G Jere		Yunusu	4	Ndindi	4	TA Ndindi	9	Mchoka	1410	37	12
15	30/04/2013	G Jere		Mponda	5	Magumbwa	3	TA Ndindi	9	Mchoka	1410	627	131
16	30/04/2013	M Chigudu		Ngwire	1	Kandulu	5	TA Ndindi	9	Mchoka	1410	861	231
17	30/04/2013	M Chigudu		Kalino	2	Kandulu	5	TA Ndindi	9	Mchoka	1410	398	90
18	30/04/2013	M Chigudu		Kalele	3	Kandulu	5	TA Ndindi	9	Mchoka	1410	210	44
19	30/04/2013	L Katsichi		Mzembela	1	Mzembela	1	SCKambwiri	3	Mchoka	1410	510	122
20	30/04/2013	L Katsichi		Senjele	2	Mzembela	1	SCKambwiri	3	Mchoka	1410	183	74
21	30/04/2013	L Katsichi		Mphere	3	Mzembela	1	SCKambwiri	3	Mchoka	1410	272	93
22	30/04/2013	l Mwayiwanji		Mpundu	1	Kandulu	5	TA Ndindi	9	Mchoka	1410	870	201
23	30/04/2013	l Mwayiwanji		Kandulu	2	Kandulu	5	TA Ndindi	9	Mchoka	1410	848	163
24	30/04/2013	l Mwayiwanji		Mapiko	3	Kandulu	5	TA Ndindi	9	Mchoka	1410	503	113
14	<>>> → Salir	na Community Da	ta Analysis	Template / Referen	ce / M	ap / 🖓 /							

#### 6. Map Cannot Be Produced

You may encounter an error like the one below:

Error: Column heading 'Non Functional Water so row 4 on the worksheet 'Analysis Template'. This not be produced.	ource (Broken) Rate' not found in s heading is needed. A map could
	OK

This message means that the map is trying to draw something that is not in the Analysis Template.

- 1. Ensure that analysis you want is in the analysis template worksheet. You may need to add a formula to the **Analysis Template** (see **Section B "Inserting a new indicator"**)
- 2. Go to the Map worksheet
- 3. Click "Update Map Option List"
- 4. Select the indicator you want from the drop down list

#### 7. Incomplete Row Data

All data should be entered in a row before moving on to the next one.

✓ **Correct**: Data in row is completely entered.

Н	1	J	K	L	M	N	0	P	Q
Name of Village	Village Code	GVH	GVH Code	ТА	TA Code	Health Center	Health Center Code	Village Population	Number of Households
	] 🔽		<b>_</b>		-		-		-
Kameta	10	William	106	TA Khombedza	4	Katawa	1424	55	7
Mwase	11	William	106	TA Khombedza	4	Katawa	1424	38	

imes Incorrect: Beginning data entry in the next row before completing the one above.

	Н		J	K	L	М	N	0	P	Q
	Name of Village	Village Code	GVH	GVH Code	ТА	TA Code	Health Center	Health Center Code	Village Population	Number of Households
		-		-	] 🔽	<b>•</b>	] 🔽			
К	ameta	10	William	106						
Μ	lwase	11	William	<b>1</b>	TA Khombedza	4	Katawa	1424	38	Į.
										[
			Missi	ng data	should be ente	red first				

# F. Annex B: Common Excel Commands

### 1. Saving Your Work

You should regularly save your work by clicking on the Save button on the toolbar.

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A	В	С	D	E	F	G	Н	1	J

### 2. Refreshing Your Data

After entering or editing data, click on the Refresh All button under the Data tab to update the database so that the analysis will include the most recently entered or edited data.

	- 17	- (21 -	•							Man	goch	i WASH [	)atabase 2	012-B1 - Mi	crosoft Excel	
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From Access	From Web	From Text	From Other Sources *	Existing	Refresh All *	See Edit Links	Z↓ A↓	Sort	Filter	y Advance	ed	Text to Columns	Remove	Data s Validation	Consolidate	What-If Analysis *
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### 3. Keyboard Shortcuts

The following are common keyboard shortcuts to use in Excel.

Command	Keyboard Shortcut
Сору	Ctrl + C
Paste	Ctrl + V
Find	Ctrl + F
Save	Ctrl + S

# Part III Training programme and syllabus on WASH M&E Database

# 1. Hands - on Training Programme for WASH M&E Database

It is the responsibility of the facilitator to develop the training programme to be covered in a particular training. One of the sample hands-on training programme for WASH M&E database is shown below.

Time		Activity
		Day 1
8:00	9:00	Opening activities
9:00	10:00	Introduction to WASH M&E database
10:00	10:15	Tea break
10:15	12:00	Basic excel skills
12:00	13:00	Lunch
13:00	15:00	Basic excel skills
15:00	15:15	Tea break
15:15	16:30	Basic excel skills
		Day 2
8:00	10:00	How to use the WASH M&E database
10:00	10:15	Tea break
10:15	12:00	How to use the WASH M&E database
12:00	13:00	Lunch
13:00	15:00	Pivot table skills for data analysis
15:00	15:15	Tea break
15:15	16:30	Pivot table skill for data analysis
		Day 3
8:00	10:00	WASH M&E advanced database skills
10:00	10:15	Tea break
10:15	12:00	WASH M&E advanced database skills
12:00	13:00	Lunch
13:00	15:00	WASH M&E advanced database skills
15:00	15:15	Tea break
15:15	16:30	Catch-up and questions
		Day 4
8:00	9:00	Catch-up and questions
9:00	10:00	Competency evaluation
10:00	10:15	Tea break
10:15	12:30	Data collector orientation guideline
12:30	13:30	Lunch
13:30	15:00	Data collector orientation guideline
15:00	16:00	District roles and responsibilities and implementation action plan
16:00	16:15	Workshop evaluation
16:15	16:30	Closing prayer

# 2. Hands - on Training Syllabus for WASH M&E Database

Based on the above training programme, training syllabus such as training module and session is shown below.

Modu	ıle No.	No. 1
Modu	ile Name	WASH M&E System Training
Targe	t	Training of District WASH officers and M&E officers on MS Excel skills and WASH Database functionality
Objec	tives	By the end of this module, participants should be able to: 1. explain a list of WASH M&E indicators 2. explain WASH M&E system 3. use WASH M&E database
Possil	ble trainers	EWB staff, MoH Environmental Health officers, MoAIWD Sanitation Engineers, Database pilot districts (Salima, Lilongwe, Blantyre, Mzimba South)
Total No.1	Duration for Workshop	4 days
Manu	als to be used	This manual
Other used	tools / materials to be	WASH M&E Database (CD) and laptop computers
	Session	Activity
No.	Title	
1	Opening Activities	Opening Prayer, Introductions, Ice Breaker Game, Expectations and Fears, Workshop Agenda, Workshop Norms
2	Introduction to WASH M&E Database	Introduction to the database, Background, Malawi database maps. Introduce use potential within the district
3	Basic Excel Skills	Refer to <b>Clause Part II-1</b> "the basic MS Excel 2007" in this manual and performing exercises participants will learn basic MS excel skills including: Basic Parts of the Excel Screen, Moving Around a Worksheet, Office Button Menu, Entering and Changing Data, Basic Formatting, Formulas, Sorting Data, Filtering Data
4	How to use the WASH M&E Database	Using the M&E database work through the WASH M&E database guide (See <b>Part II-3</b> ) in this manual. Participants will learn how to enter data, read the analysis template and update and use the map.
5	Pivot Table skills for Data Analysis	Refer to <b>Clause Part II-2</b> "the pivot tables in MS Excel 2007" in this manual and performing exercises participants will learn pivot table skills in MS Excel including: Background on PivotTables, Creating a PivotTable, Manipulating a PivotTable. Performing Calculations in a PivotTable

	Session	Activity
No.	Title	
6	Advanced WASH M&E Database Skills	Using the M&E database ( <b>CD</b> ) work through WASH M&E database advanced guide (See <b>Part II-4</b> ) in this manual. Participants will learn how to add an additional indicator, update the analysis table, draw an additional TA on the map and link to the analysis table.
7	Catch-up and questions	Participants will be asked to seek clarification on any of the previous material in preparation for the competency evaluation
8	Competency Evaluation	A brief competency evaluation will confirm that the participants are able to complete basic excel and data base exercises. Advanced skills will not be tested.
9	Data Collector Orientation Guideline and Indicator Definition Manual	The guideline prepared by the four WASH M&E pilot districts for effective orientation of data collectors will be reviewed. In this session lessons learned and the challenges overcome in the pilot districts will be discussed. The indicators will be reviewed to ensure a common understanding.
10	District Roles and Responsibilities and Implementation Action Plan	The district participants will be facilitated through a session in which they will define their roles and responsibilities for the system and will create an action plan for implementation of the WASH M&E database.
11	Workshop Evaluation	Participants will complete a workshop evaluation form.
12	Closing Activities	Closing prayer and certificate distribution

Module Title	WASH M&E System Training
Session 1	Opening Activities
Appropriate Facilitator Background	Experts in training, having knowledge and skills in participatory development.
Objectives	<ul> <li>To break ice and help participants to know each other</li> <li>To draw out participants expectations and fears about the workshop</li> <li>To explain objectives and link them to expectations and fears</li> <li>To get trainees to agree on basic norms or rules for the workshop</li> </ul>
Expected Outputs	<ul> <li>Participants get to know each other</li> <li>Participants are ready to actively participate in the workshop</li> <li>Participants are ready to abide to their own norms</li> <li>Participants are ready to follow the time table</li> </ul>
Timing / duration	Day 1 – 1 hour
Appropriate Venue	Big, well ventilated room equipped with mobile chairs. Sitting in circular form
Methodology	Interactive Exercises
Materials required	Markers, flip charts
Handouts	Workshop agenda
Session Steps	
Step 1	Opening prayer – ask for a volunteer from among the participants
Step 2	Split into groups of 3-4 and Introduce the idea of "Rhyming" Names – e.g. Charming Chisare, Mighty Mwansa, Powerful Phiri – ask each group to help each other find rhyming names. Then bring the whole group together in a circle and ask each person to introduce herself with a rhyming name (and action), which everyone repeats.
Step 3	Divide into groups to discuss – "what are your expectations and fears about the workshop? Round robin reporting.
Step 4	Present the workshop agenda and relate them to the expectations. Make a list of items which are not included in workshop topics.
Step 5	Discuss the proposed starting and stopping times and tea breaks and get agreement. Point out that flexibility in the timing of sessions is needed: often the discussion and analysis may take longer than expected, so some sessions may need additional time.

Step 6	Ask participants to brainstorm workshop rules. Record points on flipchart which can then be taped on the wall. Possible responses: start sessions on time, encourage everyone to contribute, speak loudly, respect each other views, don't condemn any contribution, don't interrupt when a person is speaking, active listening, keep comments brief, give construction criticism, etc.
Notes for facilitators	
Attached materials	

Module Title	WASH M&E System Training
Session 2	Introduction to WASH M&E Database
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database
Objectives	<ul> <li>Background and History of the database</li> <li>Overview of functionality</li> <li>Introduce potential for use within the District</li> </ul>
Expected Outputs	<ul> <li>General understanding of the database development process</li> <li>General appreciation for database feature and characteristics</li> </ul>
Timing / duration	Day 1 – 1 hour
Appropriate Venue	Large room. Seating in circular form so that every participant is visible to one
Methodology	Presentation
Materials required	Projector, Screen, Computer, markers, flip charts
Handouts	Power point presentation slides
Session Steps	
Step 1	Give overview PowerPoint presentation explaining background, history,
Step 2	Show the Malawi database map examples to demonstrate functionality
Step 3	Discuss how they are currently doing data collection and how often. Ask participants to name potential uses of the database. Capture these on a flip chart.
Notes for facilitators	
Attached materials	



Module Title	WASH M&E System Training
Session 3	Basic Excel Skills
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database or Advanced MS Excel Skills
Objectives	Participants will learn basic MS Excel skills including: Basic Parts of the Excel Screen, Moving Around a Worksheet, Office Button Menu, Entering and Changing Data, Basic Formatting, Formulas, Sorting Data, Filtering Data
Expected Outputs	<ul> <li>All participants are able to perform the exercises given in the session.</li> <li>All participants able to successfully complete the competency evaluation on Day 4</li> </ul>
Timing / duration	Day 1 – 5 hours (split into 3 sessions)
Appropriate Venue	Large room. Ability to sit in groups of 2-3 around a computer and still see the projection screen. Facilitators should be able to easily access participants to help with computer exercises. Electricity outlets for personal computers
Methodology	Presentation and Interactive Exercises
Materials required	Projector, Screen, Computer, Enough Computers for 1 every 2-3
Handouts	This manual (PART II – 1 Basic Microsoft Excel 2007)
Session Steps	
Step 1	Determine MS Excel skill level in the room. How often do they use it? How would they rate themselves between 1-5? (1 being beginner and 5 being expert.)
Step 2	Divide into groups of 2-3 with a mixture of skill levels in each group. If there are advanced users ask them to help others to learn through this session.
Step 3	Project the manual – <b>PART II – 1</b> Basic Microsoft Excel 2007. Each group will perform all recommended exercises on their individual computers.
Step 4	Capture any questions or concerns still remaining after the session. These can be reviewed individually or in the catch-up sessions on day 3 or 4.
Notes for facilitators	
If there are those that I roaming around the dif	have more advanced excel skills in the room, ask them to help others by ferent groups and answering questions when they get stuck.
Attached materials	

Module Title	WASH M&E System Training
Session 4	How to use the WASH M&E Database
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database
Objectives	Using the M&E database works through the WASH M&E database guide (See <b>PART II – 3)</b> Malawi National WASH M&E Database Guide). Participants will learn how to enter data, read the analysis template and update and use the map.
Expected Outputs	<ul> <li>All participants are able to enter data, read the analysis template and use the map function.</li> <li>All participants able to successfully complete the competency evaluation on Day 4</li> </ul>
Timing / duration	Day 2 – 4 hours (split into 2 sessions)
Appropriate Venue	Large room. Ability to sit in groups of 2-3 around a computer and still see the projection screen. Facilitators should be able to easily access participants to help with computer exercises. Electricity outlets for personal computers
Methodology	Presentation and Interactive Exercises
Materials required	Projector, Screen, Computer, Enough Computers for 1 every 2-3
Handouts	This manual (PART II – 3 Malawi National WASH M&E Database Guide)
Session Steps	
Step 1	Divide into groups of 2-3 with a mixture of skill levels in each group. If there are
Step 2	Ensure all groups have a soft copy of the database. Participants use the Database to navigate through the Guide
Step 3	Each group will perform all recommended exercises on their individual computers.
Step 4	Capture any questions or concerns still remaining after the session. These can be reviewed individually or in the catch-up sessions on day 3 or 4.
Notes for facilitators	
Attached materials	

Module Title	WASH M&E System Training
Session 5	Pivot Table skills for Data Analysis
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database or Advanced MS Excel Skills
Objectives	Refer to <b>Clause Part II-2</b> "Pivot Tables Microsoft Excel 2007" in this manual and performing exercises participants will learn pivot table skills in MS excel including: Background on PivotTables, Creating a PivotTable, Manipulating a PivotTable, Performing Calculations in a PivotTable
Expected Outputs	<ul> <li>All participants are able to create basic pivot tables</li> <li>All participants understand potential of the pivot tables to analyse large amounts of data.</li> </ul>
Timing / duration	Day 2 – 3 hours (split into 2 sessions)
Appropriate Venue	Large room. Ability to sit in groups of 2-3 around a computer and still see the projection screen. Facilitators should be able to easily access participants to help with computer exercises. Electricity outlets for personal computers
Methodology	Presentation and Interactive Exercises
Materials required	Projector, Screen, Computer, Enough Computers for 1 every 2-3
Handouts	This manual ( <b>PART II – 2</b> Pivot Tables Microsoft Excel 2007)
Session Steps	
Step 1	Determine Pivot table skill level in the room. How often do they use it? How would they rate themselves between 1-5? (1 being beginner and 5 being expert.)
Step 2	Divide into groups of 2-3 with a mixture of skill levels in each group. If there are advanced users ask them to help others to learn through this session.
Step 3	Project manual – <b>PART II-2</b> Pivot Tables in Microsoft Excel 2007. Each group will perform all recommended exercises on their individual computers.
Step 4	Capture any questions or concerns still remaining after the session. These can be reviewed individually or in the catch-up sessions on day 3 or 4.
Notes for facilitators	
If there are those that h roaming around the dif	nave more advanced excel skills in the room, ask them to help others by ferent groups and answering questions when they get stuck.
Attached materials	

Module Title	WASH M&E System Training
Session 6	Advanced WASH M&E Database Skills
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database
Objectives	Using the M&E database work through WASH M&E database advanced guide (See <b>PART II – 4</b> ). Participants will learn how to add an additional indicator, update the analysis table, draw an additional TA on the map and link to the analysis table.
Expected Outputs	All participants are able to add an indicator, update the analysis table, draw an additional TA on the map and link to the analysis table
Timing / duration	Day 3 – 4 hours (split into 2 sessions)
Appropriate Venue	Large room. Ability to sit in groups of 2-3 around a computer and still see the projection screen. Facilitators should be able to easily access participants to help with computer exercises. Electricity outlets for personal computers
Methodology	Presentation and Interactive Exercises
Materials required	Projector, Screen, Computer, Enough Computers for 1 every 2-3
Handouts	This manual ( <b>Part II-4</b> Malawi National WASH M&E Advanced Database Guide)
Session Steps	
Step 1	there are advanced users ask them to help others to learn through this session
Step 2	Ensure all groups have a soft copy of the database. Participants use the database to navigate through the Guide
Step 3	Project the manual – <b>PART II-4</b> Malawi National WASH M&E Advanced Database Guide. Each group will perform all recommended exercises on their individual computers.
Step 4	Capture any questions or concerns still remaining after the session. These can be reviewed individually or in the catch-up sessions on day 3 or 4.
Notes for facilitators	
Attached materials	

Module Title	WASH M&E System Training
Session 7	Catch-up and questions
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database
Objectives	Participants will be asked to seek clarification on any of the previous material in preparation for the competency evaluation
Expected Outputs	<ul> <li>Participants questions are answered before the competency quiz</li> <li>All participants are successful on the competency quiz</li> </ul>
Timing / duration	Day 3/4 – 1.5 hours
Appropriate Venue	Large room. Ability to sit in groups of 2-3 around a computer and still see the projection screen. Facilitators should be able to easily access participants to help with computer exercises. Electricity outlets for personal computers
Methodology	Questions and Answers
Materials required	Projector, Screen, Computer, Enough Computers for 1 every 2-3 participants,
Handouts	
Session Steps	
Step 1	Review flip charts from day 2 and 3 sessions and answer questions or review.
Notes for facilitators	
Attached materials	



Module Title	WASH M&E System Training
Session 8	Competency Evaluation
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database
Objectives	A brief competency evaluation will confirm that the participants are able to complete basic excel and data base exercises. Advanced skills will not be tested.
Expected Outputs	All participants are successful on the quiz
Timing / duration	Day 3 – 1 hour
Appropriate Venue	Large room. Ability to sit in groups of 2-3 around a computer and still see the projection screen. Facilitators should be able to easily access participants to help with computer exercises. Electricity outlets for personal computers
Methodology	Quiz in small groups
Materials required	Projector, Screen, Computer, Enough Computers for 1 every 2-3
Handouts	Competency Evaluation Sheet, Evaluation Database
Session Steps	
Step 1	Split participants into groups of 2-3. Quiz can be completed in these groups
Step 2	Ensure all groups have a copy of the Evaluation Database and the paper Competency Evaluation Sheet.
Step 3	Allow 30 minutes to complete the quiz. Add 5-10 additional minutes as required.
Step 4	Facilitator must grade the quizzes and complete the certificates over lunch hour of day 4
Notes for facilitators	
Participants should not know this is a group evaluation until day 4. Facilitator will need to grade the quizzes and complete the certificates over lunch hour of day 4	

# **Attached materials**



Evaluating a competency on basic excel and data base exercises.

Module Title	WASH M&E System Training
Session 9	Data Collector Orientation Guideline and Indicator Definition Manual
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database
Objectives	The guideline prepared by the four WASH M&E pilot districts for effective orientation of data collectors will be reviewed. In this session lessons learned and the challenges overcome in the pilot districts will be discussed. The indicators will be reviewed to ensure a common understanding.
Expected Outputs	<ul> <li>Participants are able to orient data collectors using best practice</li> <li>Uniform understanding of data indicator definitions</li> </ul>
Timing / duration	Day 4 – 3 hours
Appropriate Venue	Large room. Seating in circular form so that every participant is visible to one another
Methodology	Presentation and Interactive activity
Materials required	Projector, Screen, Computer, markers, flip charts
Handouts	This manual ( <b>PART I</b> M&E data collection system, <b>Appendix 1</b> data collection template, <b>Appendix 2</b> definition of each indicator)
Session Steps	
Step 1	Post flip charts around the room with each of the categories for the orientation guideline
Step 2	Ask participants to write main elements as they see them on the flip charts
Step 3	Read through the manual sections and compare to flip chart responses
Step 4	Facilitator sums up the main points of the guideline
Step 5	Give participants three pieces of colored paper to hold up after each of the definitions is read. (red – I don't understand, yellow – I'm confused, green – I understand perfectly
Step 6	Take turns around the table reading the definitions. Facilitator to point out problematic definitions such as Basic and Improved Latrines, ODF, ODF++
Step 7	Ask participants if they foresee any issues with definitions and/or if they seek additional clarification.
Notes for facilitators	
Write out the main co	ategories for orientation of flip charts the night before
Attached materials	

Module Title	WASH M&E System Training
Session 10	District Roles and Responsibilities and Implementation Action Plan
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database
Objectives	The district participants will be facilitated through a session in which they will define their roles and responsibilities for the system and will create an action plan for implementation of the WASH M&E database.
Expected Outputs	<ul> <li>Documented roles and responsibilities for the M&amp;E Database System</li> <li>Documented Action Plan for implementation roll out</li> <li>Group agreement on next steps</li> </ul>
Timing / duration	Day 4 – 1 hour
Appropriate Venue	Large room. Seating in circular form so that every participant is visible to one
Methodology	Presentation
Materials required	Projector, Screen, Computer, markers, flip charts
Handouts	This manual (PART I M&E data collection system)
Session Steps	
Step 1	Ask participants to name all of their different roles and responsibilities for a sustainable M&E database system. Capture these on a flip chart (15min)
Step 2	Project the manual – How is data collected in " <b>Part I</b> M&E data collection system" on the screen and add any that were mentioned in the brainstorm to the list. (5 min)
Step 3	Ask participants to put a name beside each of the responsibilities in the template. Facilitator types directly into the template projected on the screen. (15 min)
Step 4	Project the suggested Action plan activities and ask the participants to review and modify if required. (10 min)
Step 5	Add timelines and person responsible for each action as a group. (10 min)
Notes for facilitators	
Attached materials	
Module Title	WASH M&E System Training
--	--
Session 11	Workshop Evaluation
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database
Objectives	Participants will complete a workshop evaluation form. This will help with the continuous improvement of the training materials and facilitation
Expected Outputs	Completed evaluation forms
Timing / duration	Day 4 – 15 min
Appropriate Venue	Large room. Seating in circular form so that every participant is visible to one
Methodology	Completion of a form
Materials required	
Handouts	Training Evaluation Form
Session Steps	
Step 1	Ask participants to complete evaluation form
Step 2	Facilitator should collect these forms and incorporate feedback into next
Notes for facilitators	
Attached materials	

Module Title	WASH M&E System Training
Session 12	Closing Activities
Appropriate Facilitator Background	Expert in Malawi WASH M&E Database
Objectives	Closing prayer and distribution of course completion certificates
Expected Outputs	
Timing / duration	Day 4 – 15 min
Appropriate Venue	Large room. Seating in circular form so that every participant is visible to one
Methodology	
Materials required	
Handouts	Completion certificates
Session Steps	
Step 1	Distribute Completion Certificates to participants
Step 2	Ask for a volunteer to say a closing prayer
Notes for facilitators	
Certificates must be fill	ed in and signed at lunch on Day 4 or the evening of Day 3
Attached materials	

### Appendices

Appendix 1 Data collection Forms

1. Community WASH Data Collection Form including Additional O&M Indicators and Tally sheet Community WASH Data Collection Form

HSA Phone Number:

Name of HSA

Health	Centre				Health Cent	re Code:												
											BAS	C LATRINES		IMPROVED I	ATRINE	HAN FA	DWASHING	
*	Date of Data Collection	Name of Village	Village Code	НЛО	GVH Code	¥	TA Code	Village Population	Number of Households	1. Unsatisfactory Latrines	2. Permeable Floor, No DHC	3. Permeable Floor, with DHC	4. Impermesble Floor, No DHC	6. Compositing Latrines (EcoSan)	7. Households With Flush Toilets	8. Handwashing Facilities <b>without</b> Soap	9. Hand Washing Facilities with <sub>503</sub> p	10. Number of Households with Properly Functioning Waste Management System
-																		
2	~																	
6	~																	
ম																		
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Δ –																		
4	~																	
8	~																	
6																		
10																		
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12																		
13	~																	
14																		
15																		
]		Comments on Form:																

Page 1 of 8

	34. Date Declared ODF ++															
	33. Verified ODF ++? (Yes, No)															
	32. Date Declared ODF															
	31. Verified ODF? (Yes, No)															
	30. Date of Follow-up 4															
	29. Date of Follow-up 3															
	28. Date of Follow-up 2															
	27. Date of Follow-up 1															
	26. Date Triggered															
	25. Triggered in CLTS? (Yes, No)															
	24. Non-Functional															
SPRINGS	23. Functional Without Clean Surroundings															
-	22. Functional Clean Surroundings															
LOW WELLS	1. Non-Functional															
TED SHALI	20. Functional Without Clean Surroundings															
PROTEC	29. Functional Clean Surroundings															
IAL TAPS	18. Non-Functional															
INDIVIDI	17. Functional															
KIOSKS	16. Non-Functional															
AL TAPS /	15. Functional Without Clean Surroundings	-										-				
COMMUN	24. Functional Clean Surroundings															
	13. Non-Functional															
DREHOLES	12. Functional Without Clean Surroundings															
BC	sgnibruomu2 ns9l0 lenoitonu7 .11															
	Name of Village															
	*	-	2	e	4	ى ك	9	7	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	6	10	=	12	13	14	15

<b>Community WASH Data Collection</b>	Form
Community WASH Data (	Collection
Community WASH	H Data (
Community	WASH
	Community

Name of village								
ТА								
НЛЭ								
Village population								
Number of households								
1. Unsatisfactory latrine				00000 00000 00000 00000 00000 00000				
	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
<b>Basic latrine</b> 2. Permeable floor, no DHC		00000 00000 00000 00000	00000 00000 00000 00000	00000 00000		00000 00000 00000 00000	00000 00000 00000 00000	00000 00000 00000 00000
<b>Basic latrine</b> 3. Permeable floor + DHC		00000 00000 00000 00000	00000 00000 00000 00000	00000 00000		00000 00000 00000 00000	00000 00000 00000 00000	00000 00000 00000 00000
<b>Basic latrine</b> 4. Impermeable floor, no DHC		00000 00000 00000 00000	00000 00000 00000 00000	00000 00000		00000 00000 00000 00000	00000 00000 00000 00000	00000 00000 00000 00000
<b>Improved Latrine</b> 5. Impermeable floor + DHC	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Improved Latrine 6. Composting latrine	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Improved Latrine 7. HHs with Flush toilets	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000

# TALLY SHEETS FOR COMMUNITY WASH DATA COLLECTION FORM

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Hand washing facilities(HWF) 8. HWF without soap		00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Hand washing facilities(HWF) 9. HWF with soap	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
10. HHs with properly	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
functioning solid waste management system	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Boreholes	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
11. Functional with clean	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
surrounding s								
Boreholes	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
12. Functional without clean	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
surroundings								
Boreholes	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
13. Non-functional								
Communal Taps/Kiosk	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
14. Functional clean	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
surrounding s								
Communal Taps/Kiosk	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
15. Functional without clean	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
surrounding s								
Communal Taps/Kiosk	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
16. Non-functional								
Individual taps	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
17. Functional								
Individual taps	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
18. Non-functional								
<b>Protected Shallow wells</b>	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
19. Functional With Clean	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Surroundings								
<b>Protected Shallow wells</b>	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
20. Functional Without clean	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Protected Shallow wells 21. Non-functional								

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Protected springs 22. Functional With Clean Surroundings	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Protected springs 23. Functional Without clean surroundings	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Protected springs 24. Non-functional	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
25. Triggered in CLTS?	z ≻	z ≻	× ∠	Z ≻	× ∠	N Y	N ≻	v ≻
26. Date Triggered								
27. To 30. Date of followed up	1	1	1	1	1	- T - C	1	1
	2 3	2 3	2	2 3	2 3	2	2	2
31. Verified ODF?	N Y	z ≻	z ≻	N Y	z ≻	z ≻	z ≻	N Y
32. Date declared ODF								
33. Verified ODF++?	N Y	z ≻	z ≻	v ≻	z ≻	z ≻	z ≻	z ≻
34. Date declared ODF++								
CBM	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
35. No. of WPC/VHWC	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
CBM	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
36. No. of F. and/or active WPC/VHWC at this moment	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
CBM	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
37. No. of WPC/VHWC trained in initial CBM	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
CBM								
38. Year trained in initial CBM								

CBM	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
39. No. of WPC/VHWC trained	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
in CBM refresher								
CBM								
40. Year trained in CBM								
refresher course								
AM	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
41. No. of preventive	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
maintenance contract								
between AM and WPC								
AM								
42. Year of preventive								
maintenance contract								
between AM and WPC								

# TALLY SHEETS FOR COMMUNITY WASH DATA COLLECTION FORM

2. Public Premises WASH Data Collection Form and Tally sheet

6. Solid Waste Disposal List	1. Disposal in Rubbish Pit 2. Disposal in Bin/Basket	3. Composting	<ol> <li>Burying underground</li> </ol>	6. Pit Latrine 7. Public Dumping Site 8. Open Dumping 9. Other	6. Main Solid Waste Disposal Method (Pick from List) 7. If there is animal waste, Properly Functioning Animal Waste Pit						
orm			/ell	am	5. Is there a Clean Surrounding Area for the Main Water Source? (Yes=1, No=0)						
etion F	• Source List Nater∕Tap	ble to d Shallout Well	ected Shalow Wei	ted Spring ected Spring Stream/Lake/D	4. Main Source of Water (Pick from List)						
Colle	4. Water 1. Piped V	2. Boreho	4. Unprot	5. Protec 6. Unprot 7. River/ 8. Other	3. Number of Functioning Protected Water Sources						
SH Data		<u>1. Public</u> Dramacie 1 iet	1. Market	2. Bus Depot 3. Fishing Dock 4. Church 5. Other	2. Approximate Number of Patrons per Day						age 4 of 8
mises WA					1. Type of Public Premises (Pick from List)						
Public Prer					Name of Public Premises						
					Traditional Authority						
	Name of HSA		Health Centre		Date of data collection						

### \_\_\_\_

Form
Collection
Data
WASH
Premises
<sup>&gt;</sup> ublic

	18. Number of Handwashing Facilities with Soap					
	ז א. Number of Handwashing Facilities without Soap					
	16. Number of Toilets with access for the Physically Challenged					
ALE	15. Number of Flushing Toilets					
FEM	14. Number of Functional Improved Latrines					
	13. Number of Functional Basic Latrines					
	12. Number of Toilets with access for the Physically Challenged					
	ז ו. Number of Flushing Toilets ל					
MALE	10. Number of Urinals					
	9. Number of Functional Improved Latrines					
	8. Number of Functional Basic Latrines					
	Premises					
	of Public F					
	Name					

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Name of Public premises								
TA								
1. Type of public premises	□Market	□ Market	□ Market	□Market	□Market	🗌 Market	□Market	□Market
	Church							
· verify	Other							
2 Annovimate number of								
<ol> <li>Approximate number of patrons per Day</li> </ol>								
3. Number of Functioning	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
protected water sources	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
4. Main source of water								
1. Piped water/Tap	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
2. Borehole	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
3. Protected shallow well	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
4. Unprotected shallow well	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
5. Protected spring	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
6. Unprotected spring	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
7. River/Stream/Lake/Dam	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
8. Other	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
specify :								
5. Is there a clean surrounding	z ≻	Z ≻	z ≻	× ×	z ≻	N ≻	Z ≻	z ≻
area for the main water source?								
6. Main solid waste disposal	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
method								
1. Disposal in rubbish pit								
2. Disposal in bin/basket	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
3. Composting	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
4. Burning	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
5. Burying underground	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
6. Pit latrine	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000

INDICATORS	
<b>PREMISES</b>	
<b>DR PUBLIC</b>	
SHEETS FC	
TALLY	

7. Public dumping site	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
8. Open dumping	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
9. Other	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
specify :								
7. If there is animal waste,	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
properly Functioning animal	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
waste pit								
Male	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
8. No. of Functional basic latrines	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Male	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
9. No. of Functional improved	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
latrines								
Male	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
10. Number of urinals								
Male	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
11. Number of flushing toilets	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Male	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
12. Number of toilets with access	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
for the physically challenged								
Female	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
13. No. of Functional basic latrines								
Female	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
14. No. of functional improved								
latrines								
Female	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
15. Number of flushing toilets								
Female	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
16. Number of toilets with access								
for the physically challenged								
17. Number of hand washing	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
facilities without soap								
18. Number of hand washing	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
facilities with soap								

3. Health Centre WASH Data Collection Form

### Health Centre WASH Data Collection Form

Date of Data Collection		9. Number of Functional Basic Latrines	
Name of Data Collector		10. Number of Functional Improved Latrines	
ТА	Male Patrons	11. Number of Urinals	
Name Health Facility		12. Number of Flushing Toilets	
Health Facility Code		13. Number of Toilets with access for the Physically Challenged	
Type of Facility (Health Center, Dispensary)		14. Number of Functional Basic Latrines	
Operator (Gov't, Private, CHAM)	Female	15. Number of Functional Improved Latrines	
Aproximate Number of Female Patrons per Day	Patrons	16. Number of Flushing Toilets	
Aproximate Number of Male Patrons per Day		17. Number of Toilets with access for the Physically Challenged	
Total number of Male Staff		18. Number of Functional Basic Latrines	
Total number of Female Staff	Mala	19. Number of Functional Improved Latrines	
1. Functional Reticulated Water System Available? (Yes=1, No=0)	Staff	20. Number of Urinals	
2. Functioning Stand-Alone Water Point (Yes=1, No=0)		21. Number of Functional Flushing Toilets	
3. Stand Alone Water Source (Pick from List)		22. Number of Functional Basic Latrines	
4. Is there a Clean Surrounding Area for the Stand Alone Water Source?	Female Staff	23. Number of Functional Improved Latrines	
5. Main Solid Waste Disposal Method (Pick from list)		24. Number of Functional Flushing Toilets	
6. Functioning Incinerator (Yes=1, No=0)		25. Number of Handwashing Facilities without Soap	
7. Properly Functioning Placenta Pits (Yes=1, No=0)		26. Number of Handwashing Facilities with Soap	
8. Properly Functioning Liquid Waste Management System (Yes=1, No=0)		27. Number of Bath Shelters in a usable state	

3. Water Source List	5. Solid Waste Disposal List	Comments
1. Piped Water / Tap	1. Disposal in Rubbish Pit	
2. Borehole	2. Disposal in Bin/Basket	
3. Protected Shallow Well	3. Composting	
4. Unprotected Shalow Well	4. Burning	
5. Protected Spring	5. Burying underground	
6. Unprotected Spring	6. Pit Latrine	
7. River/Stream/Lake/Dam	7. Public Dumping Site	
8. Other	8. Open Dumping	
	9. Other	

4. Learning Institutions WASH Data Collection Form and Tally sheet

										_
	te Disposal List bbish Pit	ı/Basket	ground	g Site		3. Main Solid Waste Disposal Nethod Pick from list)				
	8. Solid Was 1. Disposal in Rul	2. Disposal in Bin 3. Composting	4. Burning 5. Burying underg	6. Prt Latrine 7. Public Dumpin 8. Open Dumping 9. Other		۲. اء there a Clean Surrounding Area for the Nain Water Source؟				
	ce List	<sup>r</sup> Tap	allow Well Shalow Well	ring Spring //Lake/Dam	/	5. Main Source of Water Pick from List)				
on Form	6. Water Sour	1. Piped Water / 2. Borehole	3. Protected Sh 4. Unprotected	<ol> <li>Protected Spi</li> <li>Unprotected ( 7. River/Stream</li> <li>Other</li> </ol>		5. Number of Functioning Protected Water Sources				
lecti	J				J	ł. Total number of Female Feachers				
a Col						3. Total number of Male Feachers				
H Dat						2. Total Girls Enrolment	,			
WASH						l. Total Boys Enrolment				
Institutions						School Name				
earning						School Number				
Ļ						Traditional Authority				
	ollector	Collector				Zone Name				
	Name of Data C	Position of Data				Date of Data Collection				

Page 6 of 8

1			1				
	27. Number of Handwashing Facilities with Soap						
	26. Number of Handwashing Facilities without Soap						
lers	25. Number of Flushing Toilets						
ale Teach	24. Number of Functional Improved Latrines						
Fem	23. Number of Functional Basic Latrines						
	22. Number of Flushing Toilets						
achers	21. Number of Urinals						
Male To	20. Number of Functional Improved Latrines						
	19. Number of Functional Basic Latrines						
	18. Number of Toilets with access for the Physically Challenged						8
ents	ז7. Number of Flushing Toilets						Page 7 of
ale Stud	16. Number of Urinals						
Fen	15. Number of Functional Improved Latrines						
	14. Number of Functional Basic Latrines						
	13. Number of Toilets with access for the Physically Challenged						
nts	12. Number of Flushing Toilets						
ale Stude	11. Number of Urinals						
Ŵ	10. Number of Functional Improved Latrines						
	9. Number of Functional Basic Latrines						
	аще						
	School N						

Zone Name								
TA								
School number								
School name								
1. Total boys enrolment								
2. Total girls enrolment								
3. Total number of male teachers								
<ol> <li>Total number of female teachers</li> </ol>								
<ol><li>Number of functioning protected water sources</li></ol>	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000 00000 00000	00000 00000	00000 00000
6. Main source of water								
<ol> <li>Piped water/Tap</li> </ol>	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
2. Borehole	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
<ol><li>Protected shallow well</li></ol>	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
4. Unprotected shallow well	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
5. Protected spring	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
<ol><li>Unprotected spring</li></ol>	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
7. River/Stream/Lake/Dam	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
8. Other	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
specify :								
<ol> <li>Is there a clean surrounding area for the main water source?</li> </ol>	Z	Z ≻	Z ≻	Z ≻	Z ≻	Z ≻	Z ≻	∠
8. Main solid waste disposal method								

TALLY SHEETS FOR LEARNING INSTITUTIONS INDICATORS

1. Disposal in rubbish pit	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
2. Disposal in bin/basket	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
3. Composting	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
4. Burning	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
5. Burying underground	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
6. Pit latrine	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
7. Public dumping site	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
8. Open dumping	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
9. Other	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
specify:								
Male	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
9. No. of Functional basic latrines	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Male	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
10. No. of Functional improved	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
latrines								
Male	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
11. Number of urinals								
Male	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
12. Number of flushing toilets	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Male	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
13. Number of toilets with access	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
for the physically challenged								
Female	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
14. No. of Functional basic latrines								
Female	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
15. No. of Functional improved								
latrines								
Female	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
16. Number of urinals								
Female	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
17. Number of flushing toilets								

TALLY SHEETS FOR LEARNING INSTITUTIONS INDICATORS

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Female	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
18. Number of toilets with access								
for the physically challenged								
Male Teacher	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
19. No. of Functional basic latrines	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Male Teacher	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
20. No. of Functional improved	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
latrines								
Male Teacher	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
21. Number of urinals								
Male Teacher	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
22. Number of flushing toilets	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Female Teacher	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
23. No. of Functional basic latrines	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
Female Teacher	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
24. No. of Functional improved	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
latrines								
Female Teacher	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
25. Number of flushing toilets	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
26. Number of hand washing	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
facilities without soap								
27. Number of hand washing	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000	00000 00000
facilities with soap								

5. Area Mechanic Data Collection Form

### AREA MECHANICS DATABASE

Date:

District:

Enumerator:

Area No.	Name	Sex	Village	Traditional Authority	Contact	Date of Registration
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

6. Spare Parts Retail Shop Data Collection Form

NAME LIST OF AFRIDEV SPARE PARTS RETAIL SHOPS DATABASE

Date:

District:

Enumerator:

NO.	NAME OF SHOP	VILLAGE	TRADITIONAL AUTHORITY	CONTACT	<b>CURRENT SITUATION</b>
1					
2					
3					
4					
ю					
9					
7					
8					
6					
10					
11					
12					

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7. Examples to fill in the data collection forms

### Community WASH Data Collection Form

0996-777014

HSA Phone Number:

K. Saukira

Name of HSA

				-	1				1			1	1
		10. Number of Households with Properly Functioning Waste Management System	19	7									
	ASHING TIES	9. Hand Wards Facilities 9. Mang Facilities 9. Mang Facilities	3	4									
	HANDW/ FACILI	8. Handwashing Facilities <b>without</b> Soap	0	4									
	'RINE	7. Households With Flush Toilets	Ι	0									
	OVED LAT	6. Composting Latrines (EcoSan)	0	0									
	IMPR	5. Impermeable Floor + DHC	I	2									
	VES	4. Impermeable Floor, No DHC	17	ŝ									
	SIC LATRIN	3. Permeable Floor, with DHC	I	2			$\wedge$						
	BAS	2. Permeable Floor, No DHC	I	0			4						
		<ol> <li>Δ. Unsatisfactory Latrines</li> </ol>	0	I				3					
		Number of Househol ds	60	45					5				
8		Village Populatio n	006	315					0				
		TA Code	3	ŝ						Z			
entre Code:		ТА	ùlu	iulu						25			
ealth Cen		GVH Соde	4	7									
		НЛЭ	Kangwere	Kachamba									
		/illage Code	15 1	13 1									1
Ludzi		Name of Village	Mzangawo	Kapalamula									Comments on Form:
th Centre		Date of Data Collection	2014/11/20	2014/11/21									
Hea		#	1	2	ŝ	4	2	9	2	∞	6	10	

Form
Collection
l Data (
WASH
Community

			1		1		1					1
	34. Date Declared ODF ++	Not yet	Not yet									
	33. Verified ODF ++? (Yes, No)	Ν	N									
	32. Date Declared ODF	Not yet	Nov. 2014									
	31. Verified ODF? (Yes, No)	>	~									
ODF	30. Date of Follow-up 4	Sep. 2014	Sep. 2014									
CLTS /	29. Date of Follow-up 3	Feb. 2014	Mar. 2014									
	28. Date of Follow-up 2	Jan. 2014	Jan-14									
	27. Date of Follow-up 1	Dec. 2013.	Dec. 2013					~				
	26. Date Triggered	Sep. 2013	Feb. 2013					5				
	25. Triggered in CLTS? (Yes, No)	2	X				(	Z				
	24. Non-Functional	0	Ι					C				
ROTECTED SPRINGS	23. Functional Without Clean Surroundings	I	2					P	1			
PRC SF	22. Functional Clean Surroundings	7	7						0	2		
ALLOW	21. Non-Functional	Ι	0						2			
CTED SH/ WELLS	20. Functional Without Clean Surroundings	0	Ι									
PROTE	19. Functional Clean Surroundings	0	Ι									
IDUAL PS	18. Non-Functional	Ι	2									
VIDNI VA	15. Functional	I	Ι									
APS /	16. Non-Functional	7	0									
MUNAL T KIOSKS	15. Functional Without Clean Surroundings	2	0									
COMI	14. Functional Clean Surroundings	Ι	0									
S	13. Non-Functional	2	2									
OREHOLE	12. Functional Without Clean Surroundings	Ι	2									
B(	11. Functional Clean Surroundings	2	2									
	Name of Village	zangawo	ipalamula									mments on Form.
	#	$\frac{1}{M}$	2 K.	ŝ	4	5	9	7	∞	ი	10	Č
Remark												
---------------------------------------------------------------------------------	----------	------------	---	---	---	---	---	---	---	----	---------------	
between An and WPC	2013	2010					3					
An work protocol for the contract maintenance contract Detween MA mad WPC	I	I					V	2				
40. Year trained in CBM refresher course	2014	N/A					(					
39. No. of WPC/VHWC trained in CBM refresher	I	0										
38. Year trained in initial CBM	6661	1996						(	5			
57. No. of WPC/VHWC trained in initial CMA	I	I										
ser No: on functioning and/or active WPC/VHWC at this moment	Ι	Ι										
35. No. of WPC/VHWC	7	I										
illage											orm:	
Name of V	Mzangawo	Kapalamula									Comments on F	
#	ΓI	5	m	4	Ŋ	9	7	∞	6	10	[	

### Learning Institutions WASH Data Collection Form

_											
e Disposal List	bbish Pit	l∕Basket	ground g Site	Iszoqzic Disposał Main Solid Waste Disposał Method (fzil mort Yoid)	I	Ι					
Solid Wast	1. Disposal in Ru	2. Disposal in Bir 3. Composting	<ol> <li>Burning</li> <li>Burying under</li> <li>Put Latrine</li> <li>Public Dumpin</li> <li>Open Dumping</li> <li>Other</li> </ol>	Is there a Clean Surrounding Area for the Main Water Source?	Y	N			2		
	List T	lap	llow Well halow Well ing pring 'Lake/Dam	Main Source of Water (Pick from List)	2	2		F		\$	
	Water Source	<ol> <li>Piped Water /</li> <li>Borehole</li> </ol>	<ol> <li>Protected Sha</li> <li>Unprotected S</li> <li>Protected Spri</li> <li>Unprotected Spri</li> <li>River/Stream/</li> <li>Other</li> </ol>	Number of Functioning Protected Water Sources	3	Ι					
				Total number of Female Teachers	14	9					
				Total number of Male Teachers	21	12				P	
				Total Girls Enrolment	2450	900					
				Total Boys Enrolment	1200	600					
				School Name	(amuzu	Chapanama					
	A Chimbizi	SAEHO		School Number	4 4	1					
				Traditional Authority	Zulu	Mlonyeni					
	ollector	Collector		Zone Name	Boma	Boma					
	Name of Data C	Position of Data		Date of Data Collection	08/12/2014	08/12/2015					

	Number of Handwashing Facilities with Soap	2	0							
	Number of Handwashing Facilities without Soap	8	4							
lers	Vumber of Flushing Toilets	0	0							
<b>ale   eac</b>	Number of Functional Improved Latrines	2	2							
	Number of Functional Basic Latrines	0	0							
	Number of Flushing Toilets	0	0			2				
eachers	Slanin of Urinals	0	0		P		~			
Male	Number of Functional Improved Latrines	2	2				5	1		
	Number of Functional Basic Latrines	0	0							
	Number of Toilets with access for the Physically Challenged	2	0					Π		
ents	stəlioT gnirlaul for admuN	0	0				P			
ale stud	Number of Urinals	0	2					5	2	
Lo-L	Number of Functional Improved Latrines	6	4							
	Number of Functional Basic Latrines	10	0					-		
	Number of Toilets with access for the Physically Challenged	2	0					1		5
UCS	stelioT gnirlaul for the solution of Flucha	0	0					1	U	JU
ale stude	Number of Urinals	2	Ι							
M	Number of Functional Improved Latrines	2	4							
	Number of Functional Basic Latrines	8	0							
	School Name	(amuzu	Chapanama							

Page 5 of 8

## Public Premises WASH Data Collection Form

SOUG WASTE DISposal LIST-S

	Water Source List-Z	T. DISPOSALIN KUDDISH PIT
	1. Piped Water / Tap	<ol><li>Disposal in Bin/Basket</li></ol>
Public Premesis	2. Borenole	3. Composting
List-1	3. Protected Shallow Well	4. Burning
1. Market	4. Unprotected Shalow Well	5. Burying underground
2. Bus Depot	5. Protected Spring	6. Pit Latrine
<ol><li>Fishing Dock</li></ol>	6. Unprotected Spring	7. Public Dumping Site
4. Church	7. River/Stream/Lake/Dam	8. Open Dumping
5. Other	8. Other	9. Other

If there is animal waste, Properly Functioning Animal Waste Pit	Ν	Ν					
Main Solid Waste Disposal Method (Pick from List-3)	8	Ι					
Is there a Clean Surrounding Area for the Main Water Source? (Yes=1, No=0)	Ν	Υ					
Main Source of Water (Pick from List-2)	2	8		N			
Number of Functioning Protected Water Sources	Ι	Ι		55			
Approximate Number of Patrons per Day	1700	200					
Type of Public Premises (Pick from List- 1)	Ι	<i>†</i>			3		
Name of Public Premises	Kapiri Market	Kapiri Cathoric					
Traditional Authority	Dambe	Dambe					
Date of data collection	08/12/2014	08/12/2015					



### Health Centre WASH Data Collection Form

Date of Data Collection	8/12/2014		Number of Functional Basic Latrines	0			
Name of Data Collector	S Paul		Number of Functional	4			
ТА	51 uu	Male	Number of Urinals				
	Zulu	Patrons		0			
Name Health Facility	Mchinji District Hospital		Number of Flushing Toilets	10			
Health Facility Code	12		Number of Toilets with access for the Physically Challenged	nged 2			
Type of Facility (Health Center, Dispensary)	Health centre		Number of Functional Basic Latrines	0			
Operator (Gov't, Private, CHAM)	Gov't	Female	Number of Functional Improved Latrines	10			
Aproximate Number of Female Patrons per Day	2700	Patrons	Number of Flushing Toilets	8			
Aproximate Number of Male Patrons per Day	1200		Number of Toilets with access for the Physically Challenged	2			
Total number of Male Staff	128		Number of Functional Basic Latrines	0			
Total number of Female Staff	62	Male	Number of Functional Improved Latrines	4			
Functional Reticulated Water System Available? (Yes=1, No=0)	0	Staff	Number of Urinals	8			
Functioning Stand-Alone Water Point (Yes=1, No=0)	0		Number of Functional Flushing Toilets	6			
Stand Alone Water Source (Pick from List-1)	1		Number of Functional Basic Latrines	0			
Is there a Clean Surrounding Area for the Stand Alone Water Source?	Y	Female Staff	Number of Functional Improved Latrines	12			
Main Solid Waste Disposal Method (Pick from list-2)	4		Number of Functional Flushing Toilets	8			
Functioning Incinerator (Yes=1, No=0)	1		Number of Handwashing Facilities without Soap	0			
Properly Functioning Placenta Pits (Yes=1, No=0)	1		Number of Handwashing Facilities with Soap	8			
Properly Functioning Liquid Waste Management System	1		Number of Bath Shelters in a usable state	2			
(Yes=1. No=0)	1						
Water Source List-1 1. Piped Water / Tap 2. Borehole 3. Protected Shallow Well 4. Unprotected Shalow Well 5. Protected Spring 6. Unprotected Spring 7. River/Stream/Lake/Dam 8. Other	Solid Waste Disposal List-2 1. Disposal in Rubbish Pit 2. Disposal in Bin/Basket 3. Composting 4. Burning 5. Burying underground 6. Pit Latrine 7. Public Dumping Site 8. Open Dumping 9. Other	52	comments	ate			

### NAME LIST OF AREA MECHANICS

Date: 1/1/2015

### District: Mchinji

Enumerator: Pili (WMA)

Area No.	Name	Sex	Village	Traditional Authority	Contact	Date of Registration
1	Eftone ****	Male	Mikundi	Mduwa	0991 *** ***	1/1/2013
2	Edward ****	Male	Chakhalira	Mduwa	0996 *** ***	1/1/2013
3	Andrew ****	Male	Mkanda	Mkanda	0999 *** ***	1/6/2012
4	Fanuel ****	Male	Gumba	Mkanda	0884 *** ***	1/6/2012
5	George ****	Male	Chimombo	Mkanda	0993 *** ***	1/10/2013
6	Nelson ****	Male	Chipumi	STA Kapondo	0993 *** ***	1/10/2013
7						
8						
9						
10					FL	
11				PD		
12				500		
13	C		NIL			
14	2					
15						
16						
17						
18						
19						
20						

### NAME LIST OF AFRIDEV SPARE PARTS RETAIL SHOPS

Date: 1/1/2015

District: Mchinji

Enumerator: Pili (WMA)

NO.	NAME OF SHOP	VILLAGE	TRADITIONAL AUTHORITY	CONTACT	CURRENT SITUATION
1	Pagwanji Enterprise	Bua Trading Centre	Mlonyeni	*** *** 1660	Selling
2	R.K. Hardware	Matutu Trading Centre	Mduwa	*** *** 9660	Selling
3	Angoni Grocery	Kaigwazanga	Mkanda	*** ***	Stopped selling
4	Zuze General Suppliers	Waliranji Trading Centr	Mavwele	0884 *** ***	Selling
Ŋ	Give and Take	Mikundi Trading Centre	Mduwa	0993 * ***	Selling
9	Yanu Yanu	Kapiri	Dambe	09 3 #* ***	Selling
7		(	AAAV		
8			Nu <sup>n</sup>		
6					
10					

1. Community Indicators



### **Definition of Community WASH Data Indicators**

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How to measure	Number of Basic Latrines		
Photo			
Definition from M&E Handbook *1	<ul> <li>Basic facility has the following characteristics: <ul> <li>A pit of any depth which is not full or over flowing</li> <li>Floor is a well finished mud slab with drop</li> <li>Floor is a well finished nud slab with drop</li> </ul> </li> <li>Floor is a well finished nud slab with drop poile</li> <li>Walls can be made of anything but must provide privacy for the user</li> <li>Roof can be made of anything but must provide shelter from the rain</li> <li>Some form of or no foot rests (that will guide appropriate positioning),</li> <li>A superstructure with some form of a door or a type of closing mechanism or enclosure and a roof.</li> </ul>	Mud floor without drop hole cover	Mud floor with drop hole cover Drop hole cover: A drop hole cover should be tight fitting and cover the entire latrine drop hole. No gaps should be present that would allow flies to escape the latrine. A drop hole cover should be fitted with a handle for easy removal and replacement
Indicator	Permeable floor, No DHC		Permeable floor, with DHC
	trines	Basic La	1
No	2		m

How to measure		Number of Improved Latrines
Photo		
Definition from M&E Handbook *1	Made of Cement, burnt bricks, plastic or ceramic with cement lining without drop hole cover <b>Impermeable floor</b> : An impermeable latrine floor may be made from <u>cement plaster</u> , concrete, ceramic, <u>fibre glass, metals, plastic</u> , <u>clay tiles/burn bricks plus motor</u> , or other materials that can be cleaned easily. An impermeable floor must be smooth and solid, have no cracks, perforations, or openings other than the drop-hole.	<ul> <li>An improved sanitation facility should have the following characteristics:</li> <li>a well constructed and functional pit or receptacle with a minimum depth of 1.0 metre (which is not full or over-flowing), impermeable floor made of concrete, plastic, tiles or burnt brick with cement lining and foot rests</li> <li>a good <u>superstructure with a door</u>, <u>roof</u> and <u>walls</u> (which would offer privacy, comfort, security and dignity for the user) and more the user of the user) and movement of flies).</li> </ul>
Indicator	Impermeable floor, No DHC	Impermeable floor, with DHC
No	4	ں Improved Latrine

A - 46

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No	Indicator	Definition from M&E Handbook *1	Photo	How to measure
Q	Compositing Latrines ( Ecosan)	<ul> <li>Well-constructed sub-structure (normally with accessible double holes mostly referred to as vaults); either separates urine from human faeces or not (in extremely dry climates)and safely contains new or fresh faeces separate from composted fresh faeces separate from composted fresh faeces separated, it can be stored in containers for use as liquid fertilizer</li> <li>Well-constructed superstructure with walls that provide privacy and roof providing shelter from the rain</li> <li>Where <u>ash</u> and/or <u>soil</u> are used after use.</li> </ul>		Number of Ecosan Latrine
~	Households with flush Toilets	Have running water available, and flush to either a sewer or a septic tank.		Number of flush toilets

4

		in di antes i	Profinition from M8F Hondhool, *1	
2		Hand Washing facilities without Soap	A hand washing facility should allow for free flowing water to be released over the hands	Number of HWFs without soap
			e.g. bucket with tap, home plastic water	
¢			facility, jug and bowl and Soap should also be	
D	S		available next to the hand washing facility	
	eitilise7 g		Note: HWF with no water do not count	
	Buid	Hand Washing facilities with	A hand washing facility should allow for free	Number of HWFs
	lsev	Soap	flowing water to be released over the hands	with soap
	ΛP		(e.g. bucket with tap, home plastic water	
	ueH		facility, jug and bowl and Soap should also be	
б			available next to the hand washing facility	
			Note: HWF with no water do not count	
	Numb	ber of households with	Households with working refuse pits/ waste	Number of
	prope Mana	erly functioning Waste agement system	bins	households with functional waste
10			Note: If no functional, do not count	management system

ഹ

	ote: if without clean surr wunt water point is considered oviding water at the mini ow-rate at the time of a omponents of the water e good working order. nd surrounding has exces:
ssi ssi	ote: if without clean sur ount water point is considere oviding water at the mir ow-rate at the time of a omponents of the water good working order. nd surrounding has exce soak way pit <u>without stc</u> agnant water.
functional without clean surrounding	
Bo Bo	Bore

How to measure	Number of non- functional boreholes	Number of functional communal Taps with clean surrounding
Photo		<image/>
Definition from M&E Handbook *1	A water point is considered non-functional if it is not providing water <u>at the time of a spot check</u> . This may be as a result of <u>breakdown</u> , vandalism or Abandoned:	A water point is considered functional if it is providing water at the minimum appropriate flow-rate at the time of a spot check, and if all components of the water extraction system are in good working order. And surrounding is free from excessive dirt, free from bushes, <u>a soak way pit with stones</u> present. <i>Note: if without clean surrounding do not</i> <i>count</i>
Indicator	Non-functional	functional with clean surrounding
		sysoiX\sqsT lenummoO
No	13	14

 $\sim$ 

How to measure	Number of functional communal Taps without clean surrounding		
Photo			
Definition from M&E Handbook <sup>*1</sup>	A water point is considered functional if it is providing water at the minimum appropriate flow-rate at the time of a spot check, and if all components of the water extraction system are in good working order.	And surrounding has excessive dirt, bushes, a <u>soak way pit without stones present and</u> <u>stagnant water</u>	
Indicator	functional without clean surrounding		
ž			1

 $\infty$ 

How to measure	Number of non- functional	communal Tap	Number of	functional individual Taps ( <u>inside house</u> tap and yard tap)	
Photo					
Definition from M&E Handbook <sup>*1</sup>	A water point is considered non-functional if it is not providing water <u>at the time of a spot check</u> .	This may be as a result of <u>breakdown</u> , disconnection due to Non-Payment, Vandalism or Abandoned:	A water point is considered functional if it is	providing water at the minimum appropriate flow-rate at the time of a spot check, and if <u>all</u> components of the water extraction system are	
Indicator	Non-functional		Functional		
				sde1 lei	nbivibnl
S		16		7	Ì

σ

How to measure	Number of non- functional individual Taps	Number of protected shallow wells <u>with</u> clean surrounding
Photo	Hart	
Definition from M&E Handbook <sup>*1</sup>	A water point is considered non-functional if it is not providing water <u>at the time of a spot check</u> . This may be as a result of <u>breakdown</u> , <u>disconnection due to Non-Payment, Vandalism</u> <u>or Abandoned:</u>	<ul> <li>A water point is considered functional if it is providing water at the minimum appropriate flow-rate at the time of a spot check.</li> <li>Protected well defines it is protected from runoff water by a well lining or casing that is raised above ground level and <u>a platform</u> that diverts spilled water away from the well. It is also <u>covered</u>, so that bird droppings and animals cannot fall into the well. Source: UNCEF/WHO Joint Monitoring Programme</li> <li>Shallow well define that a hole which has been dug, bored, driven or drilled into the ground to depth of less than 25m for the purpose of extracting water.</li> <li>Clean surrounding is free from excessive dirt. free from bushes. a soak way bit with</li> </ul>
Indicator	Non-functional	functional with clean surrounding
		Protected Shallow Wells
Z	18	5

Indicator Definition from	Definition from	M&E Handbook <sup>*1</sup>	Photo	How to measure
Note: if without count	Note: if without count	clean surrounding do not		
functional without cleanA water point is csurroundingA water point is cproviding water aflow-rate at thecomponents of thin good working c	A water point is c providing water a flow-rate at the components of th in good working o	onsidered functional if it is It the minimum appropriate time of a spot check, and if all ne water extraction system are order.		Number of functional protected shallov wells <u>without</u> cle
And surrounding <sup>†</sup> <u>a soak way pit wi</u> stagnant water.	And surrounding h <u>a soak way pit wi</u> stagnant water.	as excessive dirt, bushes, and t <b>hout stones present</b> and		2 0 0 0 0 0
Non-functional     A water point is constrained water point p	A water point is cont providing wat not providing wat This may be as a r <i>Vandalism or Aba</i>	onsidered non-functional if it is er at the time of a spot check. esult of <u>breakdown,</u> indoned:		Number of Non- functional protected shallow wells

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How to measure	Number of functional protected spring with clean surrounding	Number of functional protected springs <u>without</u> clean surrounding	Number of Non- functional protected spring
Photo			
Definition from M&E Handbook <sup>*1</sup>	If it has a soak away pit, apron, and a drain , is located at least 30m from the closest toilet or latrine , and if it has a <u>water-tight concrete</u> <u>cover to protect from runoff</u> . And surrounding is free from excessive dirt, free from bushes, <u>a soak way pit with stones</u> present. <i>Note: if without clean surrounding do not count</i>	If it has a soak away pit, apron, and a drain , is located at least 30m from the closest toilet or latrine , and if <u>it has a water-tight concrete</u> <u>cover to protect from runoff</u> . And surrounding has excessive dirt, bushes, and <u>a soak way pit without stones</u> and there is stagnant water.	A water point is considered non-functional if it is not providing water at the time of a spot check. This may be as a result of <i>breakdown</i> , <i>Vandalism or Abandoned:</i>
Indicator	functional with clean surrounding	functional without clean surrounding	Non-functional
	Spring	Protected	
<sup>o</sup> N	22	23	24

12

No		Indicator	Definition from M&E Handbook *1	Photo	How to measure
25		Triggered with CLTS?	Triggering refers to a process that inspires and empowers rural communities to stop open defecation and to build and use latrines without external support. Triggered either by government or development partners		Yes or No
26		Date triggered	N/A	A/A	Date
27		Date of follow up 1	1 <sup>st</sup> Supervisory visit to a triggered village with aim of assessing change done <u>by government</u> <u>EWs or development partners</u>	N/A	Date
28	noitetine	Date of follow up 2	2 <sup>nd</sup> Supervisory visit to a triggered village with aim of assessing change done <u>by government</u> <u>EWs or development partners</u>	N/A	Date
29	s	Date of follow up 3	3 <sup>rd</sup> Supervisory visit to a triggered village with aim of assessing change done <u>by government</u> <u>EWs or development partners</u>	N/A	Date
30		Date of follow up 4	4 <sup>th</sup> Supervisory visit to a triggered village with aim of assessing change <u>by government EWs or</u> <u>development partners</u>	N/A	Date
31		Verified ODF?	Final supervisory visit to find out if indeed community has stopped open defecation <u>by DCT</u> <u>members or a team of four members one of</u> <u>whom should be from the health sector.</u>	N/A	Yes or No
32		Date declared ODF	Every household uses a latrine with drop hole	N/A	Date

13

How to measure		Yes or No	Date	Number of WPCs and VHWC in the village	Number of active WPCs and VHWC in a village	Number of trained WPCs and VHWC in a Village	Date
Photo		N/A	N/A	N/A	N/A	N/A	N/A
Definition from M&F Handbook *1	cover (except for eco-san and VIP types), that offers privacy, and there is no excreta in the open. In this particular case sharing is acceptable	<u>Every household</u> has and uses a latrine with drop hole cover, superstructure, and hand washing facility. In addition, for a village to qualify for ODF++; <u>all</u> <u>primary and secondary schools, community</u> <u>based childcare centres, religious institutions,</u> market centres and health centres in the <u>village</u> have latrines with drop hole covers, superstructures, and hand washing facilities	Done by DCT members and an external/independent person.	Members elected from the water user Communities to regulate, use and care for the water point, collect and manage money to pay for spare parts and repairs	WPC is considered active/ functional <u>if it is able</u> <u>to carry out their roles and responsibility and</u> <u>more especially when their borehole is</u> <u>functional</u>	N/A	N/A
Indicator		Verified ODF ++?	Date declared ODF ++	No. of WPC/VHWC	No. of functioning and or active WPC/VHWC at this moment	No. of WPC trained in the initial CBM	Year trained in initial CBM
					СВМ		
N		33	34	35	36	37	38

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No		Indicator	Definition from M&E Handbook *1	Photo	How to measure
39		No. of WPC/VHWC trained in refresher training	N/A	N/A	Number of WPCs and VHWC trained in refresher
					training.
40		Year trained in CBM refresher course	N/A	N/A	Date
41	MA	No. of preventive maintenance contracts between AM and WPC	This is a <u>service agreement between WPC and</u> <u>AM</u> to be repairing a borehole any time it broken.	N/A	Number of preventive maintenance contracts between WPCs and AM
42		Year of preventive maintenance contract between AM and WPC	N/A	N/A	Date

<sup>\*1</sup> Reference: INDICATORS CONCEPTS AND DEFINITIONS FOR IRRIGATION, WATER AND SANITATION, Ministry of Water Development and Irrigation, 2014

2. Public Premises and Learning Institutions Indicators

<sup>o</sup> Z	Indicator	Definition from M&E Hand Book <sup>*1</sup> and/or general meaning	Photo	How to measure
Ļ	Zone Name	1	1	Write Zone Name
2	Traditional Authority	1	I	Write name of traditional Authority
m	School Number	1	1	Write School number
4	School Name	1	I	Write name of School
ъ	Total Boys Enrolment	1	1	Number of boys
9	Total Girls Enrolment	1	1	Number of girls
7	Total number of Male Teachers	1	I	Number of male teachers
∞	Total number of Female Teachers		1	Number of female teachers
თ	Number of Functioning Protected Water Sources	<ul> <li>Functional: if it is providing water at the minimum appropriate flow-rate at the minimum appropriate flow-rate at the time of a spot check, and if all components of the water extraction system are in good working order.</li> <li>Protected water source: it is considered likely to be safe to drink, free from risk of contamination, economically affordable, and reliable over a long time period.</li> <li>Public / communal tap/standpipe or b. Public / communal tap/standpipe or</li> </ul>	1	Number of functioning protected water points

# Definition of Learning Institutions / Public Premises WASH Data Indicators

How to measure		Choose the main water source for learning Institutions / public premises from the list
Photo		
Definition from M&E Hand Book <sup>*1</sup> and/or general meaning	kiosk c. Borehole or tube well d. Protected dug well e. Protected spring	A <u>communal tap</u> / <u>kiosk</u> / and also <u>a private or</u> <u>household piped connection</u> including <u>vard tap</u> is considered an improved water source if it has <u>a soak away pit, apron, and a drain</u> .
Indicator		1. Piped Water / Tap
No		10

How to measure	Choose the main water source for learning Institutions / public premises from the list	Choose the main water source for learning Institutions / public premises from the list	Choose the main water source for learning Institutions / public premises from the list
Photo	ed an <b>av pit</b> , east	p is has a it is it or	owing ted ils. If e well
Definition from M&E Hand Book <sup>*1</sup> and/or general meaning	A borehole with a hand pump is considere improved water supply if it has <u>a soak awi</u> <u>apron</u> , and a <u>drain</u> , and if it is located at le 100 m from the closest toilet or latrine.	A protected shallow well with a handpum considered an improved water supply if it <u>soak away pit, apron, and a drain</u> , and if located at least 30m from the closest toile latrine.	This is a dug well for which one of the folk conditions is true: 1) the well is <u>not protec</u> <u>from runoff water</u> ; or 2) the well is <u>not</u> <u>protected from bird droppings and anime</u> at least one of these conditions is true, the is unprotected. Source: UNCEF/WHO Joint Monitoring Programme
Indicator	2. Borehole	3. Protected Shallow Well	4. Unprotected Shallow Well
9			

How to measure	Choose the main water source for learning Institutions / public premises from the list	Choose the main water source for learning Institutions / public premises from the list	Choose the main water source for learning Institutions / public premises from the list
Photo		Source: http://www.wateraid.org/news/photo	
Definition from M&E Hand Book <sup>*1</sup> and/or general meaning	A protected spring is considered an improved water supply if it has a soak away pit, apron, and a drain , is located at least 30m from the closest toilet or latrine , and if it has a <u>water-tight</u> <u>concrete cover</u> to protect from runoff.	This is a spring that is subject to <u>runoff</u> , <u>bird</u> <u>droppings</u> , or the <u>entry of animals</u> . Unprotected springs typically do <u>not have a</u> <u>"spring box".</u> Source: UNCEF/WHO Joint Monitoring Programme	Dam-a barrier constructed to hold back water and raise its level, the resulting reservoir being used in the generation of electricity or as a water supply
Indicator	5. Protected Spring	6. Unprotected Spring	7. River/Stream/Lake/Dam
N N			

k <sup>*1</sup> Photo How to measure	on such Choose the main ith small water source for	learning Institutions / public premises from the list	free Yes or No	such as a Choose the main choose the main solid waste disposal Method for learning Institutions / public premises from the list.	askets Choose the main solid waste disposal Method for learning Institutions / public premises from the list.
Definition from M&E Hand Bool and/or general meaning	Other sources of water for the institution as rain water, water tank truck, cart wi	tank, bottled water and etc. (Specify)	Surrounding is free from excessive dirt, from bushes, <u>a soak way pit with stone</u> present.	Institutions with working disposal sites <u>land fill</u>	Institutions with working waste bins/ba
Indicator	8. Other		Is there a Clean Surrounding Area for the Main Water Source?	1. Disposal in Rubbish Pit	2. Disposal in Bin/Basket
No			11	5	N 1

ഹ

Indicator	Definition from M&E Hand Book <sup>*1</sup>	Photo	How to measure
3. Compositing	Solid waste <u>is converted into composite</u> manure which will later be used for agricultural purpose.	And the second sec	Choose the main solid waste disposal Method for learning Institutions / public premises from the list.
4. Burning	Incineration of waste materials converts the waste into ash, flue gas, and heat. The ash is mostly formed by the inorganic constituents of the waste, and may take the form of solid lumps or particulates carried by the flue gas		Choose the main solid waste disposal Method for learning Institutions / public premises from the list.
5. Burying underground	Waste are <u>buried under ground</u> and collected from under soils		Choose the main solid waste disposal Method for learning Institutions / public premises from the list.

How to measure	Choose the main solid waste disposal Method for learning Institutions / public premises from the list.	Choose the main solid waste disposal Method for learning Institutions / public premises from the list.	Choose the main solid waste disposal Method for learning Institutions / public premises from the list.	Choose the main solid waste disposal Method for learning Institutions / public
k *1 Photo	e op-hole	B	d many	(specify)
Definition from M&E Hand Boo and/or general meaning	An improved pit latrine should have th following characteristics : Privacy, Safe from collapse, Pit not full ,Impermeable floor ,Tight fitting dr cover, Non-leaking roof	Designated site for solid waste dumpin especially in market centres.	The disposal of <u>unwanted items in ope</u> <u>ground</u> . There is typically no leachate control, r control, no cover, no management, an waste pickers.	Other methods of solid waste disposal
Indicator	6. Pit Latrine	7. Public Dumping Site	8. Open Dumping	9. Other
No				

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			1		
No		Indicator	Definition from M&E Hand Book <sup>*1</sup> and/or general meaning	Photo	How to measure
œ		Number of Functional Basic Latrines	<ul> <li>Basic facility has the following characteristics: <ul> <li>A pit of any depth which is not full or over flowing</li> <li>Floor is a well finished mud slab with drop bole</li> </ul> </li> <li>Floor is a well finished mud slab with drop bole</li> <li>Walls can be made of anything but must provide privacy for the user</li> <li>Roof can be made of anything but must provide shelter from the user</li> <li>Some form of or no foot rests (that will guide appropriate positioning),</li> <li>A superstructure with some form of a closing mechanism or enclosure and a roof.</li> </ul>		Number of functional basic latrines
σ	stnəbut2 əlsM	Number of Functional Improved Latrines	<ul> <li>An improved sanitation facility should have the following characteristics:</li> <li>a well constructed and functional pit or receptacle with a minimum depth of 1.0 metre (which is not full or over-flowing), impermeable floor made of concrete, plastic, tiles or burnt brick with cement lining and foot rests</li> <li>a good <u>superstructure with a door</u>, <u>roof</u> and <u>walls</u> (which would offer privacy, comfort, security and dignity for the user) and</li> <li>some other hygienic features such as a <u>tight fitting droop hole cover</u> (which would minimise smell and movement of flies).</li> </ul>		Number of Improved latrines.

 $\infty$
Indicator	Definition from M&E Hand Book <sup>*1</sup> and/or general meaning	Photo	How to measure
	<b>Impermeable floor</b> : An impermeable latrine floor may be made from cement plaster, concrete, ceramic, fibre glass, metals, plastic, cay tiles/burn bricks plus motor, or other materials that can be cleaned easily. An impermeable floor must be smooth and solid, have no cracks, perforations, or openings other than the drop-hole. <b>Drop hole cover</b> : A drop hole cover should be tight fitting and cover the entire latrine drop hole. No gaps should be present that would allow flies to escape the latrine. A drop hole cover should be fitted with a handle for easy removal and replacement		
Number of Urinals	Made of Cement, tile/burnt bricks, plastic or ceramic with cement lining with drop hole cover		Number of boys urinals

No		Indicator	Definition from M&E Hand Book <sup>*1</sup> and/or general meaning	Photo	How to measure
11		Number of Flushing Toilets	Have running water available, and flush to either a sewer or a septic tank.		Number of flush toilets
12		Number of Toilets with access for the Physically Challenged	Accessibility can be viewed as the "ability to access" and benefit from some system and economic life which includes not only physical access but access to the facility to boost the inherent right of disabled persons to have unhindered access to the National Public Toilet Map, to enable users to locate public toilet facilities.		Number of toilets with access to physically challenged
10	ələr 2109	Number of Functional Basic Latrines	See indicator No.8		
11	n97 but2	Number of Functional Improved Latrines	See indicator No.9		

		lindiootou	Definition from MR F Hond Book *1		
ON		Indicator	Definition from INGE Hand BOOK and/or general meaning	rnot0	ноw to measure
12		Number of Urinals	See indicator No. 10		
13		Number of Flushing Toilets	See indicator No.11		
14		Number of Toilets with access for the Physically Challenged	See indicator No.12		
14	S.	Number of Functional Basic Latrines	See indicator No. 8		
15	มอนวออ	Number of Functional Improved Latrines	See indicator No. 9		
16	əT əlsî	Number of Urinals	See indicator No. 10		
17	N	Number of Flushing Toilets	See indicator No. 11		
18	S.	Number of Functional Basic Latrines	See indicator No. 8		
19	eachei Biema <sup>=</sup>	Number of Functional Improved Latrines	See indicator No. 9		
20	Р Т	Number of Flushing Toilets	See indicator No.11		

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How to measure	Number of HWFs without soap	Number of HWFs with soap
Photo		
Definition from M&E Hand Book <sup>*1</sup> and/or general meaning	A hand washing facility should allow for free flowing water to be released over the hands (e.g. bucket with tap, home plastic water facility, jug and bowl). <i>HWF with no water do not count</i>	A hand washing facility should allow for free flowing water to be released over the hands (e.g. bucket with tap, home plastic water facility, jug and bowl) and <u>Soap</u> should also be available next to the hand washing facility. <i>HWF with no water do not count</i>
Indicator	Number of Hand washing Facilities without Soap	Number of Hand washing Facilities with Soap
No.	21	22

12

How to measure	
Photo	
Definition from M&E Hand Book <sup>*1</sup> and/or general meaning	
Indicator	
No	

<sup>\*1</sup> Reference: INDICATORS CONCEPTS AND DEFINITIONS FOR IRRIGATION, WATER AND SANITATION, Ministry of Water Development and Irrigation, 2014

Appendix 3 Sample Report Format

MM.YYYY

XXXX District, DEHO and DWDO

# **XXXX Districts WASH Monitoring and Evaluation Report**

## 1. Introduction

Malawi Government is committed to providing adequate, reliable and sustainable water and sanitation services coupled with hygiene promotion to the citizens of Malawi to meet the ever increasing demand for safe water.

The vision of the water and sanitation sector is water and sanitation for all, always. The expected output for the water department under the MGDS is that Malawi is expected to have increased access to water and sanitation services averaging a distance of 500m from communities.

Monitoring activities are often carried out by a range of different actors at the national level, including the Ministry, NSO, Donor Agencies and Non-Governmental Organizations with the aim of coming up with a sector wide information system that could provide vital data and information for programme/project planning and implementation as well as resource allocation and prioritization in the sector. Regular data collection and analysis will provide a robust M&E and MIS systems that inform performance of the sector. Recently a study was conducted on the harmonised national WASH indicators in Mchinji to establish the current status of the sector.

This report therefore will base on the findings of a survey conducted in Mchinji on selected WASH indicators. Mchinji district has 16 health centres that are responsible for delivery of health care services in 9 Traditional Authorities. The survey was conducted in the catchment areas of the 16 health centres. The HSAs were enumerators for this survey and Assistant Environmental Health Officer.

Since the survey was based on interviews and observations reliability may be compromised.

#### 2. Results and Discussion

The preliminary results of the survey showed that the district has an estimated population of about 507,013 in 109,143 households distributed in 1428 villages as shown in table below

T/A	Villages	Village Population	Number of Households
TA Mlonyeni	144	64,174	13,992
SC Mavwere	208	77,803	18,405
TA Zulu	149	79,786	17,827
SC Mduwa	259	72,331	14,462
TA Mkanda	321	95,654	20,040
SC Dambe	136	41,319	8629
TA Simphasi	155	56,730	11,793
STA Kapondo	2	915	192
STA Nyoka	54	18,301	3,803
Grand Total	1,428	507,013	109,143

Table 1: Population Distribution per T/A

Data: District environmental health office, Dec. 2014 – Jan. 2015

# 2.1 Sanitation and Hygiene

According to WHO "Sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and faeces. Inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health both in households and across communities. The word 'sanitation' also refers to the maintenance of hygienic conditions, through services such as garbage collection and wastewater disposal as well as provisions of sanitary facilities such a pit latrine and refuse pits for the rural areas.

#### a). Latrine Coverage

This study revealed that the coverage of these sanitation facilities in still inadequate in Mchinji district requiring the attention of Authorities. Statistics indicate that total latrine coverage is at 46% and this varies per T/A. The table 2 below shows:

Traditional Authority	Total Latrine coverage
TA Mlonyeni	48%
SC Mavwere	48%
TA Zulu	47%
SC Mduwa	32%

#### Table 2: Latrine coverage

Traditional Authority	Total Latrine coverage
TA Mkanda	54%
SC Dambe	54%
TA Simphasi	33%
STA Kapondo	76%
Grand Total	46%

Data: District environmental health office, Dec. 2014 – Jan. 2015

From the table above it shows that latrine coverage is below 50% and T/A Mduwa has the lowest coverage of latrines pegged at 32%. This is a far low percentage as per the dream of Malawi to be ODF of ODF Malawi by 2015. This therefore calls for immediate action to reverse the situation so as to improve the sanitation standards in the communities consequently improving the health of the rural masses.

Traditional Authority	Unsatisfactory Latrines Coverage	Total Basic Latrine coverage	Total Improved Latrine coverage	Composting Toilet (EcoSan) coverage	Flush Toilet coverage
TA Mlonyeni	17%	43%	5%	0%	0%
SC Mavwere	20%	44%	4%	1%	0%
TA Zulu	19%	37%	11%	1%	4%
SC Mduwa	28%	30%	1%	0%	0%
TA Mkanda	20%	52%	2%	0%	0%
SC Dambe	14%	52%	2%	0%	0%
TA Simphasi	23%	30%	3%	1%	1%
STA Kapondo	8%	76%	0%	0%	0%
STA Nyoka	24%	38%	4%	0%	0%
Grand Total	21%	41%	4%	0%	1%

# Table 3: Latrine Coverage by Technology

Data: District environmental health office, Dec. 2014 – Jan. 2015

From the table above it shows that basic latrines are the most locally available technology among all other different technologies for latrines accounting for 41%. Ecosan and Flush toilets rank the least of all the technologies. According to the results in table above, the only T/A with relatively higher number of flush toilets is Zulu with at least 4%. This may be attributed to the fact that it is located at the headquarter of the district hence flush toilets due to availability of piped water.

# b). Hand Washing

The study has shown that hand washing behaviour is very low in Mchinji accounting for 10%. Those that wash hands using soap are very few only 3% of the total households with those

that do not use soap accounting for 7%. This shows that there is a lot that needs to be done to improve the hand washing behaviour with soap or without soap. The figure below shows the hand washing behaviour coverage.



#### Fig.1 Hand Washing Behaviour Coverage

Data: District environmental health office, Dec. 2014 – Jan. 2015

From the graph it shows that T/A Kapondo, Mduwa and Mkanda have the least coverage in terms of hand washing behaviour. This is in agreement with the level of sanitation in the T/As Mduwa and Kapondo. This means Traditional Authorities Kapondo and Mduwa should be given priority when it comes to issues of promoting hand washing facilities and hand washing behaviour as well as sanitation promotion.

#### c). Solid waste management system coverage

This survey has revealed that only 20% of house households have some sort of functional solid waste system which is mainly waste pits while the majority 80% practising open dumping. The coverage varies per Traditional Authority as shown in the graph below.



Fig2: Graph Showing Coverage of Solid Waste Manage System

Data: District environmental health office, Dec. 2014 – Jan. 2015

Again the situation above is worrisome to the health authorities as unmanaged garbage does not only harbour disease vectors but also cause environmental hazards in addition to filthy environment. This survey has revealed that solid waste management at household level is a big problem in Mchinji. Traditional Authority Simphasi is the least served in terms of solid waste management.

# d). Community Led Total Sanitation Triggering (CLTS)

Community Led Total Sanitation is a process to inspire and empower rural communities to stop open defecation and start to build and use pit latrines without external hardware subsidy. CLTS is based at stimulating a collective action towards stoppage of open defecation in their communities. This is an approach that the government of Malawi adopted as a tool for promoting sanitation in communities as well as schools and institutions. This study has stabled that those villages that were reached with triggering are only about 32%. This percentage varies among traditional Authorities. The map below shows the coverage of CLTS triggering per Traditional Authority.



Fig3: Map showing coverage of CLTS triggering

Data: District environmental health office, Dec. 2014 – Jan. 2015

From the map it has shown that more than 75 % of T/A Mkanda had been triggered with CLTS while T/A Mduwa is the least triggered. This shows that efforts have not been evenly distributed to the whole of Mchinji district in terms of triggering. In addition, Traditional Authorities Mduwa, Simphasi and Kapondo are the least served according to this survey. Of all the triggered villages only 5% were verified as Open Defecation free (ODF). And there is no ODF ++ villages so far.

# 2.2 Water Supply Coverage

The survey found out that water supply coverage is around 74% but this varies across the traditional Authorities. Some T/As have better coverage than others. This shows that there is need to do more in terms of water supply. The findings also revealed that functionality of the water points is relatively better pegged at 83%. However, this should not cause the authorities to relax since functionality is supposed to be almost 100%. The fig below gives a summary of coverage and functionality per T/A as well as the grand total.



# Fig.4. Graph showing Water Coverage and Functionality.

Data: District environmental health office, Dec. 2014 – Jan. 2015

Water supply coverage and functionality varies also among T/As as well as in terms of technology. Traditional Authorities Dambe and Mlonyeni are the least served in terms of water supply coverage pegged at 60 and 62 percent respectively. Therefore, these two T/As should be the given priority any time when new water supply facilities will be constructed.

# 2.3 Community Based Management Training (CBM)

Community based management refers to all process done to empower the community to have a sense of ownership and responsibility over their water points and such that they maintain the water point when it breaks. Therefore the trainings are conducted with the aim of empowering communities to take over responsibility and ownership of water points such that they do operation and maintenance of their water points.

This report therefore gives a summary of the statics as of the date of the survey. The study has revealed that only 50% of all the committees received CBM training while 2% received refresher training with the remaining 48% not. Even if the committee may have been trained in initial CBM but with time there is loss of members that due to marriages and or death. This means there is need for refresher training to be conducted to the members that replace those who leave the committee on regular basis. Activeness of water point committee is highly linked to whether the committee was trained or not. The activeness of committees' is highly linked to training those committees that are trained and that this may have an impact on the functionality of the water point. This underscores the need for CBM refresher course to be conducted on regular basis by water department at district level. The Figure below shows percentage of WPC that received initial and refresher CBM training.



Fig.5: Graph Showing Percentage of WPC Trained in initial and Refresher CBM

Data: District environmental health office, Dec. 2014 – Jan. 2015

### 2.4 Area Mechanic Contracts with Water Point Committees

Through CBM trainings water point committees are empowered with skills to do minor repairs to the borehole. However, more advanced repairs require the help of Area mechanics who have skills to repair complicated breakdowns. As such Area Mechanics are a crucial part of the operation and maintenance system. Since Area mechanics do repairs at cost that is paid by the water point committee, their work is done through contracts. The number of contracts made between Area Mechanic and Water point committee determines how much they have worked in that particular period. This survey shows that only 6% of the committees had service contracts with the Area Mechanic. This percentage varies across T/As as shown in the figure below. T/A Mkanda was found to have the highest number of contracts pegged at 12% in Mchinji.



Fig.6 Graph showing percentage of committees on Contract with Area Mechanics

Data: District environmental health office, Dec. 2014 - Jan. 2015

From the graph above it is shown that about 94% of WCPs are not on contract with Area Mechanic. This may be attributed to lack of initial and or refresher training which zero's in on the need for WPC to be on preventive contract with Area Mechanics. The other reason could be attributed to financial problems with the committee because the community members lost trust due to mismanagement of contributed water funds.

#### 3. Conclusion

Looking at the above findings it can be concluded that sanitation and hygiene coverage is still low with latrine coverage pegged at 46% while hand washing behaviour is at 10%. This study has revealed that only 20% of all households in the district have a properly functioning solid waste management system.

The above results showed that 32% of villages in Mchinji have been reached with CLTS triggering out of which 5% were verified as ODF.

Water coverage is at 74% while functionality is at 83%. Since water is life the remaining 26% is still a bigger percentage that needs to be served with water.

#### 4. Recommendations

 It should be recommended that more efforts are required to reverse the sanitation problem and that efforts should be distributed across all T/As. It should be mentioned here that Traditional Authority Mduwa is the least served in terms of sanitation and hand washing behaviour and that more efforts needs to be directed to this Traditional Authority.

- 2. It should be concluded that Mchinji district still needs more water supply facilities to cater for the remaining 26% who have no access to safe water and also to improve the functionality from 83% to 100%. Furthermore, it should be mentioned that Traditional Authorities Dambe and Mlonyeni are the least served in terms of water supply.
- 3. Based on this survey 48% of water point committees have not been trained and these require refresher training so that they are able to carry out their duties properly.



**Rural Water Supply Operation and Maintenance Series** were developed for planners, managers and practitioners for the practices of operation and maintenance of boreholes fitted with Afridev hand pumps in rural Malawi.