



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



Rapid Seed System Security Assessment (RSSSA)

Methodology Guide

Version 1, 2023

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**GLOBAL
FOOD SECURITY CLUSTER**
Strengthening Humanitarian Response



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TABLE OF CONTENTS

Introduction.....	1
Grain Trader tool.....	2
Household Data Collection tool.....	3
Agro-Dealer and Seed supplier survey	4
Data Use: Exporting data from Kobo to Excel, and then linking to POWERBI report	5
Configuring the Report.....	6
Exporting data from Excel to Power BI.....	8
Terminology Review	8
Connecting directly from KOBO to PowerBI.....	13
Follow the steps below when getting data from Kobo to Power BI.....	13
Updating the data in your reports.....	14
Publishing and Sharing the Reports	15

INTRODUCTION

The purpose of this guide is to explain what the seed system tools are, how they are used in data collection in Kobo Collect, and how the data are analyzed in Power BI. These tools were originally designed and used in 8 countries.

The Feed the Future Global Supporting Seed Systems for Development activity (S34D) is a five-year Leader with Associates Cooperative Agreement Award, funded by Feed the Future through the Bureau of Resilience and Food Security (RFS) and by USAID through the Bureau for Humanitarian Assistance (BHA). Catholic Relief Services is the prime and is leading a team of Consortium Partners (CPs). S34D's Life of Activity (LOA) runs from August 2018 through August 2023. The overarching goal of S34D is to improve the functioning of national seed sectors in an inclusive manner in Zambia, Ethiopia, Sudan, DRC, Guatemala, Cambodia and Timor-Leste. The activity aims to meet its goals by increasing the capacity of each of the seed systems to sustainably offer quality, affordable seeds of a range of crops (**Objective 1**) and increasing collaboration and coordination among all seed systems actors and actions (**Objective 2**). During the period of project implementation S34D developed tools for collecting data that will continue being used by organizations strengthening seed systems. These tools are namely:

1. [Grain Trader](#)
2. [Household survey tool](#)
3. [Agro Dealer and Seed Supplier Survey](#)

These tools are accessed in [KoBo Toolbox](#), an open source, free software that is used for data collection in low connectivity environments. The tools can be tailored to meet the contextual need of the project seeking to collect seed system data. Once the tools have been tailored and tested for enumerator training, then enumerators can use the tool using their mobile devices in areas with high or low connectivity.

The data is analyzed using Microsoft Power BI Desktop to visualize results of the data collected. More information about how to use the Power BI report template is provided in the Guidance.

GRAIN TRADER TOOL

The Grain Trader tool is used to collect information from small retail grain traders and large wholesale traders serving a given geographic area. The purpose of the tool is to understand the seed and input supply situation in the areas. The tool should be administered prior to planting for the upcoming season. The table below summarizes the questions asked in the Grain Trader tool:

Questions	Importance of data points
Details of enumerator (Gender, Name, Organization)	This information helps the data collection supervisors to follow up with enumerators on any data that might have errors. It is important information for purposes of cleaning data, but it is not analyzed in POWER BI.
Consent (select "Yes") to move forward	Consent is critical for ethical reasons. Without completing this section, you cannot move to the questions.
Respondent information	
Name, Gender, Age	The name of the respondent is required but will not be analysed in POWERBI. Gender and age tell us about the social background of grain traders and allows to identify marginalized groups such as youth and women.
Name of Enterprise, Location (Admin 1 and Admin 2 (these requires to be localized)	Name of Enterprise is important for follow up in case the program needs further information. The location allows us to determine the approximate distance that farmers might travel to purchase food and potential seeds. You can specify the location according to locally appropriate administrative levels, whether province, district, ward, village, etc.
Female led or Female owned enterprise	This information allows for gender sensitive analysis.
Position in enterprise	We want to know if the respondent is the owner, manager, or employee of the enterprise. This helps to assess the accuracy of the information provided.
Period of upcoming seasons (start and end date of season)	This is important to know planting times and harvesting times and when grain is available.
Client asset information	This helps to assess the relative size of the business/enterprise.
Trader Characteristics (wholesaler/retailer)	This allows us to understand the trader's role in the grain value chain and their type of business.
Asking questions on whether the trader sells to farmers, local traders, regional traders, collectors and % sold to them	This allows us to understand the trader's customer base and the value chain.
Trader assets	This helps to assess trader's asserts like vehicles, carts, bicycles, motorcycles
Crop selection (highlight all crops/seeds traded)	It is necessary to distinguish the different crops because grain markets and seed systems vary by crop.
Details of each crop selected (source, region, estimate of grain to be sourced, prices, reasons for changes in quantities sourced	These details help us to understand whether or not there might be reduced harvests for specific crops in specific geographic areas.
Type of grain sold as seed by each type of seed selected (source of seed, quantities, sales price,	This helps to assess the quality of seed and whether or not there might be seed shortages.
Distinguishing grain seed from other grains, price of seed, quantity and markets	This helps to assess the quality of seed and whether or not there might be seed shortages.
Grain for use as seed	
Grain/Seed movement to the markets, constraints encountered in obtaining grain, source of seed, source location. amount sourced, sales prices, having seeds in stock, quantity of seed (below or above normal)	This helps to assess the quality of seed and whether or not there might be seed shortages.
Credit	
Source of credit and asking if the traders use or offer credit. Whether credit was affected by crisis, reasons for not offering credit	This information allows us to determine whether there might be any market disruptions due to lack of credit, or whether some farmers might lack access to grain / potential seed on credit.

HOUSEHOLD DATA COLLECTION TOOL

The purpose of the tool is to understand how farmers in the area purchase and manage seeds for their crops. It should be administered prior to the planting season.

Questions	Importance of this data point
Basic Information (Date and Time of survey, survey number code, period of upcoming season)	This information allows us to understand when the data was collected in relation to the agricultural calendar.
Details of enumerator (Gender, Name, Organization)	This information helps the data collection supervisors to follow up with enumerators on any data that might have errors. It is important information for purposes of cleaning data, but it is not analyzed in POWER BI.
Respondent information	
Name, gender, age, organization phone number, relationship to household head, household size, Household type, person with disability, area cultivated by household, unit of measure of land size, area cultivated on separate plot by female household member, period of upcoming season, period of prior year cropping season	The name and phone number of the respondent allows for any necessary follow up and will not be analysed in POWERBI. Information about the cultivated area allows us to determine the relative wealth of the households, and gender-related information allows for gender-sensitive analysis.
Location	
You can specify the location according to locally appropriate administrative levels, whether province, district, ward, etc. This information allows us to determine whether there might be differences in seed availability across different locations.	
Questions	
Do female household members cultivate separate plots, size of plot cultivated, major crops planted, major vegetables, fruit and legumes planted. What crops will be planted next year, which crops will be planted more/less and reasons, sources of seeds for the crops, reasons for changing source of seed,	This information allows for gender-sensitive analysis and whether there might be any seed shortages for crops that are cultivated by women.
Sources of seed	
Assessing quality of seed from sources that the respondent is familiar with, availability of seed from the sources,	This provides an assessment of seed quality and availability from the farmers' perspective.
Seed	
Seed storage, what kind of seed is stored, how is it stored, is seed treated, for each type of seed stored how much is lost, storing more/less/same	This information helps to understand seed management practices, potential seed quality issues, and relative seed availability.
This provides information about other inputs that farmers regularly use, in addition to seed.	

AGRO-DEALER AND SEED SUPPLIER SURVEY

This tool is used to understand input and seed supply situation in the area. The tool should be administered prior the planting season.

Questions	Importance of this data point
Details of enumerator (Gender, Name, Organization)	This information helps the data collection supervisors to follow up with enumerators on any data that might have errors. It is important information for purposes of cleaning data, but it is not analyzed in POWER BI.
Respondent Details	
Name, Gender, age, Name of enterprise, Female owned or female led enterprise, position in enterprise, location (admini 1 &2 and name of village, period of upcoming season	The name of the respondent is required but will not be analysed in POWERBI. Gender and age tell us about the social background of seed providers, allowing for gender-based analysis. The study also asks information about ownership of the enterprise to inform gender analysis
Characteristics of agrodealer	
Independent or part of large business, to whom do they sell,	This information helps to understand whether the business has support from a bigger company, and where they are within the seed value chain.
Seed varieties that they carry list 10 major crop seeds (5 staple and 5 cash crops)	It is important to know which crops are provided because seed systems vary by crop.
For each crop listed highlight the source, type of vendor, region, whether they will source more/less/same and reasons for changes, peak prices, certification, seed varieties preferred by men, women, male youths, female youths, PWD and percentages, changes in clientele and reasons for changes	This information helps to assess whether there might be seed shortages of particular crops, and which crops and varieties are preferred by different farmer types.
Fertilizers	
Type of fertilizers sold, source, will they source more/less/same, estimate the percentages, reasons for changes prices of fertilisers (last year and current), reasons for changes in fertilizer prices.	This helps to understand fertilizer markets and whether they might be any changes in availability.
Pesticides and herbicides	
Source, whether they source more/less/same, estimate percentages, reasons for changes, prices of pesticides have they increased or not, reasons for changes in prices,	This helps to understand other input markets and whether they might be any changes in availability.
Other	
Constraints faced by agrodealer supplying seeds, fertilizers, and pesticides, what can be done to address the constraints, current challenges in stocking inputs,	This information can be helpful in identifying potential interventions to support agricultural input markets.
Access to credit (source, crisis experienced by agrodealers are customers allowed to buy on credit, has the crisis affected this, support provided and type of support	This information allows us to determine whether there might be any market disruptions due to lack of credit, or whether some farmers might lack access to seed on credit.

DATA USE: EXPORTING DATA FROM KOBO TO EXCEL AND THEN LINKING TO POWERBI REPORT

Prior to proceeding, please ensure that the CRS staff focal point responsible for setting up the report and sharing with partners has the following:

- ✓ a Power BI Pro license with Power BI Desktop installed
- ✓ Free access to Kobo tool box

The Power BI report uses a global template that is already pre-designed to allow CRS staff and partners to track, visualize and analyze data collected from KOBO. The Power BI report will be connected to KOBO. Staff are allowed to make limited changes to the tools otherwise the Power BI template will break. ***Do not connect the Power BI report until at least one observation has been recorded in KOBO and synced.***

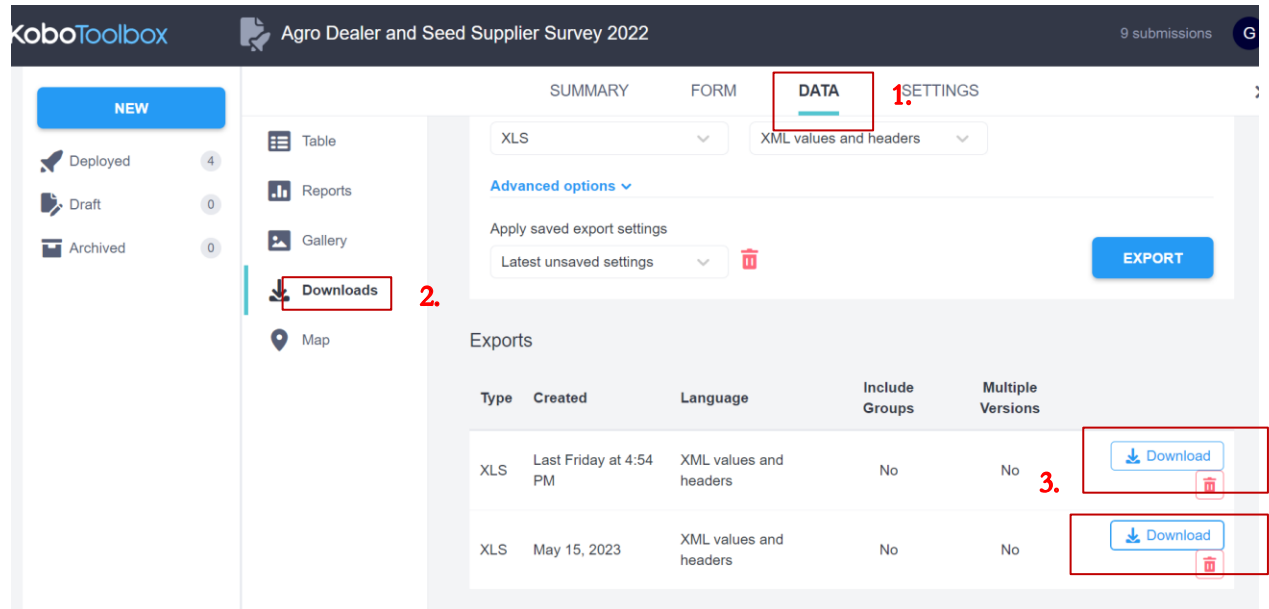
CONFIGURING THE REPORT

Follow the steps below to connect data collected in KOBO to Power BI template report.

Note: Ensure there is at least one form submitted before making this connection. Additionally, make sure all the fields are selected with the proper display name, otherwise there will be errors in the connection.

There are two ways of connecting data to Power BI, through Excel download or through connection directly from KOBO to Power BI. This guide will explain the two processes.

1. Downloading data from KOBO to Microsoft Excel



When exporting data to Excel you follow the steps below:

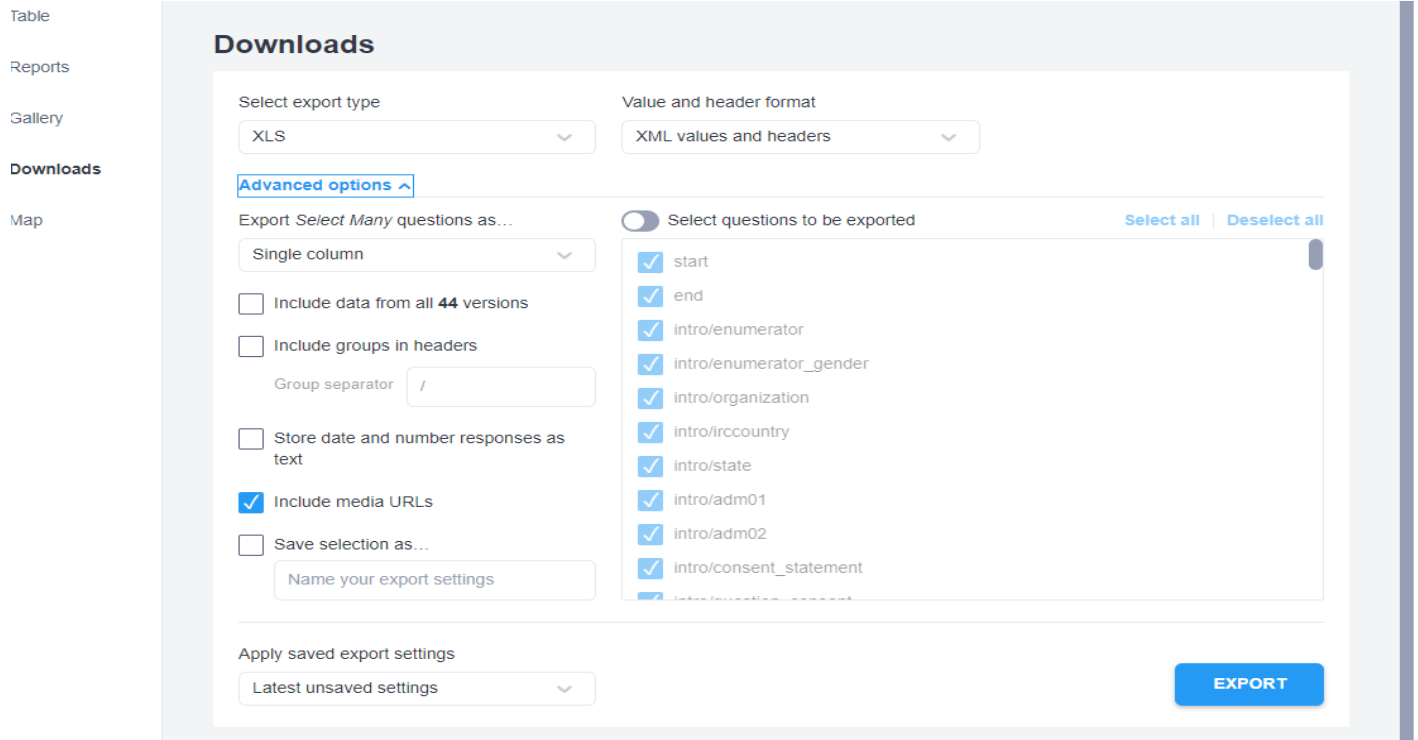
Click Data and then **click downloads**, you will see an **Excel file** that you need to open. Make sure to clean all data capturing errors before exporting to Power BI. Data cleaning can be done directly in KOBO or in Excel. Using the KoboToolbox interface, in the **DATA>Downloads** tab of your project, is the standard method for exporting your data into multiple different formats. These exports are created in an “asynchronous” fashion, meaning they are created in the background and you will see a “Processing...” item in your downloads list until complete. This will generate a “snapshot” of your data at the time of exporting. You can then download the completed export for analysis outside the application.

There is also a **REST API** where project data can be queried in **JSON or XML** format depending on your purposes, such as for automated scripts or connecting with other applications. However, there are important advantages to using the asynchronous exports over the REST API, such as specifying labels, languages, filtering by question names, etc., which the JSON and XML formats do not provide. This is particularly useful when creating dashboards in an external application. The “synchronous exports” feature aims to make it easier to seamlessly connect your data with an external application using the same export settings in standard downloads. An API endpoint can be queried by an external **application** allowing for a dashboard to automatically update with the latest data. During the exporting process you can change different settings of your export, such as the “Value and Header format”.

Click **“Advanced options”** to customize the data that will be exported. For example, you can choose:

- Which questions to export?
- How “Select Many” questions will be exported?
- Form versions from which the data will be exported: either all versions or just the latest one;
- Whether to include groups in headers, and so on

The picture below shows how you can customize data using the ‘Advanced Options’.

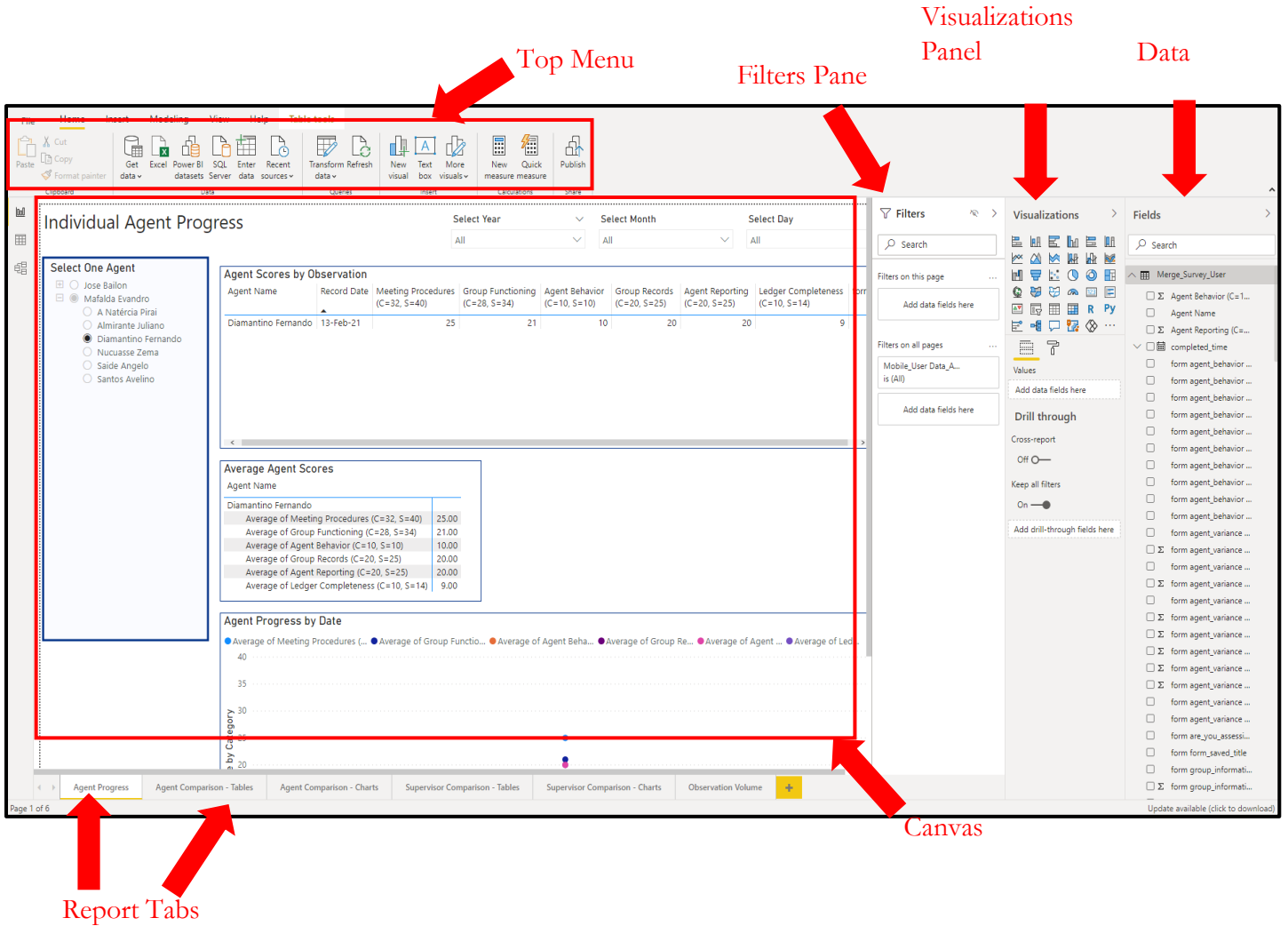


PLEASE DO NOT EDIT ANY PORTION OF THE SURVEY IN KOBO (E.G., ADDING/REMOVING QUESTIONS), AS THIS WILL CHANGE THE SYNCHONICITY OF KOBO WITH POWERBI FOR ALL USERS.

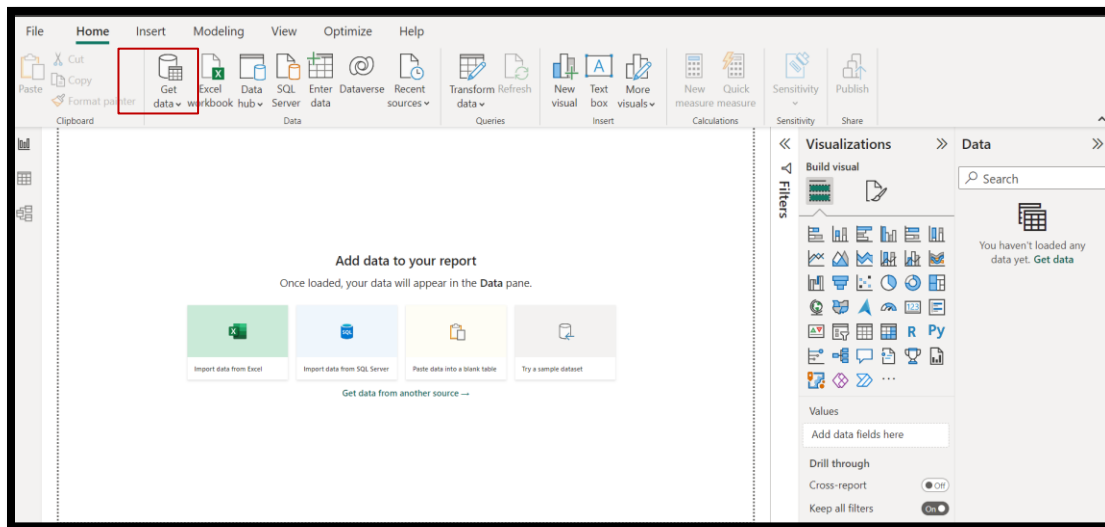
EXPORTING DATA FROM EXCEL TO POWER BI

Terminology Review

This report uses a lot of technical terminology. To familiarize yourself with the terms, see the following diagram of the PowerBI report that references the areas you will use the most.

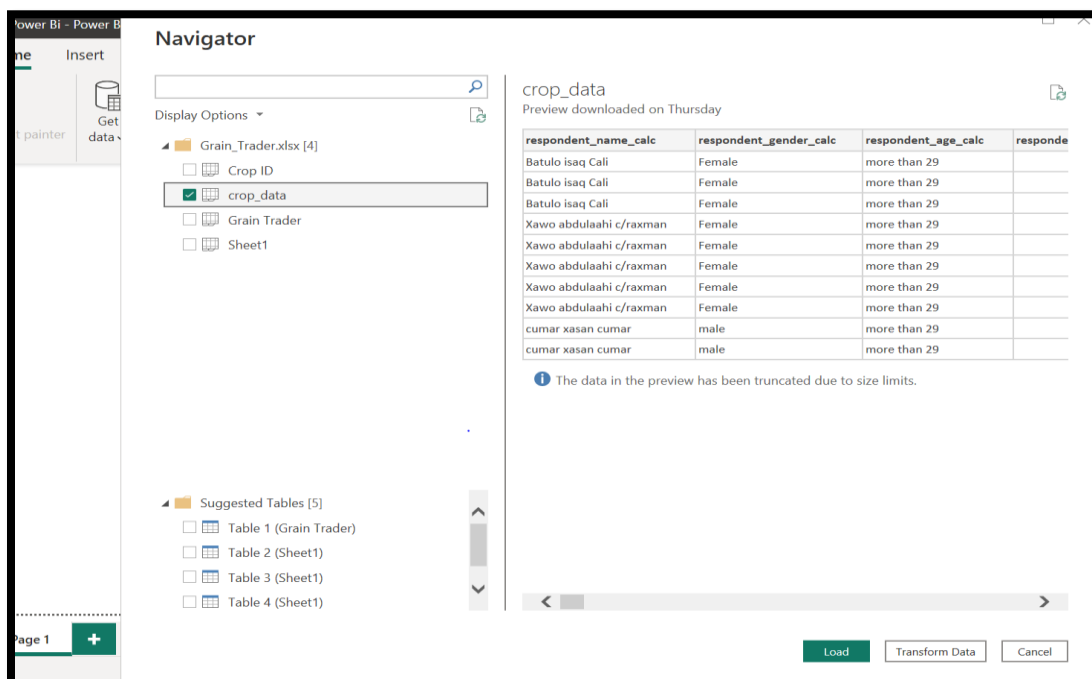


When you open your Power BI template you will see a blank file similar to the one below:



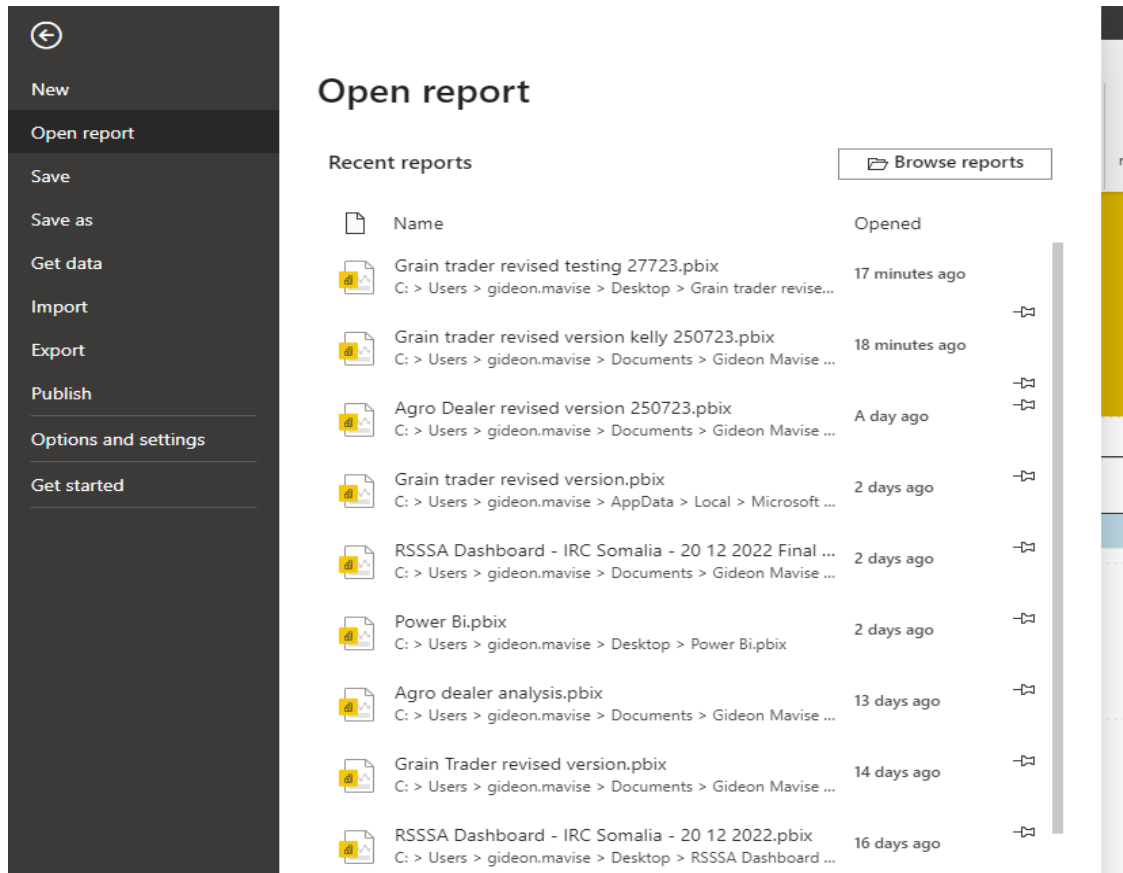
After opening the blank file above, follow the steps below:

1. Click get data icon
2. Select Excel workbook, it will show you all the Microsoft Excel files in your computer
3. Select the Excel file that you want to visualize in Power BI
4. You will see the data as shown in the picture below:

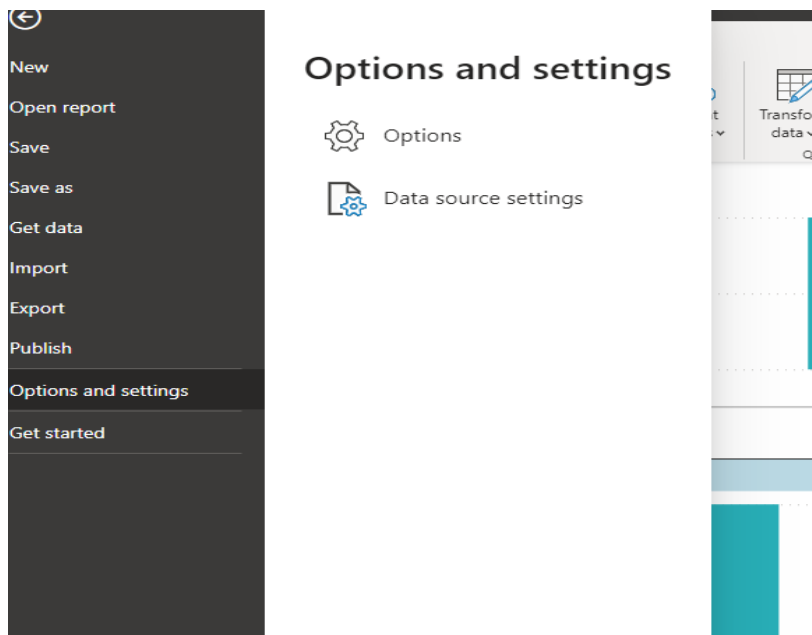


5. Click load data
6. One can start working on visualization process of data

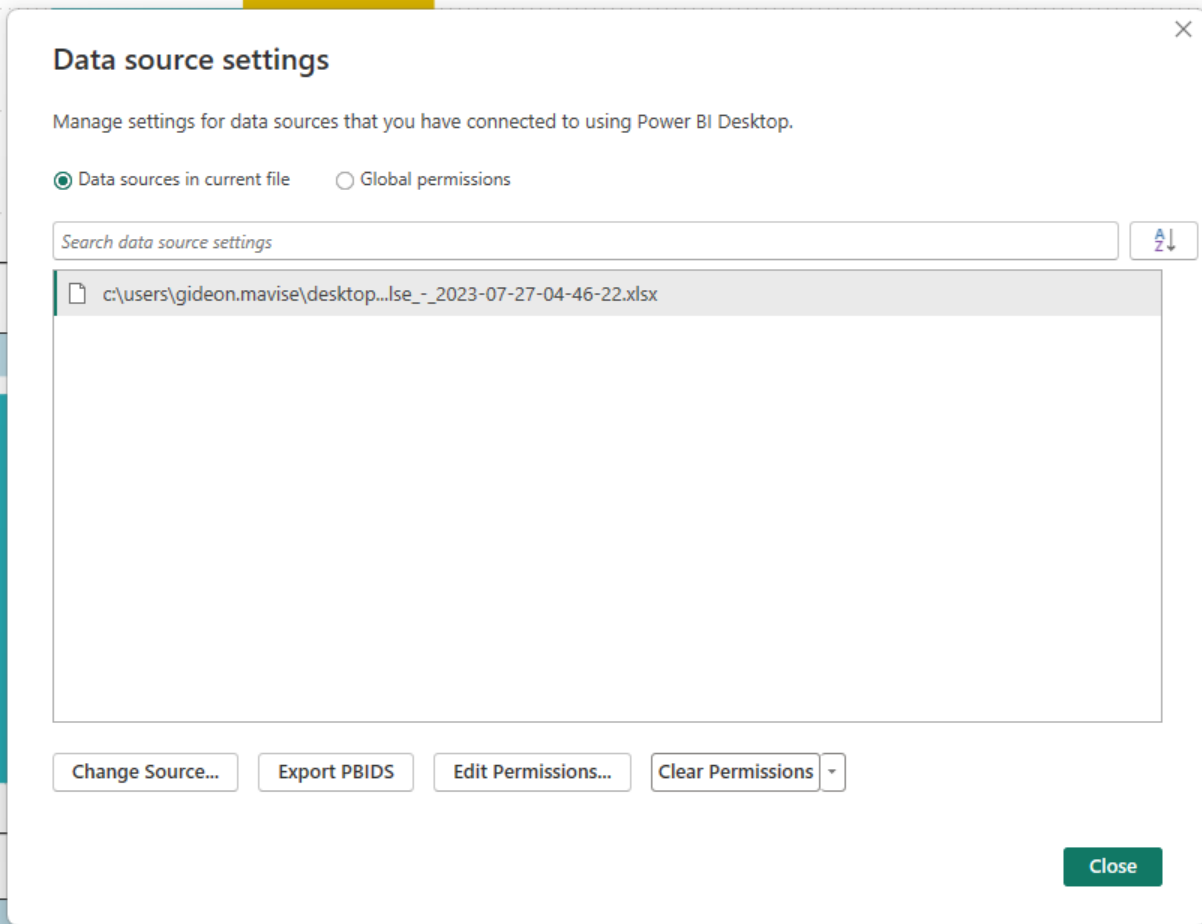
Since you are using an already linked template with visual that are developed already. You click Options and Settings button and it will update all the visuals in the Power BI.



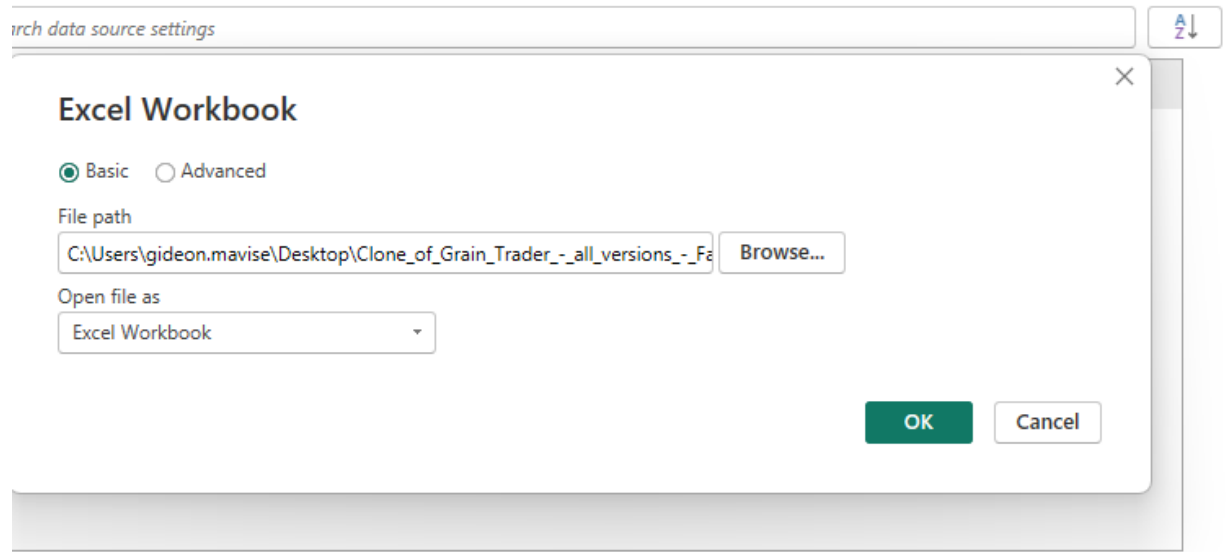
Then click **Data source settings** as shown below:



Then click **change source** as shown below.



Then click **browse** and search the Excel document that you want to visualize in Power BI. The click close and it will update automatically.

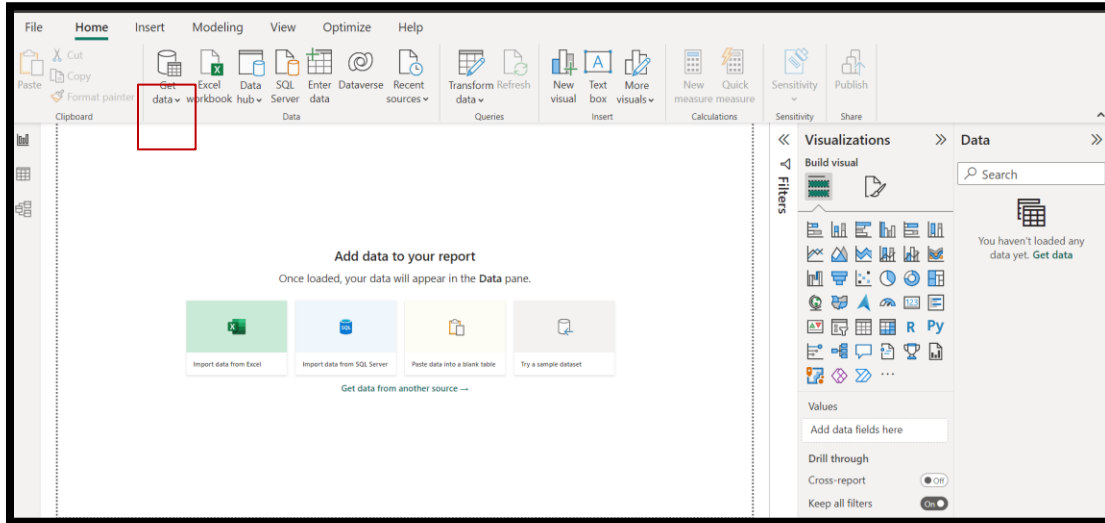


CONNECTING DIRECTLY FROM KOBO TO POWERBI

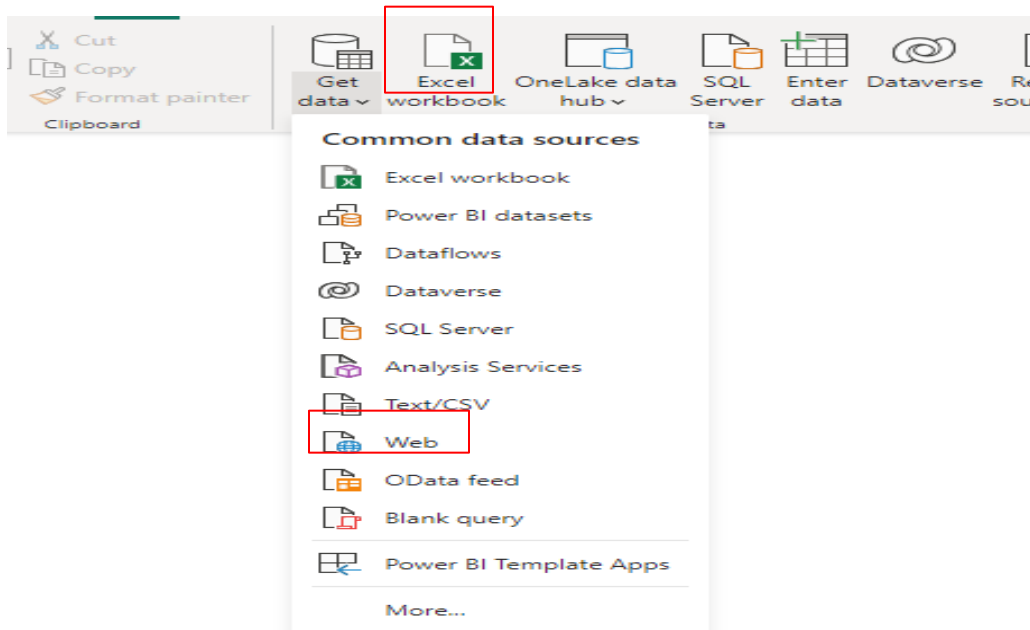
The Kobo Toolbox API allows you to connect your project with data analysis tools such as Power BI, Excel and Google Sheets. Data you collect is shared with the external application which can then be used for analysis and visualizations and dashboards. One of the most popular data analysis and visualization programs you can connect to is Microsoft Power BI.

Follow the steps below when getting data from Kobo to Power BI

Click the drop-down arrow on the “Get Data” button.



Choose “Web”



Paste the synchronous export URL you copied and click OK

Log in to Kobo using the following credentials:

Username: seed4development

Password: crshq@01

There are three URLs that correspond to three of the surveys:

Grain trader survey

<https://kobo.humanitarianresponse.info/#/forms/aVkPZTjX9t5Pd9WFVKzicL>

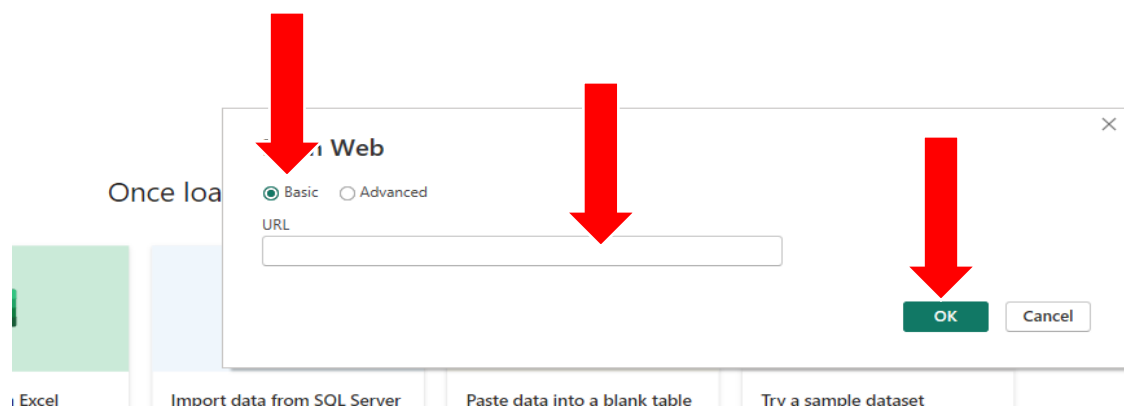
Household survey

<https://kobo.humanitarianresponse.info/#/forms/aQbHPcksQJQD9ho4uchAov>

Agro dealer seed supplier survey

<https://kobo.humanitarianresponse.info/#/forms/aMj99ByyiBMRp3QkNeFhaH>

Copy URL of the data that you want to link to POWER BI and paste in the area highlighted below and click OK



- Click Basic for adding your authentication details

Since this data is public, you will connect without the need for authentication

A list of the data contained in your project will be displayed in the Navigator.

- Choose the data you would like to import.
- Click **Load** to bring the data in or click Transform Data to open the Power Query Editor, which you can use to clean up and transform the data before loading it.

The tables will be shown in the Fields panel where you can develop your dashboards and reports.

Updating the data in your reports

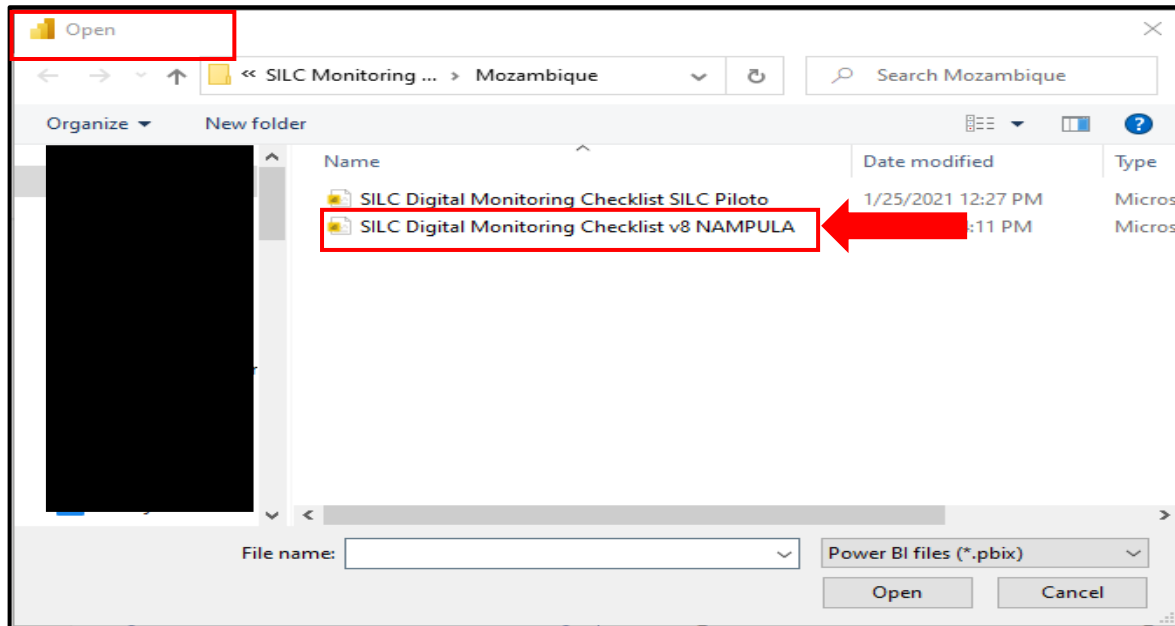
When your project's data is updated on the KoboToolbox server, such as when you have new submissions, changed validation statuses, edits, or deletions, you will need to synchronize it with your reports.

To do this, click **Refresh** in the "Home" tab.

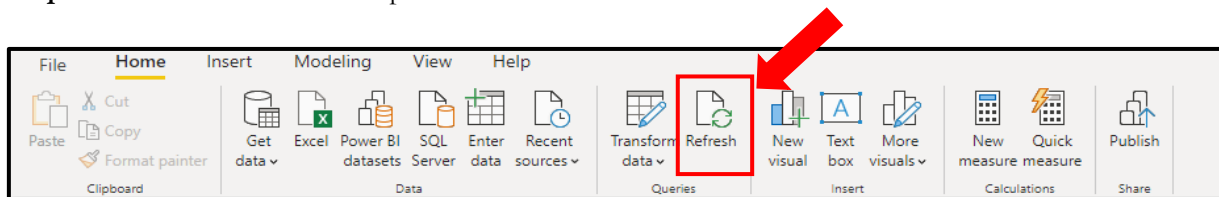
Publishing and Sharing the Reports

Power BI Pro and trial Pro users are able to share Power BI content from their Power BI workspaces to stakeholders within their organization as well as outside of their organization. To ensure data privacy and security are maintained, content must be shared correctly so that the only intended recipients are able to view the content. In the steps below, we will show you how you can share your Power BI report content with staff within your organization.

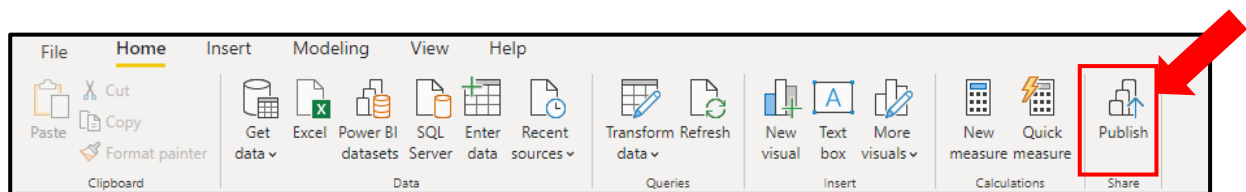
Step 1: In Power BI Desktop, open the report for the correct partner (each partner will have a distinct file). In this example, we will open the report for Nampula to publish.



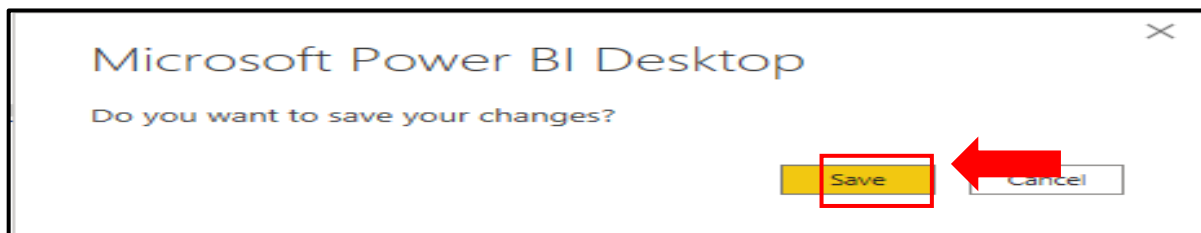
Step 2: Click “Refresh” on the top menu bar.



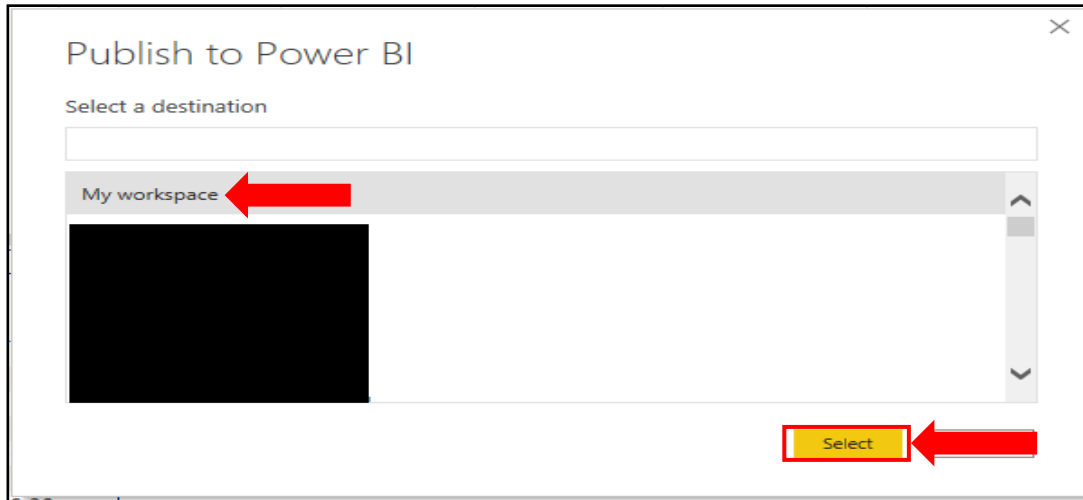
Step 3: Click “Publish” on the top menu bar.



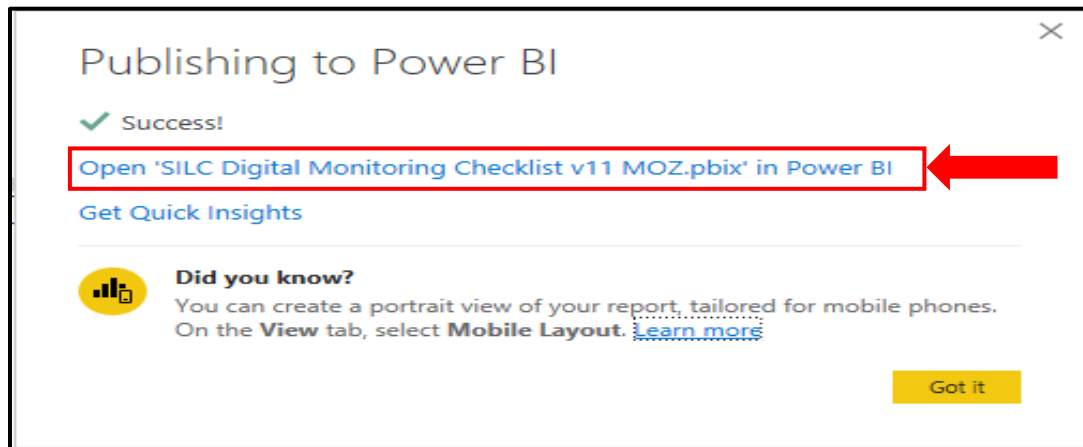
Step 4: Click “Save” when the prompt opens.



Step 5: In the menu, select “My Workspace” as the location where to publish.



Step 6: Once it has successfully been published click the link to open the report online.



Step 7: See Steps 1-8 below. This is no longer in Power BI Desktop – it is in Power BI Online (part of the Office365 online suite). Click on “Share” on the top part of the report. Then click “People in your organization with the link can view and share”. A menu will open in the center of the report. Select “Specific People” and ensure the boxes that “allow recipients to share the report” and “allow recipients to build new content with underlying data” are both unchecked. Begin typing the email address to the people you want to share the report within CRS and outside of CRS. Then type a message to the people about the report.. Then click “Share”. **Inform the recipients that they will receive an email from Microsoft (not directly from you) that shares the link of the report.**

1. Click on the "Share" button in the top navigation bar of the Power BI report.

2. In the "Send link" dialog box, select "People in your organization with the link can view and share".

3. In the sub-dialog box, select "Specific people".

4. In the "Settings" section, ensure that "Allow recipients to share this report" and "Allow recipients to build content with the data associated with this report" are both unchecked.

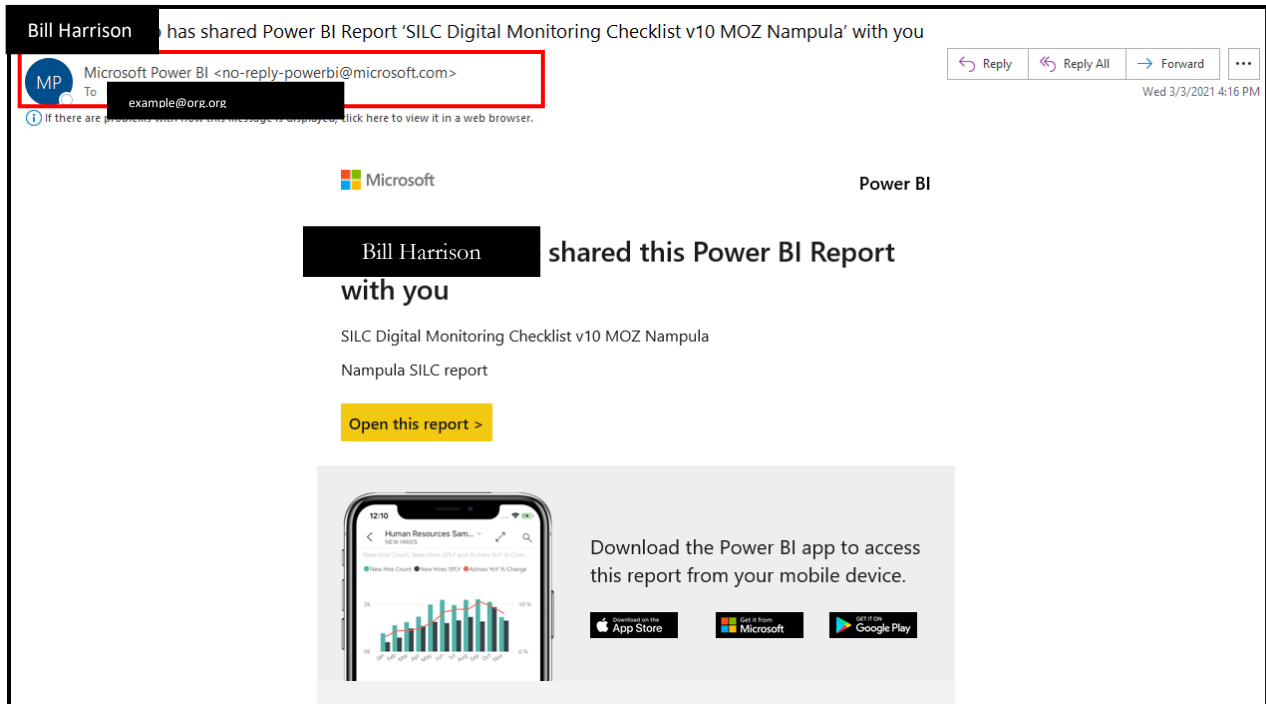
5. Click the "Apply" button.

6. Enter the email address of the recipient in the "Enter a name or email address" field.

7. Type a message to the recipient in the message field.

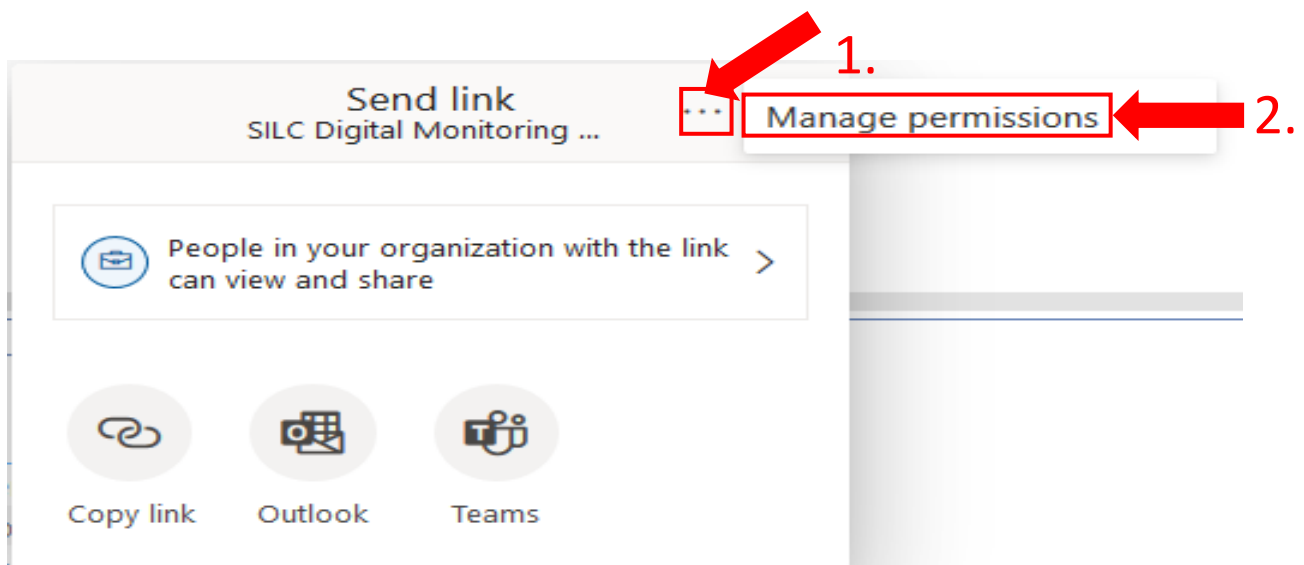
8. Click the "Send" button.

This shows that the email came from Microsoft Power BI, but the report was shared by Bill Harrison.



Step 8: See Steps 1-7 below. To verify that the correct recipients have received the report or if you would like to add new recipients to the report, click on “Share”. This will reopen the window in the center of the canvas that says “Send Link” at the top. Click on the ellipse **⋮** and then “Manage Permissions”. This will open a menu on the right side of the canvas, showing all the individuals that currently have access to this report. You can manage individual access by clicking the ellipse **⋮** next to the “Copy” button. Now **add people** by typing their name into the email box. Or you can **remove people** by clicking on the “X” next to their name. This means the link they have will no longer be accessible. To finish managing people accessing the report, click “Save” at the bottom.

Note: When adding new people to receive the report, you need to copy the link and send them an email with the link so they can access it



Power BI My workspace SILC Digital Monitoring Checklist v11 MOZ | Data updated 3/10/21

Pages: Agent Progress, Agent Comparison - Ta..., Agent Comparison - Ch..., Supervisor Comparison..., Supervisor Comparison..., Observation Volume

Individual Agent Progress

Select Year: All | Select Month: All

Select One Agent

Agent Name	Record Date	Meeting Procedures (C=32, S=40)	Group Functioning (C=28, S=34)	Agent Behavior (C=10, S=10)	Group Records (C=20, S=25)	Agent Reporting (C=20, S=25)
[Redacted]	[Redacted]	25	21	10	20	20

Average Agent Scores		
Agent Name	Average of Meeting Procedures (C=32, S=40)	Average of Group Functioning (C=28, S=34)
Diamantino Fernando	25.00	21.00
	Average of Agent Behavior (C=10, S=10)	10.00
	Average of Group Records (C=20, S=25)	20.00
	Average of Agent Reporting (C=20, S=25)	20.00
	Average of Ledger Completeness (C=10, S=14)	9.00

Agent Progress by Date

Y Category: 30, 40

Manage permissions

SILC Digital Monitoring Checklist v11 MOZ

Links giving access

Names of people who can view

Direct access

Project owner | Owner

Advanced

Manage permissions

SILC Digital Monitoring Checklist v11 MOZ

Links giving access

Report link | Copy | ...

Specific people can view

Names of people who can view

Direct access

Project owner | Owner

Advanced

Manage permissions

SILC Digital Monitoring Checklist v11 MOZ

Report link | Copy

Specific people

Link settings

People with this link can view this report and use the data associated with it, regardless of its sensitivity label.

Allow recipients to share this report

Allow recipients to build content with the data associated with this report

This link works for

tere |

Names of people who can view

Save | Cancel

Manage permissions

SILC Digital Monitoring Checklist v11 MOZ

Report link | Copy

Specific people

Link settings

People with this link can view this report and use the data associated with it, regardless of its sensitivity label.

Allow recipients to share this report

Allow recipients to build content with the data associated with this report

This link works for

Enter a name or email address

Names of people who can view

Save

3.

6.

4.

5.

7.