



Booklet

Collection, entry and verification of data IV

Using a spreadsheet application for data entry

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About AfricaRice and Afrique-learning

AfricaRice:

AfricaRice is a leading pan-African rice research organization committed to improving livelihoods in Africa through solid science and effective partnerships. AfricaRice is a research center of CGIAR, which is part of a global research partnership on future food security. It is also an intergovernmental association of African member countries. Today, it has 30 member countries. The mission of AfricaRice is to contribute to poverty reduction and food security in Africa through research, development and partnership activities, aimed at increasing the productivity and profitability of the rice sector so as to guarantee the sustainability of the agricultural environment.

Afrique-Learning:

Afrique-learning is a Beninese cooperative which creates and manages vocational e-learning courses specially designed for African youth. Courses are tailor-made in collaboration with experts in the field with the aim of producing interactive, illustrated, interesting and easy-to-study courses that provide the student with important information in simple and appropriate language. Learning is done independently at the student's own pace, it is assessed and a course certificate is attained following a final test. Courses are available on computer, smartphone or android tablet. They only require a very modest bandwidth and are therefore within the reach of students. Registration and classes are free.

Acknowledgements

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Source of graphics

[1-5] Graphics are created by the pedagogical team.

Context of the booklet

This is the first part of the booklet that deals with data collection for a Smart-Valleys development project. Data is collected during the different stages of the inland valley development. It is used for project management, providing information on the progress of the project and making it possible to prepare project reports. At the same time, this data is also used as proof that tasks have been successfully completed by the service providers. The introduction to the concept of services can be found in booklet 5. A description of services can be found in guide 7.

Using a spreadsheet application for data entry

Why use spreadsheet applications like Excel or Google Sheets?

The Excel application is used to create forms for the ODK application. In this booklet you will find brief instructions on how to create the form. However, if the data is entered manually on a sheet of paper, it must be digitized. This is also done with Excel (or Google Sheets). Find the instructions on the last page of the booklet.

How the spreadsheet works

With the spreadsheet application you can create tables of several rows and columns to organize, structure and filter your content. You can do simple calculations like adding or multiplying but also quite complex calculations like statistics.

For these two functions, we create formulas for which the address of a cell plays a key role. Each cell has a “unique” address created by the intersection of the row (1, 2, 3, etc) and the column (A, B, C, etc.)

An example is shown below (A): “= Sum (K2: K4)” This formula, if entered in K5, will show there the result of adding together the digits entered in K2-K4.

	A	B	C	D	E
1	Lowland	Cultivable area	Cultivated area	Cultivated area with rice	Corn (yes / no)
2	Lowland Enagnon	5	13	4	No
3	Lowland Gbédokpo	9	21	2	No
4	Lowland Gbèzé	4	8	2	Yes
5		=sum(B2:B4)			
6					

A.

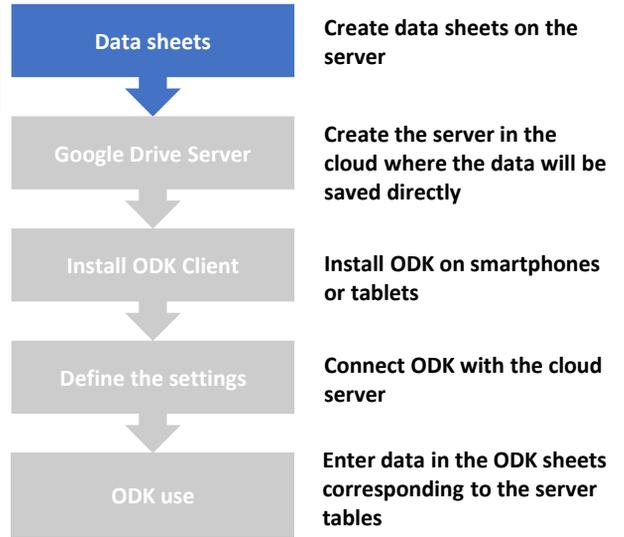
Figure 1

Creating a database for ODK

To create the data collection form with ODK, it is recommended that you use the "Households_surveys" template provided in the toolbox.

As you can see in the diagram to the right, creating the form is the first step in using ODK. The next step in the process is to create the server.

Please note the following.



- If you change the language, simply change the following columns in the spreadsheet sheets (A): "label", "hint", "constraint_message" (B)
- To add questions yourself (e.g. yield or crop from last season) or to remove other questions from the template, do so at row level (C)
 - when formulating a question, simply use the existing questions as a guide
 - a question always has the following elements (D):
 - **"type"** - here you define the type of data to be entered (letters, numbers, date, etc.)
 - **"name"** - this is the reference for the question in the database
 - **"label"** - this is the question the data collector sees
 - **"hint"** - here you can explain the question to the data collector (eg for the yield question there may be a brief reminder of how yield is determined)
 - **"constraint" + "constraint_message"** - here you can set a limitation for data entry to avoid entry errors beforehand; the relevant message then informs the data collector
 - **"required"** - indicate here with "yes" if answering the question is compulsory

	A	B	C	D	E	F	G	H	I	J
1	type	name	label	hint	relevant	constraint	constraint_message	repeat_count	calculation	required
2	start	start_time								
3	end	end_time								
4	deviceid	device_id								
5	subscriberid	subscriber_id								
6	simserial	sim_serial								
7	phonenum	phone_number								
8										
9	text	interviewer	Nom de l'enquêteur							yes
13	geopoint	int_location	Collectez les coordonnées GPS de ce ménage.	Tenez-vous directement devant l'entrée principale du ménage.						

Figure 2



Digitizing data collected in the field

As you can see from the diagram above, we are just beyond the data collection stage. The data was recorded by hand and must now be digitized. A technician or supervisor will perform the following steps to do this.

1. The first step is to create a table in a spreadsheet. This table reproduces the structure of a data sheet (Figure 3). The categories of data sheet form the header of the table. The entries from the different files are then placed in the rows. You use a new row for each data sheet. This example includes the data records for several inland valleys.

1. Identification data

Date (dd.mm.yyyy)
First name
Last name

Figure 3: Extract of a field sheet

	A	B	C	D	E
1	Lowland	Date (dd.mm.yyyy)	Name	First name	Cultivable area
2	Lowland Enagnon	26.05.2021	Mbogo	Hyacinte	5
3	Lowland Gbédokpo	04.05.2021	Mbaya	Raoul	9
4	Lowland Gbèzé	31.01.2021	Paul	Richard	4

Figure 4: Extract from a Google Sheets sheet with the categories of data and data already filled in

2. Now transfer the collected field data from the data sheets (Figure 3/4). When entering data pay attention to the spelling and format

3. Configure a filter (Figure 5) for easy troubleshooting. It can save you a lot of time, especially with large amounts of data. Additional spaces in front of the entry prevent the entries from being recognized. It is essential to avoid this. These and other errors can be quickly identified with the filter function. The data can then be verified by the person responsible.

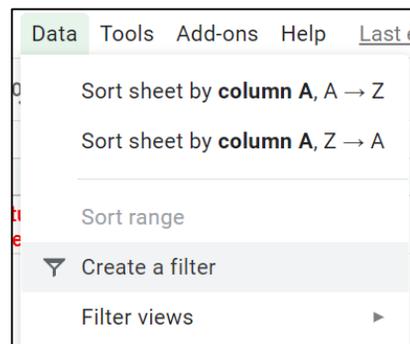


Figure 5: Filter insertion at Google Sheets level