

Kobo exercise - a primary data collection project

About Kobo Toolbox

Kobo Toolbox is an integrated solution for mobile data collection and analysis. See [their website](#) for more information about the various tools that they offer.

Workflow

Kobo replicates the workflow of traditional paper-based surveys:

	Paper-based survey	Kobo Toolbox survey
Plan	Agree on a survey form	Agree on a survey form
↓		
Build	Design a survey form (questionnaire) in MS Word or Excel	Create a 'project' in Kobo.humanitarianresponse.info
↓		
Deploy	Print a few hundred copies of the form and give them to enumerators	Design a survey form (questionnaire) in Kobo.humanitarianresponse.info
↓		
Collect	Train enumerators	On mobile devices, install the KoboCollect app or Google Chrome
↓		
Aggregate	Enumerators go into the field and fill out forms one by one	Deploy the survey form to mobile devices
↓		
Analyse	Enumerators return completed forms	Train enumerators
↓		
	Data entry staff transcribe form contents into Excel	Enumerators go into the field and fill out forms one by one
		Enumerators go online and upload collected data

	An analyst creates aggregations, statistical analysis, and maps	An analyst creates aggregations, statistical analysis and maps, either online or exporting the data to other tools
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Kobo Toolbox comprises two pieces of software:

- A web platform to manage projects, design forms, and analyse data. UN OCHA provides an instance of the Kobo web platform at [Kobo.humanitarianresponse.info](https://kobo.humanitarianresponse.info), free for humanitarians.
- A mobile app, [KoboCollect](#), for data entry. Android only. Alternatively, data entry can be done on any mobile device (laptop, tablet, mobile, etc) through the Google Chrome app.

Technical points

Kobo Toolbox is built on Google's [OpenDataKit \(ODK\)](#), hence forms built with ODK and Kobo are mostly interoperable, so you can exchange Kobo forms and data with ODK or another ODK-based tool.

Support for Kobo

See [OCHA's guidance and additional tools](#), and for Support [see the Kobo Toolbox site](#).

Kobo Toolbox Exercise

Preparations

We will cover the whole data collection workflow:

- Designing a form (on the Kobo web platform) and deploying it,
- collecting data in the field (with the Kobo mobile tools), and
- aggregating and analysing the collected data (again on the web platform).

We will be transcribing a paper form into the Kobo workspace for your use. The form is at the end of this document (2023-10-Outdoor-Survey). Familiarise yourself with the form.

You need a user account on Kobo.humanitarianresponse.info (OCHA's instance of the Kobo web platform), so sign up for an account now. See also [OCHA's \(really good\) guidance](#).

To collect data in the field:

- If you have an Android device, install the [KoboCollect app from Google Play](#).
- If you have a non-Android device (iPhone, iPad, Apple laptop, Windows laptop), install the Google Chrome browser.

Start a survey project

1. Log into Kobo: <http://Kobo.humanitarianresponse.info> You may need to create an account and verify it through a link sent to your email upon registration.
2. Create a project by selecting “NEW”.
3. Select 'Build from scratch'.

Design a Form

1. Set the project name to “2023-10 Outdoor Survey”
2. Add “Description”, “Sector” and “Country”.
3. Click “Create Project”. The project is saved and an empty form is created.
4. Click on the + button to add your first question.
5. Type in the question label for the first item in the questionnaire, ‘A1: Date of the assessment’, click Add Question, and choose the response type Date.
6. Add another question for ‘A2: Name of the assessor’, as 'Text'
7. Preview your form (Eye icon)
8. Add another question for ‘A3: Gender of the assessor’, with response type 'Select One' and add the options 'Male' and 'Female'.
9. In any of your questions click the cog icon; this shows question details. The 'Data

Column Name' is set automatically to the first 30 characters of your question title. Change the Data Column Name to your question identifier (A1, A2, etc). When exporting the collected data, these will be exported as column names.

10. Rearrange questions by dragging them up and down.
11. Group the questions you created: select them with CTRL + click on question (on a Mac, Command + click), then click the icon 'Create group with the selected questions'. Change the group label to replicate the paper form. To ungroup, click on the group's bin icon.
12. Click Save
13. Click X to exit the form, this takes you to the form overview. Click the "Edit" icon (pen) to continue editing.
14. Continue adding questions, replicating the paper form.
15. To add a choice question with the option 'Other', [see here](#)
16. The question "Type" will need a follow-up question to describe the "other" site type if it is selected. Create another question using the + button, filling in the question label as "If other, what site type is it?". Click on the Settings (cog) icon, and then under 'Skip Logic' tab, add the condition "Site type = Other".
17. To add location, use question type GPS.
18. Note that you can set the response to certain questions as mandatory by changing the settings to 'Mandatory Response: Yes'. Change if necessary.
19. Optional: add additional questions with other response types, like notes, photo, etc.
20. Optional: add a few questions to your Question Library, so you can keep the questions for other projects.

Continue building the form until it has at least 10 questions.

Optional advanced topics:

- Download your form as an XLS file, open it and try to understand the syntax.
- Cascading choices, e.g. for administrative hierarchies and capturing p-codes:
 - Find the cascading choices XLSX
 - GIS\2_Active_Data\215_3www\
 - <country>_3www_www_tab_s1_ma_pp_admnchoices.xlsx
 - Upload this XLS to your Kobo Library (not as a Form)
 - Add the cascading choices to a project
 - Deploy the project and add some entries
 - Download the XLSX data with XML Headers enabled
 - Open in Excel and see the capturing of p-code as well as the admin area names
 - Look at the [Instructions](#) for a deeper understanding
- See also: [How to use P-codes](#)

Important when building forms:

- Frequently preview and save your form
- It is recommended to use a short, unique identifier for each question (e.g. A1.1, A1.2, etc), and begin the question text with the identifier, as well as using the identifiers as the (internal) Data Column Names. Identifiers don't need to be consecutive, but they must be unique.
- When you copy a question or change the title, the Data Column Name does not change, so you must review the Data Column Name.
- If you change a question's Data Column Name, skip logic in dependent questions can get lost and you must rebuild the skip logic. This is another reason to define and use unique question identifiers from the very beginning.
- Although in Kobo there is an option to make a response mandatory, in practice this is not useful, so if in doubt leave the response type as non-mandatory.

Good practice and good to know:

- When you create a project, you can copy in a previous project's form as a template.
- Rather than creating a form in MS Word and then replicating it in Kobo, create the form Kobo from the beginning.
- The Kobo web application work best with the Google Chrome browser.
- If you get errors previewing and saving forms, it sometimes helps to remove Validation Criteria from all responses, and potentially also remove Skip Logic, and then try to save/preview again. You will of course need to rebuild what you removed. Also avoid using special characters in Data Column names and form names.
- Groups: In data exports, grouped fields are exported as Groupname\Subgroupname\Fieldname. This potentially complicates data processing, so avoid groups.
- Always pilot the form, i.e. run a small mock survey. e.g. within the team. Piloting reveals logical and technical flaws in the form design.
- To share your form, go to the "Summary" page and > 'Share project', or download an XLS copy to share.
- Kobo uses the terms 'project' and 'form' sometimes interchangeably, which is confusing.
- OCHA has [naming conventions for Kobo terms](#) (form ID, question names, option lists, etc)

Deploy the project

1. Save and close the form (both buttons are at the top right of the screen).
2. Go to 'Projects'.
3. Scroll down to the 'Draft' section; your project is listed there. Click on the project if

you are not already at the Draft project form page.

4. Click 'Deploy'. There should be a message that pops up for about a second showing that it is deploying the form, before confirming that it has successfully deployed.

Deploying the project means:

- a. The project moves from 'Draft' to 'Deployed'
 - b. You cannot modify the form anymore
 - c. The data collection form is publicly accessible via an URL
 - d. Data entered into the form will be uploaded to the project database
 - e. If the project needs to be redeployed, it will overwrite all data collected through the earlier version of this form.
5. After deploying, you are taken to the project's main page.

Crucial when deploying a form:

- A 'project' comprises everything from deploying a form, collecting data in the field, syncing the data back to the server, and optionally carrying out analysis.
- You can save a form as template and re-use it in another project.
- A project can have only one form.
- Every project gets an ID, based on the project name. The ID has to be unique among all your existing projects.

Good practice and good to know:

- You don't have to build the form in Kobo. You can upload any compatible form (either into your forms collection to keep as a template, or to deploy it directly as a Kobo project).
- To pilot your project:
 - deploy your pilot project
 - test
 - correct the form
 - deploy the new form as a new project
 - delete the pilot project
- For the fieldwork take printouts of the assessment form as backup.

Deploy the form to mobile devices

The concept is

1. You have one or more mobile devices.
2. You copy your Kobo form to your devices.
3. You go into the field and do interviews/observations, filling in the form accordingly. Once a copy of the form is filled in, it creates a new blank copy for the next interview/observation. Collected data is stored on the device.

- When back in the office, you upload the collected data to the Kobo server.

Crucial:

- You can collect data offline. You only have to be online (a) when you copy the form to your device, and (b) when you submit the collected data.

Android	Non-Android (using Google Chrome)
<ol style="list-style-type: none"> Go to Kobo.humanitarianresponse.info > your project > Form tab In the 'Collect data' section, select 'Android application'. Follow the on-screen instructions 	<p>You can use any device that supports Google Chrome, e.g. iPhone, iPad, laptop, PC.</p> <ol style="list-style-type: none"> Go to Kobo.humanitarianresponse.info > your project > Form tab In the 'Collect data' section, leave the default 'Online-Offline (multiple submissions)'. Click Open. This <ol style="list-style-type: none"> opens the form for data entry caches the form in the browser, so you can go offline now. Bookmark the form. Pass the URL to other people and devices as needed.

Collect data

For this practical, all participants will be collecting data using a pre-prepared version of the form that you have just created. Everyone will be collecting data using this form, to simulate the situation where multiple surveys are conducted during the same time period. The instructors will provide a link for you to use.

First, let us try collecting data while still in the classroom:

Android	Non-Android (using Google Chrome)
<p>If you wish to collect data using a form that you have created yourself:</p> <ol style="list-style-type: none"> Open the Kobo Collect app 	<ol style="list-style-type: none"> Fill out your data collection forms, online or offline. You may need to enable GPS on your device (e.g.

<ol style="list-style-type: none"> 2. Click on Fill blank form 3. Select the form to which you would like to enter data 4. Go through all the questions (swiping your finger from right to left) 5. At the end click on Save Form and Exit (making sure the form is marked as 'finalized') 6. Repeat steps 2-5 <p>If you wish to collect data using a form that someone else has created:</p> <ol style="list-style-type: none"> 1. Click on the three dots to open settings to add a new project 2. Enter the server URL https://kc.humanitarianresponse.info and your username and password. The person who originally created the form will need to add your username to the project under Settings > Sharing. 3. Open "Get Blank Form" and select this project. 4. Open "Fill Blank Form" to start your survey. 	<p>“ee.humanitarianresponse.info wants to know your location”).</p> <ol style="list-style-type: none"> 2. On the top left you see a network indicator and the number of forms queued for upload. Click on both.
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Now, go outside and collect data.

Complete at least 5 forms.

Upload collected data

Android	Non-Android
<ol style="list-style-type: none"> 1. Once you are online again, from the Kobo home screen, click on “Send Finalized Form”. 	<p>Once you are online again click the top left corner 'Records Queued' icon and click Upload. Alternatively, wait a few</p>

<ol style="list-style-type: none">2. A list of your most recently collected forms appears.3. Click Toggle All, and then click Send Selected.	minutes for an automatic upload.
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Analyse the data

1. Go to <https://Kobo.humanitarianresponse.info> > Projects > [your project] > Data
2. Explore the available analysis tools: Reports, Table, Gallery, Downloads, Map
3. KoboToolbox Excel Data Analyser:
 - a. Note: Site still works but is now archived; is in progress migrating to new site
 - b. [Download the Data Analyser and the manual here](#) or see GIS\1_Original_Data\120_Kobo
 - c. Follow the Data Analyser manual to copy your form and your data into the Data Analyser.
 - d. Analyse the data from your project, e.g. what is the distribution of urban vs rural settings?
4. Download the data and make a map (based on the coordinates and/or p-codes).

Good to know:

When you download data, GPS data comes as individual fields for latitude, longitude, height, and accuracy. An additional field is created containing all of these as single space-separated string. In Excel, you can split this with the function Data > Text to Columns.

2023-10-Outdoor-Survey



Survey form v2

A: Date and Assessor

A1: Date of assessment:

A2: Name of assessor:

A3: Gender of the assessor (choose one):

- Male

- Female

B: Landmark Information

B1: Name of landmark:

B2: Type (highlight one):

Building

Information board

Bench

Rubbish bin

Other

If other, what type of landmark is it?

B3: Perimeter size (m):

B4: Location (GPS point):

B5: Take a photo (photo identifier):

C: Other

C1: Any other notes: