

MANUAL 4

ANALYSE YOUR WASH KAP DATA



Contents

STEP 1: EXPORTING YOUR DATA FROM YOUR ONLINE KOBO PLATFORM.....	3
STEP 2: USING THE WASH KAP EXCEL ANALYSER.....	5
2.1. Discovering the WASH KAP Excel Analyser	5
2.2. Pre-set graphs and indicators	6
2.3. Filtering data for general indicators and graphs	7
2.4. Using the KoBo Excel Analyser tabs	7
STEP 3: MAPPING OUT THE RESULTS WITH THE KAP MAPPER.....	9
3.1. Discovering the WASH KAP Mapper	9
3.2. Creating a map with your data.....	11
ANNEX: MORE DETAILED SETTINGS OF THE KOBO EXCEL ANALYSER.....	14

The WASH KAP Analysis tool aims at helping you:

- Calculate the standard HCR WASH indicators in a couple of clicks
- Obtain pre-defined graphs and maps to help analyse a WASH KAP survey data in more detail depending on the partner organisations' local needs

This manual's aim is to explain you how to use the WASH KAP Excel Analyser and WASH KAP Mapper.



Note that these tools will work only if you used the WASH KAP survey template also made available (and adapted to your needs) as part of this project.

The WASH KAP survey data analysis can be performed on three different tools depending on your needs:

Tool	Type of use
Online KoBo platform	To review your data in real time on tabular view mode and use the automatic reporting and mapping functions with possible disaggregation of answers
WASH KAP Kobo Excel Analyser (made available as part of the project)	To automatically calculate the UNHCR 13 key-indicators, To create offline graphs with possible disaggregation of answers.
WASH KAP mapper (made available as part of the project)	To visualise geographically relevant key-indicators directly on a map

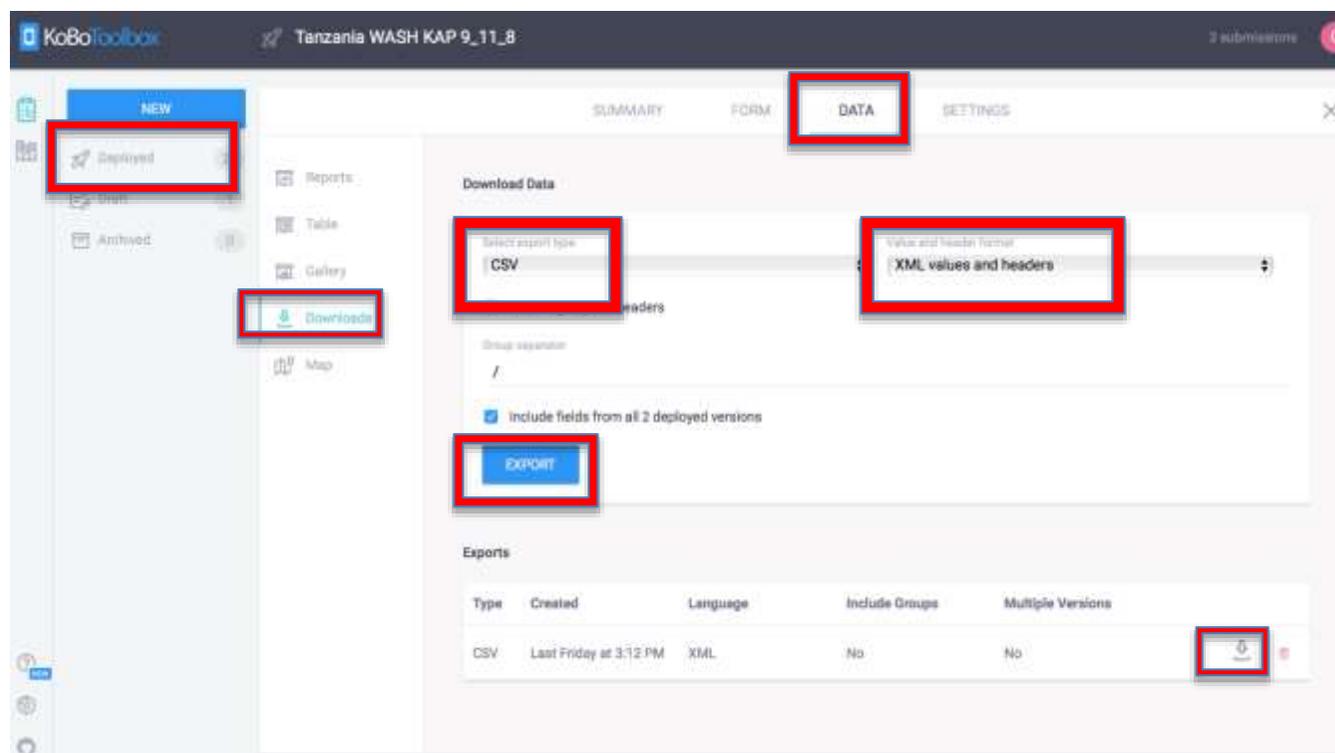
Of course, you can also use any other tool you wish for your operational needs; you just have to export your KoBo account data in the format corresponding to the tool in question.

STEP 1: Exporting your data from your online KoBo platform

Prior to any analysis, whether it is on the WASH KAP Excel Analyser or the WASH KAP Mapper, you will have to first export your data from your online KoBo platform.

To export your data:

- 1- Go to the KoBo platform; on the homepage, select the project for which you want to analyse data.
- 2- In the "Data" section, go to "Download".
- 3- Select the CSV "Export type"; then, select the XML Label (normally set by default) or Value and header from the "XML values and headers" feature and click "Export"
- 4- A new line appears in the table below; you can then click on the "Download" icon.
- 5- The file is automatically saved in the "Download" folder of your computer.
- 6- We suggest you save it in your WASH-KAP related folders.



The analysis tools come with sample data that you can use to get an idea for how it works and what are the available features.

Once you feel familiar enough, you can import your own data.



If you import data into an analysis tool that already contains data, the old data will be removed from the tool and only the latest data you have imported will be displayed. In other words, this tool is meant to work as a one-off importation manager (it does not store previous data).

STEP 2: Using the WASH KAP Excel Analyser

2.1. Discovering the WASH KAP Excel Analyser

As a first step, get the "WASH KAP analysis tool" from the UNHCR WASH KAP website; make sure it is the version that corresponds to the WASH KAP mobile template you are using.

- The tool number must correspond to the survey version you used (i.e., if you used the survey template named WASH_KAP_mobile_template_v9_8_2, make sure the analysis tool is named "KAP Analysis tool v9.8_FR_ENG")

Once the file is opened, start by choosing the language (English or French) with which you want to work.

The analysis file opens on the "Instruction" tab, but it also contains other important tabs that we will detail below:

Instruction: this page specifically details how the tool works (in this manual, we will not go back in detail on the procedures that are already presented in the tool). The instructions specify:

- How to import data into the tool,
- How to update your survey template
- How to configure the analysis tool.

Two specific tabs on top of the instruction tab have precisely been developed for this project:

- **Core indicators:** this page automatically generates UNHCR's main 13 indicators based on the data file you imported.
- Note that you can also compare two different datasets by following the procedure for importing two different datasets.
- **Indicators definition:** detailed definition for each of the 13 indicators.

The following tabs correspond to the KoBo Excel Analyser developed by OCHA:

- **Config:** It is on this page that you can set some useful options for other analysis tabs (BarGraph/PieChart): you will for instance be able to choose the language in which you want to generate your graphs.
- **BarGraph/PieChart:** the tables and graphs provided in these 2 pages will be updated automatically based on your data. These graphs can be created in 2 different styles: bar graphs and pie chart questions.
- **Survey/choices: these two pages** will automatically be updated when importing your form in XLS format in the "Instruction" page. These two tabs are essential for carrying out the analysis as they will take into account any small adaptations you may have made to the standard form (camp name, languages used, etc.).

2.2. Pre-set graphs and indicators

The primary use of this tool is to have access to a certain number of pre-calculated indicators and graphs that are of general interest in WASH KAP surveys. These are available under the “Core Indicators” tab:

Note
 - This sheet is best used at 80% zoom on most screens;
 - The default data shown is a fake dataset for the purpose of demoing the tool

Filters for Dataset 1		Filters for Dataset 2	
Camp filter	all	Camp filter	A
Cluster filter	all	Cluster filter	all
Zone filter	all	Zone filter	all
Block filter	all	Block filter	all
Section Filter	all	Section Filter	all

1 - Global Indicators

Legend on computed indicators' colors:	Main indicators for the surveyed population									Secondary indicators for the surveyed population			
Above Emergency and Post-Emergency Standards level	1 - Average liters of potable water/per person/per day collected at HH level	2 - % HHs with at least 10 L/p protected water storage capacity	3 - Average distance to waterpoint (in meters) for the 2% of HHs with longest distance	4 - % HHs collecting drinking water from protected/treated sources	5 - % HHs with family latrine/collect	6 - % HHs reporting defecating in a toilet/latrine	7 - % HHs with access to soap	8 - % HHs with access to solid waste disposal facility	9 - % of recipients women of reproductive age who are satisfied with menstrual hygiene management materials and facilities	10 - % HHs with access to a specific hand-washing device	11 - % of respondents knowing at least 3 critical moments when to wash hands	12 - % HHs practicing open defecation. **Includes defecating in the bush at night.	13 - % HHs having access to a bathing facility
Between Emergency and Post-Emergency Standards level	≥ 15	≥ 70%	≤ 500m	≥ 70%	=	≥ 60%	≥ 70%	≥ 70%	≥ 70%	≥ 70%	≥ 60%	0%	≥ 70%
Below Emergency and Post-Emergency Standards level	≥ 20	≥ 80%	≤ 500m	≥ 95%	≥ 85%	≥ 85%	≥ 90%	≥ 90%	≥ 50%	≥ 90%	≥ 80%	0%	≥ 90%
Emergency Standards	≥ 15	≥ 70%	≤ 500m	≥ 70%	=	≥ 60%	≥ 70%	≥ 70%	≥ 70%	≥ 70%	≥ 60%	0%	≥ 70%
Post-Emergency Standards	≥ 20	≥ 80%	≤ 500m	≥ 95%	≥ 85%	≥ 85%	≥ 90%	≥ 90%	≥ 50%	≥ 90%	≥ 80%	0%	≥ 90%
Population surveyed (dataset 1)	8,2	44,0%	400	100,0%	71,0%	90,0%	70,0%	58,0%	60,2%	48,0%	83,0%	43,0%	91,0%
Population surveyed (dataset 2)	8,0	48,7%	400	100,0%	66,7%	87,2%	69,2%	61,5%	76,9%	53,3%	79,5%	46,2%	87,2%

2 - Global graphs

The graphs available below are based on the data you have imported in Step 2. Data from both Datasets 1 and 2 are reflected here. To the left of each graph, there is a table where you can define the class limit of each category. This allows you to produce graphs that better suit your data and uniformize it with other graphs you produce in your reports. Note: these graphs are simple Excel graphs - if you know how to further personalize graphs in Excel, don't hesitate if you need to!

Distribution of households by distance to nearest waterpoint (meters)

Categories - Distance to waterpoint (the last category is open)	
Class limits	Distance (meters)
Class 1	0
Class 2	50
Class 3	150
Class 4	200
Class 5	400
Class 6	500

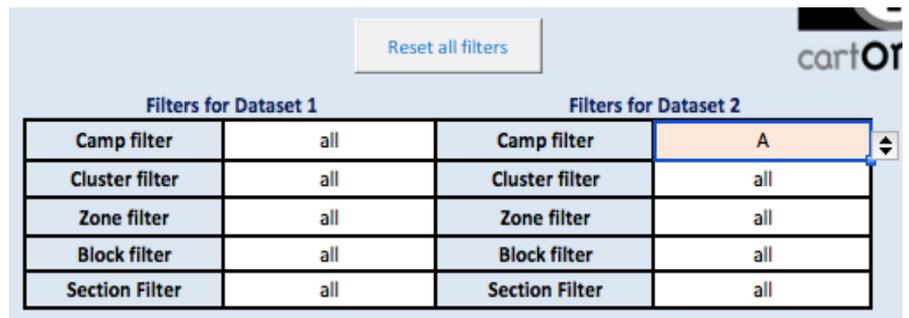
Categories - Water consumption (the last category is open)	
Class limits	Water (L/p/d)
Class 1	0
Class 2	5
Class 3	10
Class 4	15
Class 5	25
Class 6	40

Distribution of households based on daily water consumption

2.3. Filtering data for general indicators and graphs

As for the graphs mentioned above, it is possible to filter data related to general indicators and graphs -- by various data, i.e., by camp (if more than one camp is being surveyed) or by cluster.

This is done by using selectors at the top of the tab.



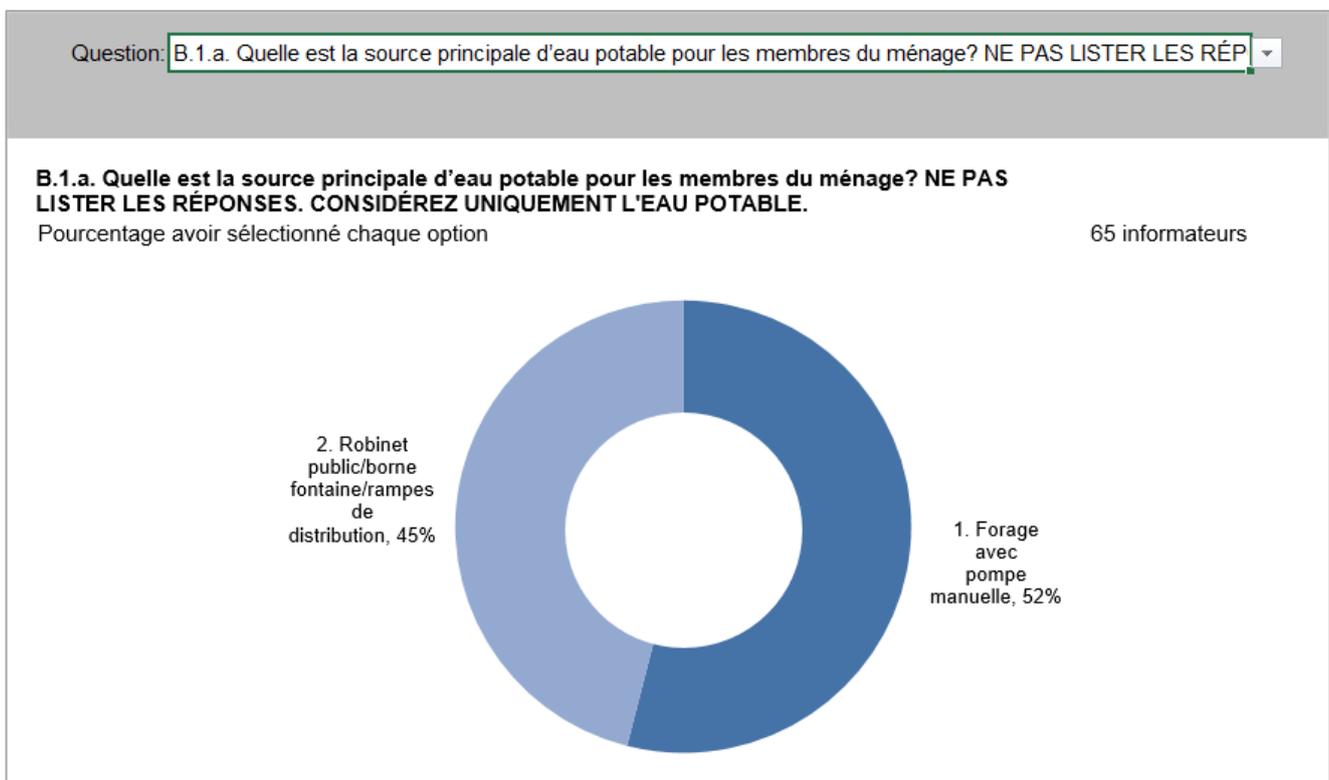
The screenshot shows a filtering interface with a 'Reset all filters' button at the top. Below it are two columns of filters: 'Filters for Dataset 1' and 'Filters for Dataset 2'. Each column contains five filter rows: 'Camp filter', 'Cluster filter', 'Zone filter', 'Block filter', and 'Section Filter'. The 'Camp filter' for Dataset 2 is currently set to 'A', while all other filters are set to 'all'.

Filters for Dataset 1		Filters for Dataset 2	
Camp filter	all	Camp filter	A
Cluster filter	all	Cluster filter	all
Zone filter	all	Zone filter	all
Block filter	all	Block filter	all
Section Filter	all	Section Filter	all

2.4. Using the KoBo Excel Analyser tabs

The KoBo Excel Analyser component (Bar Graph, Pie Chart tabs...) allows you to go further in your operational analyses by processing each variable and disaggregating them if needed.

Here is an example of graph made with this tool:



The survey template is designed in a way that the analysis plan is partly in place in the tool already; indeed, the tool displays questions by analysis tab; it is also true for disaggregation variables depending on what is defined in the XLS form template. This is thanks to a column named "analysis" in the "survey" tab that is included in the XLS form you have imported.

The available options are the following:

- BarGraph: C
- PieChart: U
- Disaggregation (by block, cluster, etc): D

If you have added questions of your own that are of a type recognisable by the tool (single or multiple option, integer...), make sure that you have also updated them in the “survey” tab accordingly for them to be taken into account by the Kobo Excel Analyser tabs.

Not all questions can be analysed from all tabs. If a question is not available for a given type of graph, it will not show up in the dropdown menu even if you write the letter in the proper cell in the analysis column.



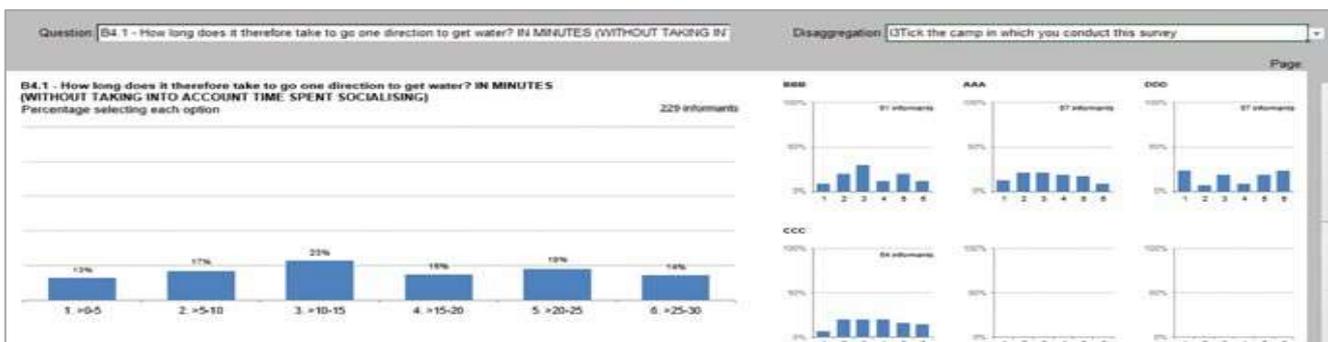
If you combine several options, you need to separate letters with a space.

Disaggregation options:

Using options for disaggregation will allow you to analyse the data for sub-groups if you specify a "D" in the analysis column.

- In this example, we have one of the questions selected (about open defecation) On the right, the same question is analysed for each survey area (5 in that case). This helps to see if there are differences in the data. For instance, you can see a "D" related to administrative questions, which will allow to disaggregate data depending on these.

See further information in relation with the setting of these Kobo Excel Analyser tabs in annex.



Note: you cannot use the disaggregation functionality for “integer” type questions.

STEP 3: Mapping out the results with the KAP Mapper

3.1. Discovering the WASH KAP Mapper

The "WASH KAP Mapper" allows you to display your WASH KAP survey data. These standardised or customised maps complete the reports generated by the WASH KAP Excel Analyser.

The tool makes it possible to display several predefined WASH indicators. The households surveyed appear in red, orange or green depending on whether the indicator target is achieved or not.

These indicators are the following:

- Average L/p/d (litres per person per day) of potable water collected at the household level
- Households with at least 10 litres/person of potable water storage capacity
- Distance from household to potable water collection point
- Households collecting drinking water from protected/treated sources
- Households with household/family latrine/toilet
- Households reporting defecating in a latrine/toilet
- Households with access to soap
- Households with access to solid waste disposal facility
- Households satisfied with MHM materials and facilities

Example of analysis:

The households surveyed are mapped and a qualitative evaluation is calculated based on their access to soap

- Not met: red
- Met: green
- No data: grey

The map helps identify areas where many households have not been able to present soap under 1 minute to the enumerator. This layer of information can be cross-matched with other indicators in order to obtain an overall understanding of the current situation on the ground.

Households with access to soap

The screenshot displays the WASH KAP Mapper interface for 'Households with access to soap'. The sidebar on the left contains the following elements:

- UNHCR logo
- How to use the map +
- Upload the CSV with the results of the survey: a6nc2954WoyQKdvdvXyeQY_2018_08_27_10_22_02.csv
- The extent of the map will be set according to the households stored in your data
- Choose indicator: Households with access to soap
- Add Camp name and Country:
-

The main map area shows a street map with colored dots representing households. A popup window is open over a red dot, displaying the following data:

Number of people in the HH	19
Number of children in the HH	7
Access to soap in HH	No
Maximum distance from HH to potable water collection point	No data available
Distance to closest active hand/foot pump present in the UNHCR borehole Database or tapstand in Camp Mapping Database	347m

UNHCR indicator status:

- Met (Green dot)
- Not met (Red dot)
- No data (Grey dot)

Survey date: 13/7/2018 | Source: UNHCR WASH KAP, OSM contributors
The boundaries and names shown and designations used on this map do not imply official endorsement or acceptance by the United Nations.

Developed by Ordnance Survey

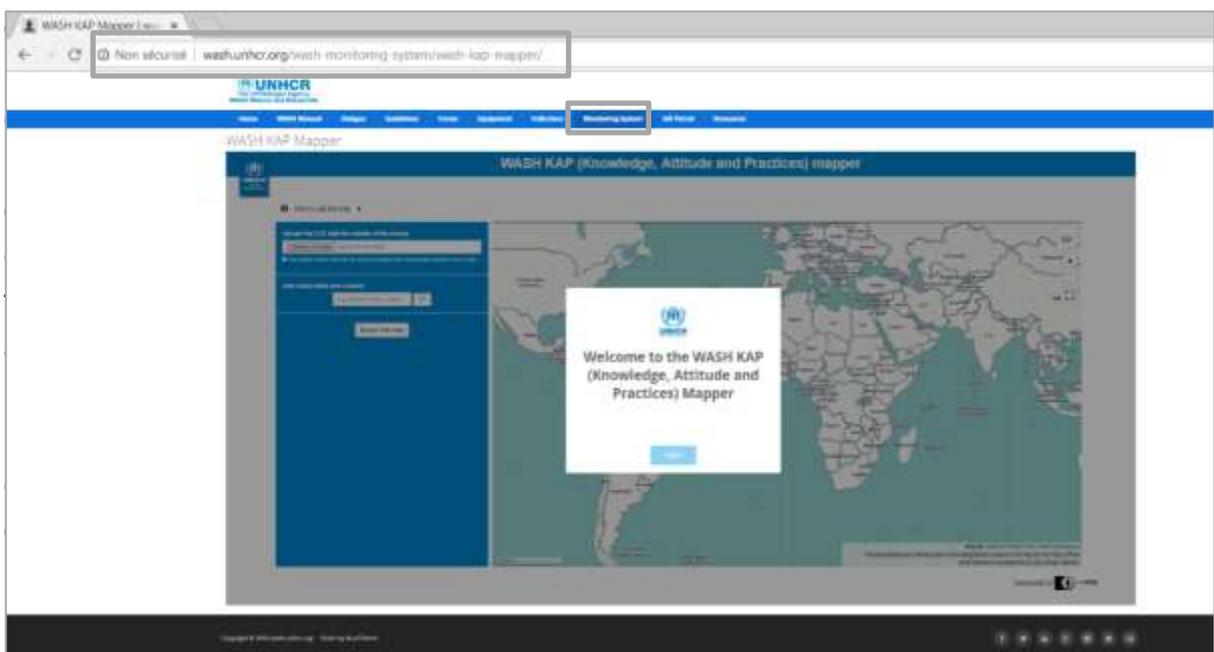
For camps where UNHCR infrastructure data has been mapped, a buffer zone can be displayed around taps and pumps on the map to compare KAP indicators with UNHCR's standards on water coverage.

When you click on a given point, a set of information related to the survey is available, i.e., number of children, or distance between water distribution points and households surveyed.

3.2. Creating a map with your data

To start:

- 1- Export your WASH KAP survey data from your online KoBo platform in a CSV + “XML values and headers” format file.
- 2- Access the online WASH KAP Mapper: from your search engine, go to the UNHCR website here: <http://wash.unhcr.org/>. Then, in the "Monitoring System" section, select the "WASH KAP Mapper" option.
- 3- On the WASH KAP Mapper's homepage, click on "Start" to continue
- 4- By default, the background map is OpenStreetMap - OSM is a collaborative, free and open license world map under. (<https://www.openstreetmap.org>). If there is a detailed site mapping dataset from UNHCR available through m

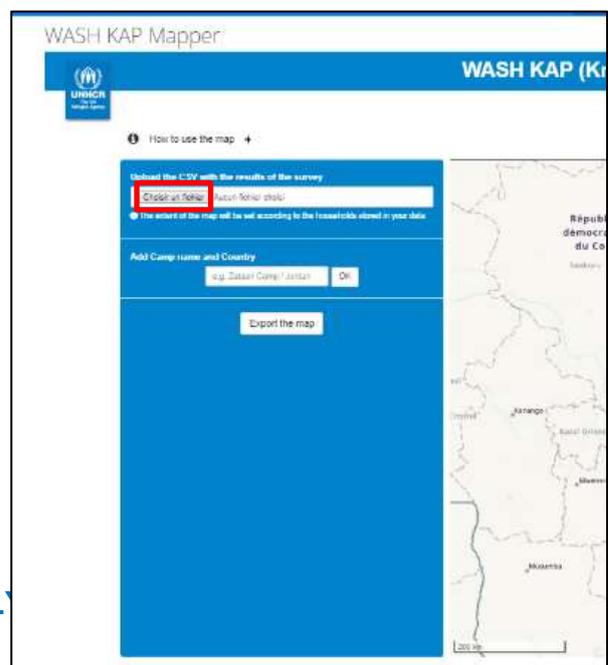


a

p

ping exercises, it will be visible automatically.

- 5- Import the CSV file that contains your survey data.
- 6- The map is focusing on the area where your households are located (by showing them as small grey spots).

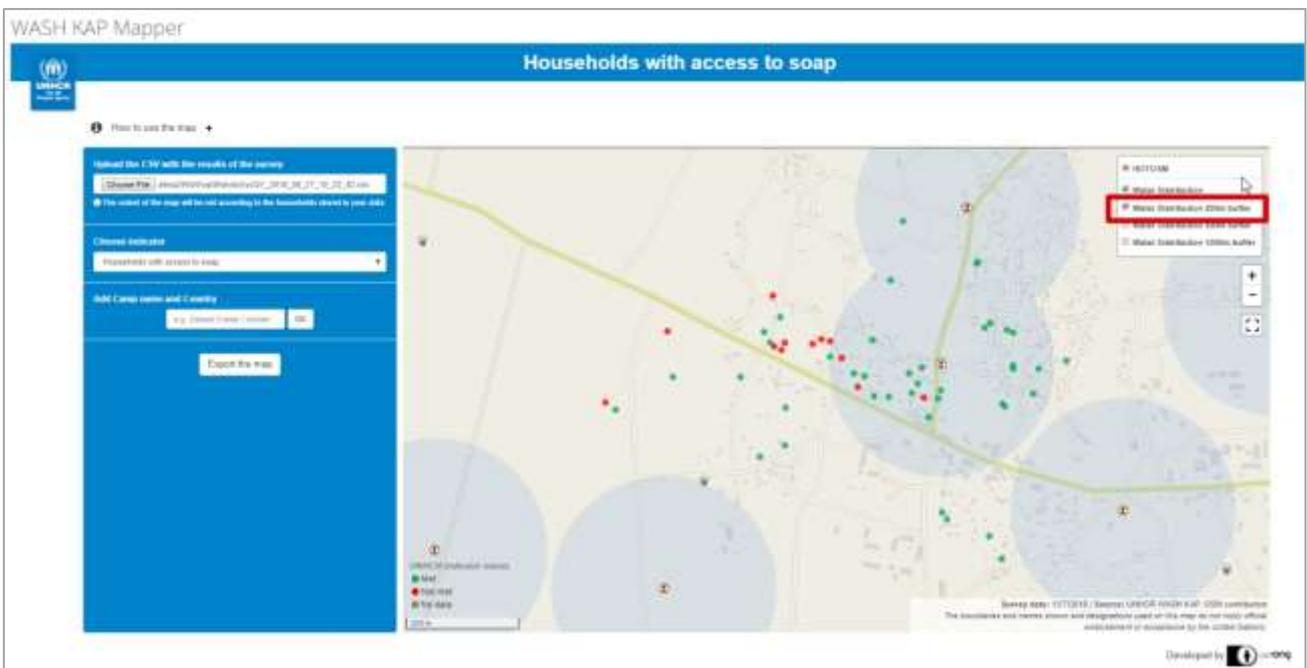


You can manage your background, i.e., activate/deactivate the UNHCR Camp mapping layer or the HOTOSM background map by using the layer control functionality located at the top right corner of the map.



Be careful: it can take a few minutes to display the "camp mapping" background map depending on the quality of your internet connection.

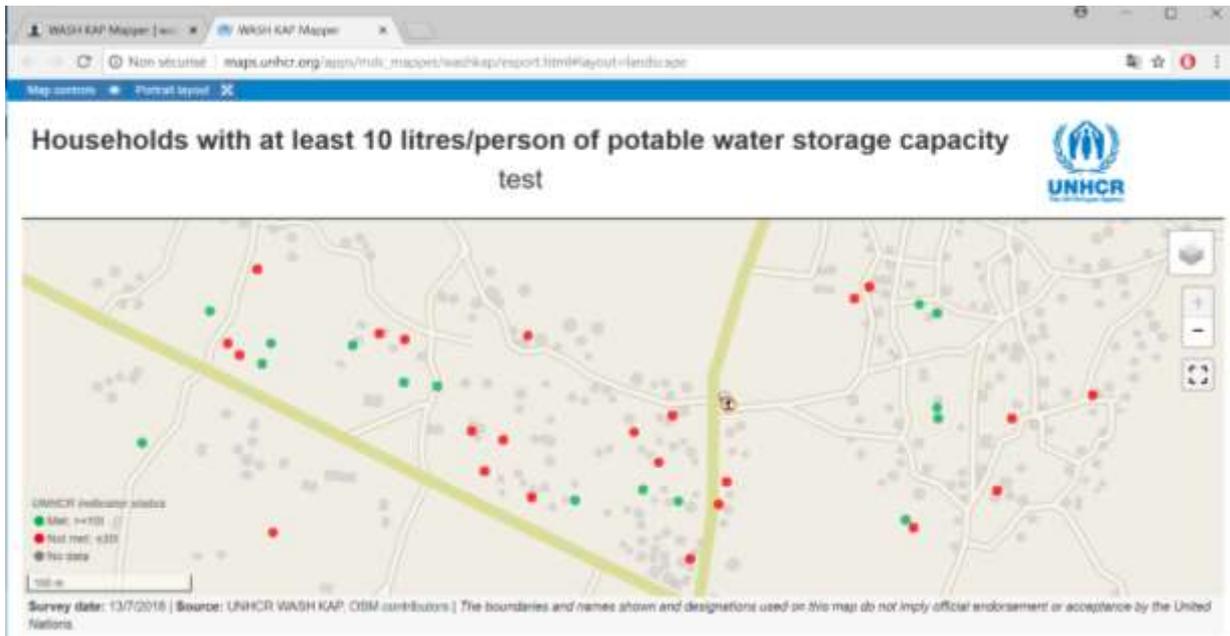
- 7- In "Choose indicator", select the information you wish to have displayed.
- 8- Once the indicator is chosen in the menu, the grey icons on the map will appear in colour, and the title bar and legend will change accordingly.
- 9- You can also add 200, 500, or 1000m buffer zones around UNHCR'S water points to view the surveyed households' access to them.



- 10- To improve the name of your map, you can add the camp and / or country's name(s) or some text you want to have as map title). Then, click "OK": the information will be added automatically to the map's title.
- 11- Once you are satisfied with the symbology and map title, click on "Export map" The page's style will now change to match the UNHCR standard map style; this may take a few seconds.

You can still zoom in and obtain a panoramic view of the map by using the map commands on the right side or by using the mouse wheel and double-clicking. You can choose between a landscape or portrait layout by clicking the "Portrait layout" top bar button. You can make the tool's "Zoom and layer change" icons disappear from the map by clicking on "maps control"

12- You can also take a screenshot to obtain an image that can be included in a report.



Annex: more detailed settings of the KoBo Excel Analyser

This annex provides you with a detailed explanation on using the Kobo Excel Analyser.

1. Grouping models

This determines what categories will be used to display integer questions (where surveyors enter a number). It is important to note some elements to use them correctly:

Figure 9: Grouping models

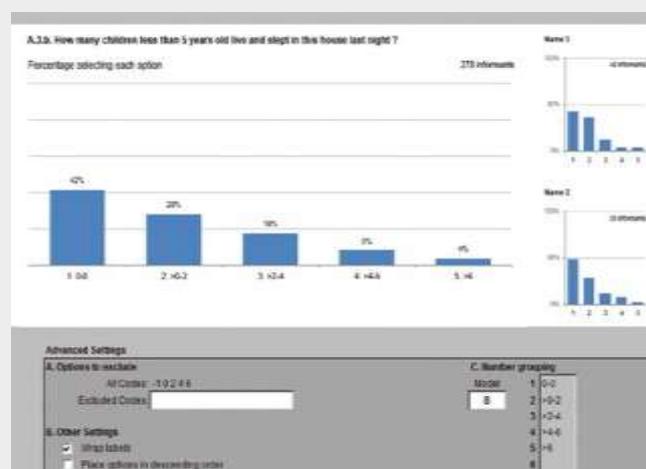
Thresholds for number grouping models				
	A	B	C	D
0	-1	-1		
1	5	0		
2	10	2		
3	15	4		
4	20	6		
5	25			
6				

- In each category, the lowest number is excluded, and the highest number is included. For example, in column “A” above, the categories would be: 0-25, 0-6, etc.
- If you want the last category to be open (to include all numbers higher than the last one you have entered), you need to leave the box empty. In the example above, all numbers “25 and above” will be grouped together in the last category for model A while in model B all “6 and above” will be grouped together.

As an illustration, we used model “B” to analyse the number of children below 5 years of age in each household:

In the beside example, we see that 34% of households had no children under 5 while 55% had 1 or 2, etc.

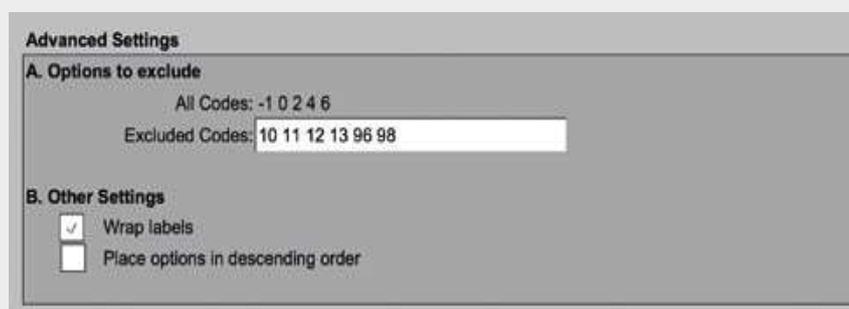
Figure 10: Categories have been set according to the grouping model “B”



2. Exclusion codes

In some cases, you may wish to exclude some of the answers in your analysis – i.e., as in the case above, many choices have not been selected by any household. If we show them on the graph, it will make it difficult to read. We can enter their codes under “Excluded codes”, each one separated by a space if there are more than one to exclude:

Figure :15: Options to exclude and label wrapping



Advanced Settings

A. Options to exclude

All Codes: -1 0 2 4 6

Excluded Codes: 10 11 12 13 96 98

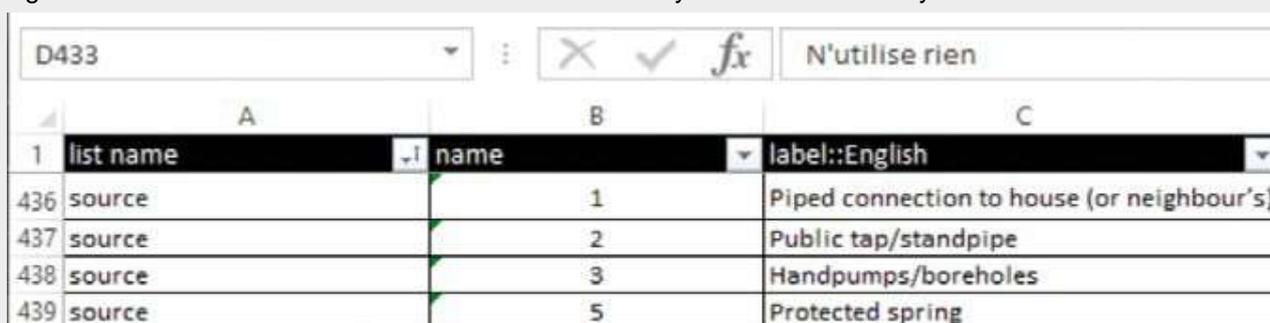
B. Other Settings

Wrap labels

Place options in descending order

How to find which value corresponds to which answer in your survey? You must look into the “choices” tab of your XLS form (the WASH KAP form we have provided):

Figure 16: How to find which codes to exclude based on your XLS form survey.



	A	B	C
1	list name	name	label::English
436	source	1	Piped connection to house (or neighbour's)
437	source	2	Public tap/standpipe
438	source	3	Handpumps/boreholes
439	source	5	Protected spring

In the above example, we have excluded the “Water seller”, “Tanker truck”, “Bottled water”, “Surface water”, and “Other” codes because they have not been selected in our survey. We also decided to exclude “Do not know” for programmatic reasons – we do not want to include non-responses in our analysis.

Another useful option in this section is “Wrap labels”. If you have lengthy options in your surveys, wrapping the text of the answer will simplify the graph presentation.

3. Other tips and tricks for your graphs

- The graphs are ordinary Excel graphs – they have nothing special per se. You can easily adjust their style and presentation to suit your needs just as if you had created them yourself based on your survey data.
- Some of the field data in the WASH KAP is calculated directly in the phone based on other information (such as the number of litres/person/day, which must be calculated based on all the trips made to fetch water and the number of members in the HH). These fields cannot be analysed with the Bar graph or Pie chart tabs of the tool, please use the main indicators tab to do so.

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Credits to the Kobo team for providing a tool setup to work directly with the XLS forms format. The “Kobo Excel Data Analyzer” is also available directly from the Kobo account.

It has been embedded in this analysis tool to allow the use of a single tool for Excel analysis.