



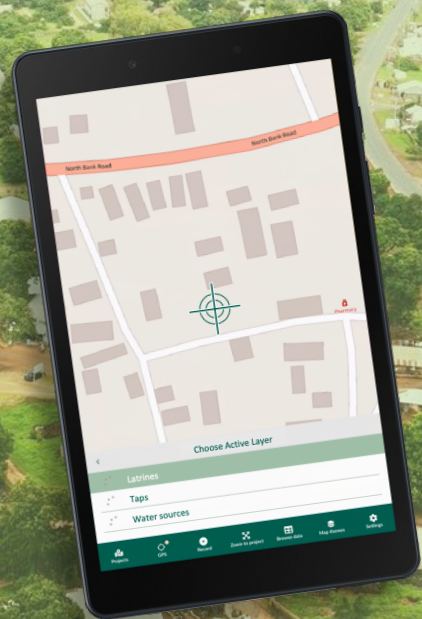
Ministry of Fisheries,
Water Resources and NAMS



Climate Smart Rural WASH
Development Project



African Development Bank



input Mobile Application

User Guide

For surveying WASH field data in the Gambia

Version 1 Oct 2021

PROJECT:

Development of a WASH Map and Establishment of a
Functional Web-Based M&E System

Consultant team:



User Guide

This guide is intended to provide a quick reference for the use of the Input App for the specific purpose of use for surveying WASH data points in the field. The intended users of this User Guide are the Survey Team members under the current project who are tasked with gathering geographic information and conducting questionnaires throughout the Gambia for this project.

For reasons of brevity, we use the term “App” to refer to the Input software, and use the term “mobile device” to refer to a smartphone or tablet.

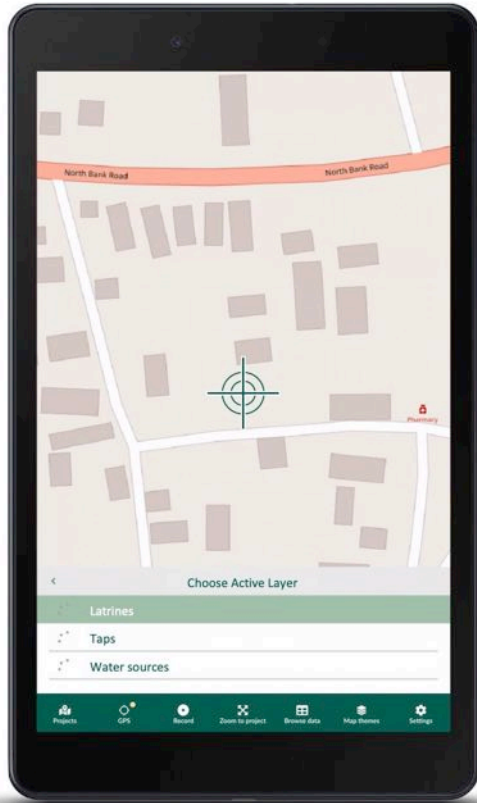
Screens

The screenshots in this User Guide are based on how the App is displayed on an iPad running on Apple’s iOS. There may be minor differences as to how this appears on smartphones and other

tablets running on Android, such as the Samsung Galaxy Tab A8, the primary device being used by the Survey Team. Nevertheless, the descriptions and functions are identical across those platforms.

Contents

1. Introduction to the Input App.....	3
2. App overview.....	4
3. Getting started.....	5
4. Opening the Project.....	8
5. Checking location settings.....	9
6. Entering survey data.....	10
7. Browse and edit survey data.....	12
8. Synchronizing survey data.....	16
Annex – Questionnaires.....	17



Introduction to the Input App

1

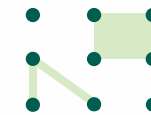
Input App

The Input App is a mobile survey application optimised for collecting information in the field. The app runs directly on a mobile device and works both online and offline. The app locates information using the QGIS platform and uses data sync over a network. Input is free and open source.

The current module of Input App has been customized for the current project, “Development of a WASH Map and Establishment of a Functional Web-based M&E System”. The module integrates specific survey questionnaire forms tailored to the WASH survey in the Gambia and enables data synchronization directly with the project database (IPMIS).



Features



Data capture

WASH survey data are captured as points assigned to a field specific location.

Map View

View survey data and location on the map, based on the QGIS platform.



Works offline

WASH survey data can be captured offline without a network access.

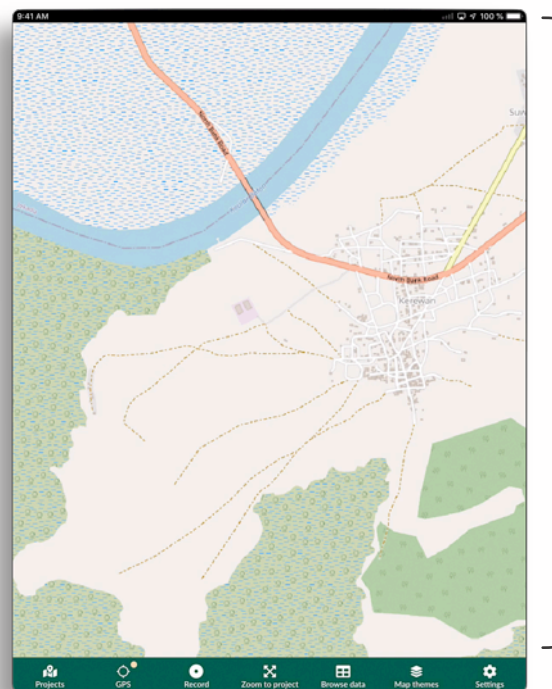
Wireless data sync

Schedule synchronization to send data from device through a network to the project database server.



App Overview

2



Home screen view

A Map View

The main space on the Input App presents a map that shows location of data. Pinch and scroll to view a new location and scale. Data points are indicated as colored points on the map.

B Menu Bar

Main functions are presented in the green bar at the bottom of the display.

1 Projects

View and explore a list of downloaded projects on your device.

2 GPS

GPS signal color on the map denotes the current accuracy.

3 Record

Capture the GPS position of a data point (latrine, tap, or water source) and enter and save questionnaire information related to that point.

4 Zoom to project

A shortcut to zoom to the extent of all visible layers within the project.

5 Browse data

Browse and search a data point in the project.

6 Map themes

Switch between different map themes

7 Settings

Configure GPS and recording settings.

Getting Started

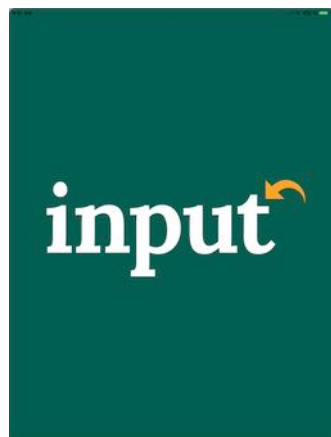
Launching the app

To launch the Input App, follow these steps:

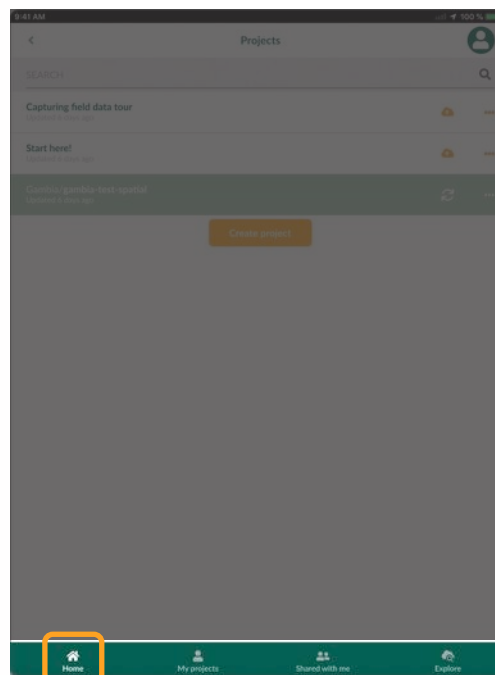
- 1 Find the **Input App** button on your device and click it.



- 2 The App opens with a green screen with the Input logo.



- 3 After a few seconds, the App starts at the **Home** page where you can log-in and navigate to other parts of the app.




Now you have successfully launched the Input App.

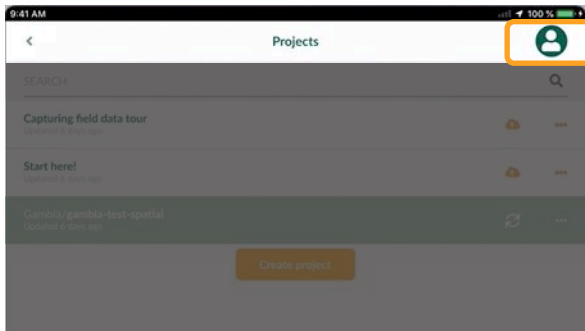
Important!

Input works both offline and online, so you can launch the app and use it when your device is not connected to an internet connection. However, you will need to connect to the internet to perform any data transfer, such as synchronizing the latest version of the project to your device or submitting your latest questionnaire data that collected in the field while you were offline.

Sign-in to your account

You'll need to sign in to be able to run the App and conduct your work with it. The Team Leader has provided you a unique Username and Password to use.

- 1 At the **Home** page,  find and click the Log In icon at the top right of your display screen.



The login page opens.

- 2 Enter your **Username** and **Password**. Don't click the **Sign In** button yet!



Before signing in, you need to connect to the **Project Database link** address:

<https://mergin.faunalia.eu/>

At the bottom of the **Log In** page, you'll find the field where the Project Database link is entered:

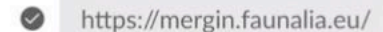


If the correct address is not showing already, you will need to enter it. Follow steps 3 - 5. If the address is already correct, skip ahead to step 5.

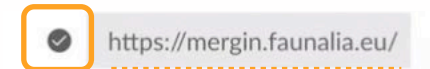
- 3 Click the edit pencil icon to activate text editing.



The icon changes to a checkmark in a circle, indicating that you can type in the **Project link address** in the field:



- 4 Enter the Project link address in the field. Click the checkmark to save.



The pencil icon should re-appear, deactivating the edit function.

- 5 Now you're ready to sign in. Click the orange sign-in button to sign in:



Connect your device to internet

You can use the Input App offline without a connection to mobile data or WIFI. However, some functions of the Input App do require an access to the internet to complete.

Actions requiring an internet connection

- ✓ Updating the Project database on your device
- ✓ Synchronizing your data (Chapter 8)

Follow these steps if you wish to perform one of these tasks and connect your device to the internet.

- 1 Check your device's status of connection to a mobile data or WIFI signal. If your device is connected to a signal, you will see one of these symbols at the top of your device's display.

LTE 4G



You may need to go to the main home screen of your device to view the signal status icon.

If you do not find one of these network symbols active on your device, it means you are not connected to the internet and you need to connect.

- 2 Connect your device to an **internet signal**, either through a mobile network (eg. Africell, Comium, Qcell) or a WIFI connection. Consult your device's settings and instructions if you need assistance. When you see one of the symbols above, you are connected.



Opening the project

What is the Project?

The **Project** is the complete dataset of all WASH survey questionnaire data collected by the Survey Team. You view the Project as a map on the Input App which contains points for villages, latrines, water sources and taps. A point on the map represents the location of a questionnaire captured by the Survey Team.

Access the Project

You've signed into your account and now you need to get ready to use the app. Before you begin any survey work in the field, you'll need to make sure you have the latest version of the Project database on your device.

- 1 If your screen shows the map, then click **Projects** in the Menu Bar.



- 2 Click **Home** to view the list of Projects.

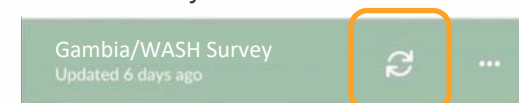


- 3 Check if the Project needs to be updated. Below the name of the project, it will indicate the time and date of the last update of the Project.

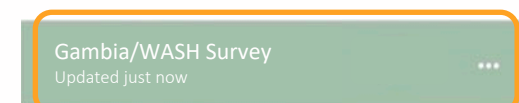


If the Project was recently updated, then skip to step 5.

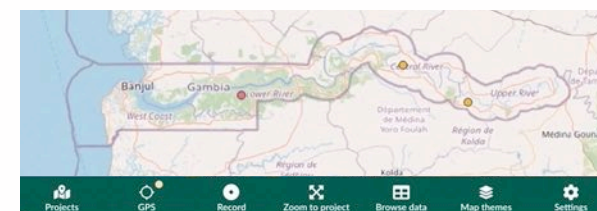
- 4 If the Project is outdated, then you need to update the Project on your device before using it. Press the sync arrows icon and the Project updates automatically.



- 5 Click the Project name to open the Project.



The Project opens in the Map View. You now can work on the Project:



Checking location settings

5

Field location positioning

When in the field, you will use the Input App to assign a precise geographic location to a WASH survey questionnaire. For each new questionnaire, you will create a point on the map and the Input App automatically assigns a GPS coordinate location to that point.

To add a point to the map, your device needs to be connected to the GPS satellite network.

Adjust GPS settings in Input

You can configure the tracking settings of the GPS in **Settings**.



There you can set the GPS to follow with the map and set the desired accuracy threshold.

GPS location status

Your location status is given in the **GPS** button in the Menu Bar.



The small colored dot gives the current strength of the GPS signal:

- Good** (accurate GPS position)
- Limited** (less accurate GPS position)
- No GPS** (No GPS position fix available)

Turn GPS location On / Off

To turn GPS on or off using a Samsung Galaxy Tab A (8.0) (2019 model), follow these instructions. Satellite or standalone GPS services require more power and have a greater effect on battery life.

1. From the Home screen, swipe up or down from the center of the display to access the apps screen.
2. Navigate: Settings > Location
3. Tap the Location switch (upper-right) to turn on or off .
4. If presented, review the disclaimer(s) then tap "Agree" to continue.

Entering survey data

WASH Survey

For this Project, you will be collecting field data through the completion of WASH survey questionnaires on the Input App. You will record each survey point in the Input App by creating a record, which is a completed questionnaire form assigned to a specific GPS location on the map.

The App includes 4 types of questionnaires:

- ✓ Village
- ✓ Latrine
- ✓ Water source
- ✓ Tap

At each point, you will select which questionnaire form to fill out. Some locations may require multiple questionnaires to be filled out.

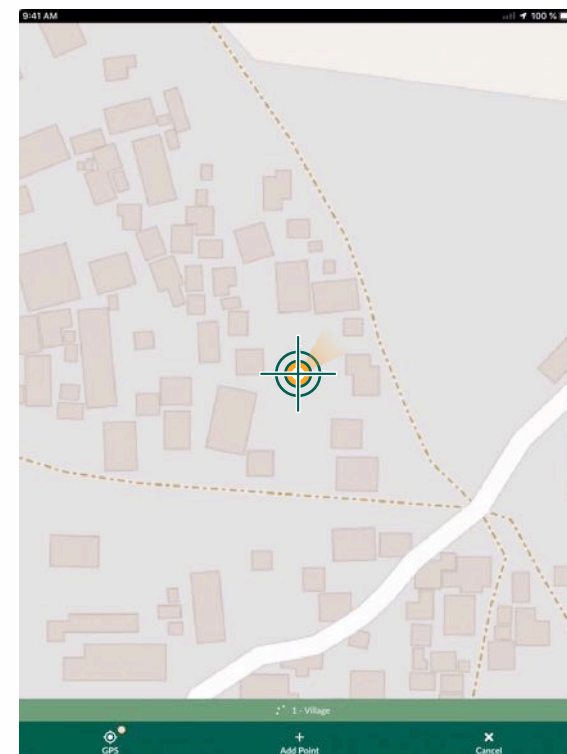
Recording a new point (completing a questionnaire)

You're in the field on location and you're ready to enter information about a specific WASH survey point (village, latrine, water source, or tap). Follow these general steps to record a new point for all questionnaire form types.

- ① In the map view, select the position on the map of the WASH survey point. Make sure the map shows the correct location and matches your current surroundings.
- ② Press **Record** in the Menu Bar.



The **point locator icon** appears on the map indicating the precise location. Make any adjustments to the correct the location, if needed.



- ③ A new menu in the Menu Bar appears at the bottom of the screen:



- ④ Select the survey type by tapping the layer type bar:



- ⑤ A menu pops up revealing the four different questionnaire survey types. Select the form by tapping on the desired questionnaire type.



- ⑥ Click **Add Point**.



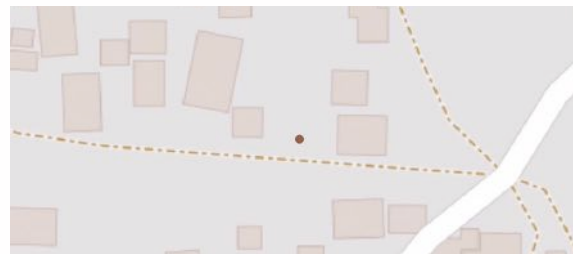
The selected questionnaire form appears.

- ⑦ Complete the questionnaire form. See the next section of this guide for a list of questions contained in each questionnaire form.

- ⑧ When completed, click **Save** in the upper-right of the form.

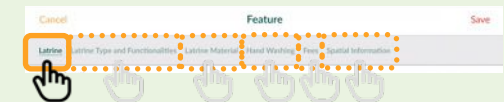


The questionnaire is saved and the new point is saved on the map:



Special instructions for filling out questionnaires

- ✓ Fill out all pages of the questionnaire.
- ✓ Tap the contents menu at the top of the form to navigate through all pages of the questionnaire:



- ✓ Questions in **RED** are mandatory and must be given an answer. Once questions have been answered, the question turns to **GRAY**.



- ✓ When the form is complete and all questions have been answered, the **Save** button turns **ORANGE**. Indicating that it can be saved.



Browse and edit survey data

Input enables you to browse and make changes to WASH survey data that you have saved. In this section, learn how to:

- ✓ Browse data
- ✓ Search for a specific data point
- ✓ Edit and make changes to a data point
- ✓ Delete a data data point

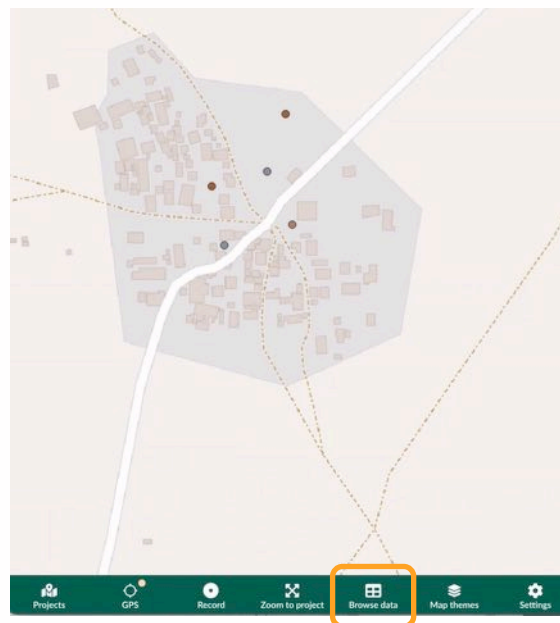
IMPORTANT!

After editing or deleting a data point, remember to synchronize the Project. See Chapter 8 "Synchronizing" for instructions.

Browse data

To browse the survey data in Input, follow these steps:

- ① At the main map view, click **Browse Data** in the Menu Bar at the bottom of the screen:



A layers menu pops up showing a list of survey questionnaire categories.



- ② Select the desired questionnaire category to browse. In this example, Latrines (above).

A window appears showing a list of data points in the selected category. In this case, two records are shown, but in reality the Project database will show many more.

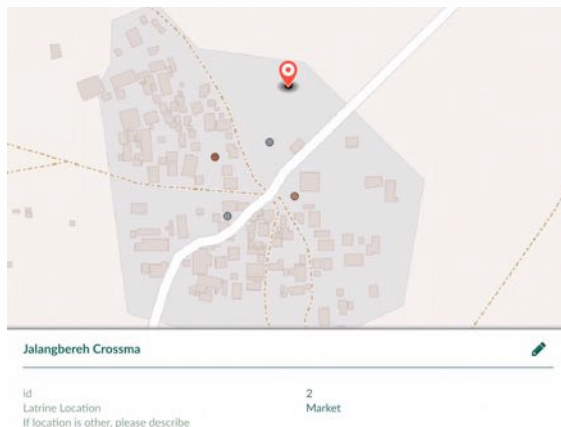


③ Scroll and browse through the list of points from the selected category.

④ To view more detailed information about a specific survey data point, select and tap the desired data point in the list. In this case, Jalangberekh.



A map opens and shows the location of the selected survey point (a **RED** point marker) along with the questionnaire data:



Search for data point

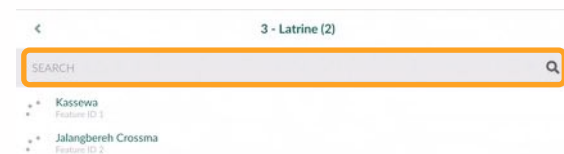
To search for a specific survey data in Input, the steps are similar to steps of **Browsing Data**, plus a few additional steps.

① At the main map view, click **Browse Data** in the Menu Bar at the bottom of the screen.

A layers menu pops up showing a list of survey questionnaire categories.

② Select the desired questionnaire category to browse. In this example, Latrines.

A window appears showing a list of data points in the selected category and a search field.



③ In the Search field, type a key word related to the survey point you are searching for, such as village name. In this example, Kassewa.

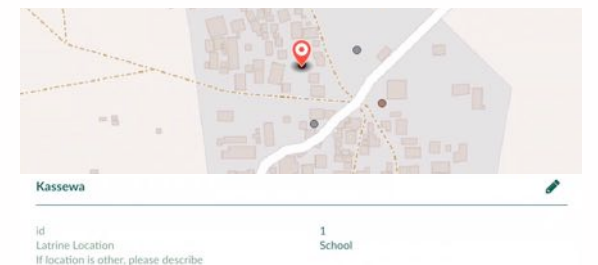


Results of the search are generated automatically.

④ Tap on the result in the list.



A map appears showing the selected point with the survey questionnaire data:



Edit a data point

To edit a survey data point in Input, follow these instructions:

- 1 Identify on the map the point that want to edit.
- 2 Tap the point. A **RED** point marker appears and a record pops up below it:



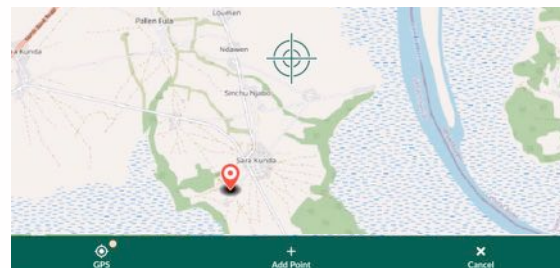
- 3 Tap the **pencil** icon (see above). This opens the questionnaire form containing the existing information.

- 4 To edit a questionnaire answer, simply click on the field that you desire to edit and type in the correct answer. Click **Save** when you are done:

- 5 To change the position of a point, click on **Edit geometry** in the Menu Bar at the bottom of the screen.



The map appears showing the **RED** point marker.



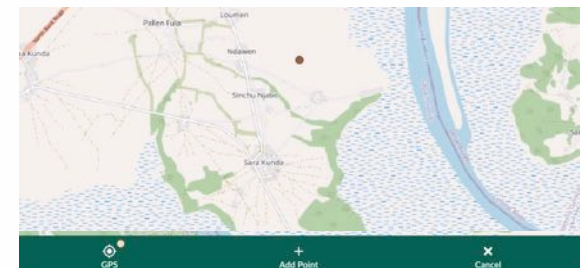
- 6 Drag the **cross-hairs** icon to the desired new location.



- 7 Tap **Add Point**.

- 8 The questionnaire form opens. Click **Save** in the top-right:

The new location of the point is shown in the map:



Delete a data point

To delete a survey data point in Input, follow these instructions:

- 1 Identify on the map the point that want to delete.
- 2 Tap the point. A **RED** point marker appears and a record pops up below it:

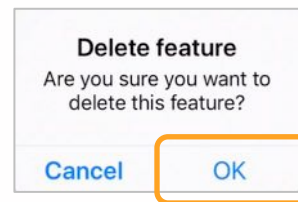


- 3 Tap the **pencil** icon (see above). This opens the questionnaire form containing the existing information.

- 4 Tap **Delete** in the Menu Bar at the bottom of the screen.



A dialogue window appears:



- 5 Click **OK**.

The point is deleted and no longer appears in the map:



IMPORTANT!

Remember to synchronize after making any changes. See Chapter 8 "Synchronizing" for instructions.

Synchronizing survey data

8

Syncing Your Data

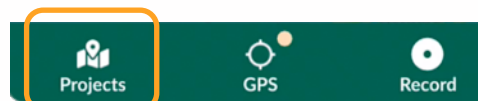
You have completed questionnaires in the field and entered new survey data (records) on your device through Input. Now you'd like to submit your work to be included in the complete WASH survey. Synchronizing (or "syncing") is a two-way transmission between your device and the main project database server (IPMIS). It will send your data from your device to the project database, and simultaneously it will also upload to your device the latest version of the complete project database that has been updated since the last time you connected.

Important!

Syncing can only work when your device is connected to the internet, such as through a mobile data network or WIFI.

Follow these steps to synchronize your survey data and get up-to-date.

- 1 Make sure your device is connected to the internet.
- 2 If you have your map open, press **Projects** in the Menu Bar at the bottom of the screen.



- 3 In the Projects page, press **Home** in the Menu Bar.



When sync changes are pending, your project will have two sync arrows next to it:



- 4 Press the **sync arrows** to synchronize your data.

When the sync completes, you'll see a check mark or no mark at all:



That's all there is to syncing. Your data has been saved on the Project database server and any changes made by your fellow surveyors have also been synced onto your device.

Annex – Questionnaires

WASH Questionnaires

- 1 – Village
- 2 – Water source
- 3 – Latrine
- 4 – Tap

The background image is an aerial photograph of a village with a river, showing houses, trees, and a communication tower. Overlaid on this is a tablet displaying a digital questionnaire form.

The form has a header with tabs: **Picture**, **Water source type**, **Working Status**, **Uses of Water Source**, **Drinking Status**, **Water Source Quality**, and **Water Source System**.

The main content area is titled "Water source type: Public Tap/Standpipe" and contains a list of options with expandable sections indicated by diamond icons:

- Water source type: Public Tap/Standpipe
- Tube Well/Borehole
- Dug Well
- Protected Well
- Unprotected Well

WASH Questionnaires

1 – Village

Table 1 of 1

Data / Questions	Survey Answers
How many public water sources (both functional and not functional) are located within this settlement?	No. of water sources
Population of Village	Population range
Does this village/town have an active Village Water Committee (VWC)?	Yes / No
If Yes (above), how often does the VWC meet?	No. of times a year
Does this village have a plan to fix the water source if it breaks?	Yes / No
If Yes above, does this village/town have a method of paying for fixing the water source if it breaks?	Yes / No
If Yes above, what is the method for paying to fix the water sources when they break?	Define Options
Describe any aspect of this community's water situation that was not captured in survey (not required)	Short qualitative answer

WASH Questionnaires

2 – Water source

Table 1 of 6

Data / Questions	Survey Answers
Take a Geotagged photo of the water source	Insert photo here
What is the Water Source type? (Multiple choices allowed)	Public Tap/Standpipe Tube Well/Borehole Dug Well Protected Well Unprotected Well When “public tap” selected above, then surveyor required to fill out Public Tap survey
Provide the working status of the water source	-Functional and in use -Functional but not in use -Not functional
If not functional, Status of nonfunctional water source	-Properly sealed -Clear and present danger -Used for dumping trash
What is the water source used for? (Multiple choices allowed)	-Municipal -Domestic -Agriculture -Industrial

WASH Questionnaires

2 – Water source

Table 2 of 6

Data / Questions	Survey Answers
Is the water supplied from this source usually acceptable for drinking?	<ul style="list-style-type: none"> -Yes, acceptable -No, unacceptable taste -No, unacceptable color -No, unacceptable smell -No, contains materials -No, other
Does drinking water from this source result in sickness or running stomach?	<ul style="list-style-type: none"> - No -Yes, so community does not drink from it -Yes, and the community still drinks from it - Don't know
Has a water quality analysis been conducted on this water source?	<ul style="list-style-type: none"> -Yes -No -Don't Know
If Yes Above, how long ago was the water tested?	<ul style="list-style-type: none"> -3 Mos. -6 Mos. -1 year -2 years -Never -Don't know

WASH Questionnaires

2 – Water source

Table 3 of 6

Data / Questions	Survey Answers
If Yes water quality analysis has been conducted on this water, who conducted the water quality test?	<ul style="list-style-type: none"> -Water Quality Lab in Abuko -Another Gov't Institution -Private Lab -Overseas Lab -Unknown
In the past month, for how many days was water from this source unavailable when needed?	1 - 31
What type of system do you use to draw water from the source?	<ul style="list-style-type: none"> -Hand Pump -Rope and Bucket -Horse/Donkey -Solar Submersible -Electric Submersible -Hybrid Submersible solar-electric -Other
Pump Size (Liters per day)	<ul style="list-style-type: none"> 1,000L 2,000L 5,000L 10,000L 20,000L Other N/A

WASH Questionnaires

2 – Water source

Table 4 of 6

Data / Questions	Survey Answers
Is there a water meter installed?	-Yes -No
Water Reservoir or Tank Size	Number of liters N/A
Percentage of people in village using this water source?	No. %
If any, estimate how many people from neighboring villages regularly use this water point as their main water source?	-None -No. of people
If any people above, which neighboring villages use this water point as their main water source?	Drop-down menu of neighboring villages
How long is the average queue to fetch water from this water source?	-No. of minutes
How many hours per day does this water source supply water?	-Less than 6 hrs. per day -6-11 hrs. per day -12-17 hrs. per day -18-23 hrs. per day -24 hrs. per day (all day)

WASH Questionnaires

2 – Water source

Table 5 of 6

Data / Questions	Survey Answers
During what part of the year does the water source run dry?	<ul style="list-style-type: none"> -Does not run dry -March-May -June-August -Sep-Nov -Dec-Feb -All Year
Water treatment	<ul style="list-style-type: none"> -No treatment -Boil -Add Bleach/Chlorine -Strain Through a Cloth -Use Water Filter (Ceramic/Sand/Composite/Etc.) -Solar Disinfection -Let It Stand and Settle -Other -Don't Know
Funding Source Implementing Agency	<ul style="list-style-type: none"> -Community -Central Govt. -Local Govt. -NGOs -Private -ADB -JICA -SSP

WASH Questionnaires

2 – Water source

Table 6 of 6

Data / Questions	Survey Answers
Who Drilled the Water Source?	-Open-ended -Unknown
Cost	-Cost range
Year of construction	-Year range

WASH Questionnaires

3 – Latrine

Table 1 of 4

Data / Questions	Survey Answers
Latrine Location	<ul style="list-style-type: none"> -School -Market -Health Facility -Worship Center -Other
If location is other, please describe	Description
Latrine Type	<ul style="list-style-type: none"> -Flush to Piped Sewer System -Flush to Septic Tank -Flush to Pit Latrine -Flush to Somewhere Else -Flush, Don't Know Where -Ventilated Improved Pit Latrine -Pit Latrine with Slab -Pit Latrine without Slab -Open Pit -Other
How many latrines are there?	No. of latrines
How many of the latrines are functional?	No. of latrines
How many of the latrines are built to enable use by those with functional difficulties?	No. of latrines

WASH Questionnaires

3 – Latrine

Table 2 of 4

Data / Questions	Survey Answers
Gender segregation	-Yes -No
If Yes (above), how many of the latrines are for women?	No. of latrines
How many users per latrine?	-5-10 -10-15 -15-20 -More than 20
Materials used for construction (Multiple choices enabled)	-No Walls -Cane/Palm/Trunks -Dirt -Bamboo With Mud -Stone with Mud -Mud/ Mud Bricks -Plywood -Cardboard -Reused Wood/Pallets -Cement -Stone With Lime/Cement -Bricks -Cement Blocks -Mud Blocks Plastered with Cement -Wood Planks/Shingles -Bamboo With Cement -Ceramic Tiles with Cement -Other

WASH Questionnaires

3 – Latrine

Table 3 of 4

Data / Questions	Survey Answers
What material is used for the construction of the roof?	<ul style="list-style-type: none"> -No Roof -Thatch/Palm Leaf -Palm/Bamboo -Wood Planks -Metal/Corrugate -Wood -Ceramic Tiles -Cement/ Concrete -Decra -Other
What material is used for the construction of the floor?	<ul style="list-style-type: none"> -Earth/Sand -Dung -Wood Planks -Tiles -Cement/Concrete -Other
Is a hand washing facility available at the Latrine?	<ul style="list-style-type: none"> -Yes -No
If yes above, is soap available at the hand washing facility?	<ul style="list-style-type: none"> -Yes -No

WASH Questionnaires

3 – Latrine

Table 4 of 4

Data / Questions	Survey Answers
Does the tap work?	-Yes -No
Is there a fee associated with the use of the latrine?	-Yes -No
If yes above, how much does use of the latrine cost?	Cost

WASH Questionnaires

4 – Tap

Table 1 of 1

Data / Questions	Survey Answers
How many taps are there?	- No. of taps
Among the taps given above, how many of the taps work?	-No. of taps -None work
Tap Location	-School -Market -Health Facility -Worship Center -Other
If tap location is “other,” describe.	Description

