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# Flood Resilience Measurement

Android App User Guide for field workers – **PRODUCTION  
VERSION**

V1.0 – July 9, 2018

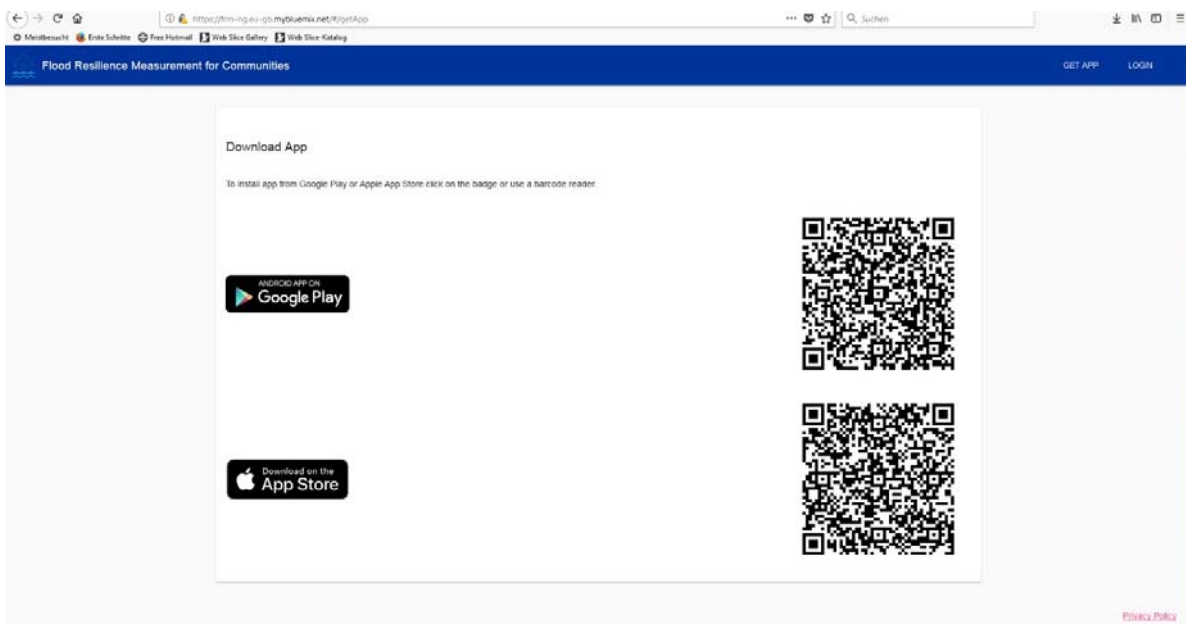
# Zurich Flood Resilience Program – Flood Resilience Measurement for Communities (FRMC): Android mobile application user guide for field workers

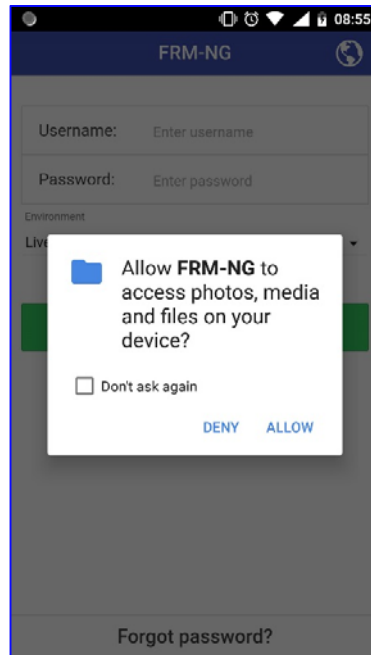
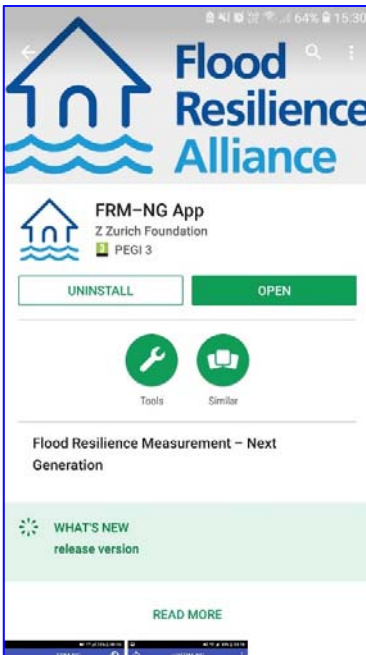
## Purpose of this document

This guide is intended to explain how to use and navigate through the Flood Resilience Measurement App on your Android device. How to get your login credentials is NOT explained in this guide. You will receive this from your trainer.

### 1. Installing the App on your phone

Go to <https://frm-ng.eu-gb.mybluemix.net> and click the “Get App” link on the top right. Locate and snap the QR code (using an installed QR code reader App) for your Android device or click the link to be taken to the Android Play Store. Alternatively, you can locate the “Zurich FRM-NG” App in the Play store directly.





Click install. Ensure you answer the question asking you to permit the App access to your phone with allow / yes, otherwise the installation will not be successful.

## 2. Logging in

When opening the App, you should see the following log in screen. Ensure you use the “training” environment from the drop down to enter the training / practice environment. The menu bar will turn red. Ensure you use the “live” environment for the production version. The menu bar will turn blue.

Please use the username and password provided to you by your trainer to enter the App. Note that both username and password are case-sensitive. If you enter the password incorrectly, a corresponding error message will be shown. If you do not have a data network connection and thus the server cannot be contacted, another error message will be shown. Ensure you have a data network established before logging into the FRM app for the first login. Hereafter you can also login without a network connection and use the app in offline mode. The Spinner will show up after selecting login and will automatically hide once you get the login response back. In case it takes longer to connect to the server, the app will show a message at the bottom with the advice to retry.

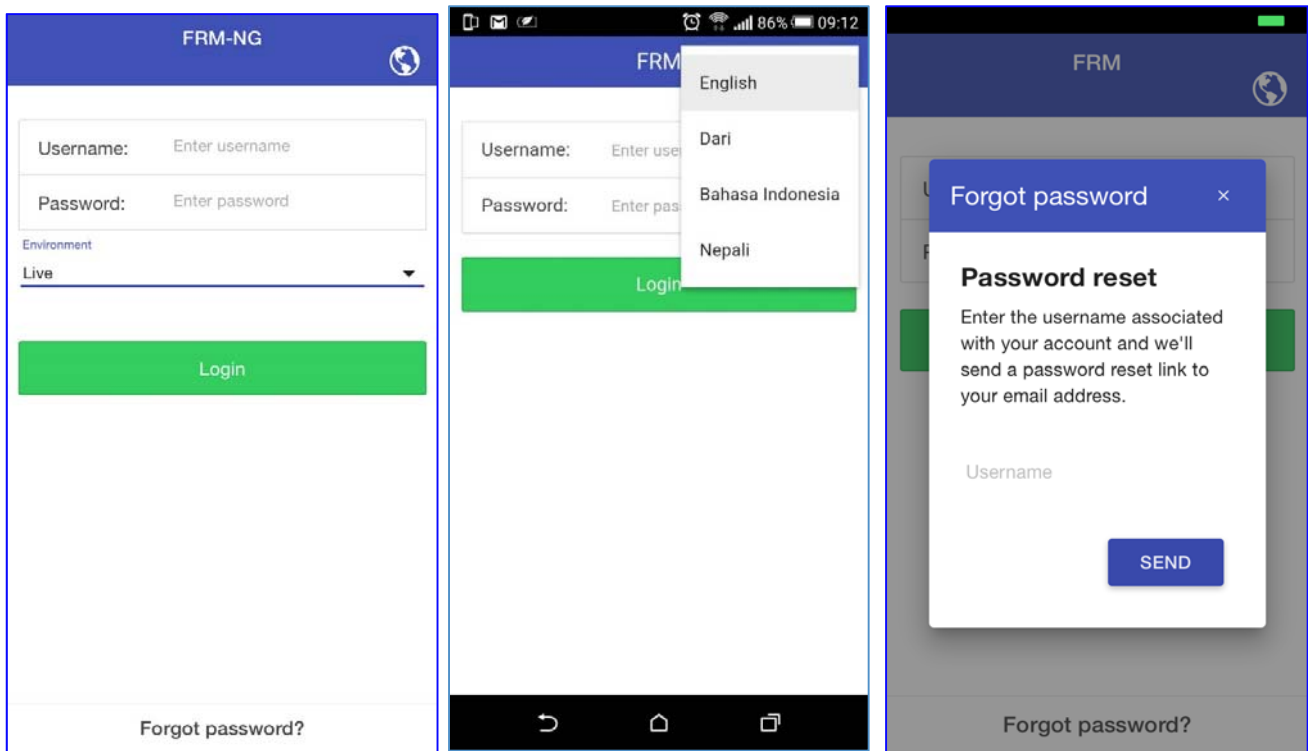
### 2.1 Select language of downloaded studies

Right on the top you will find the ‘globe’ icon to choose the language for the downloaded studies. Upon clicking on the icon, a list of available languages will be displayed. The currently selected language will be highlighted in blue.

By default the pre-selected language is English. When you are logging in the first time, please select your preferred language. Your chosen language will be saved in your user account, so you don't need to select a language every time you login. By changing the language the new selected language will override the old setting.

**Warning:** Only change the language when you don't have studies on your device! Complete a study always in one language!

If you forgot your password, click the "forgot password?" link at the bottom to receive instructions how to reset your password to your associated email address. Hence, always ensure your email address in the system is up to date.



### 3. Loading new studies to work on

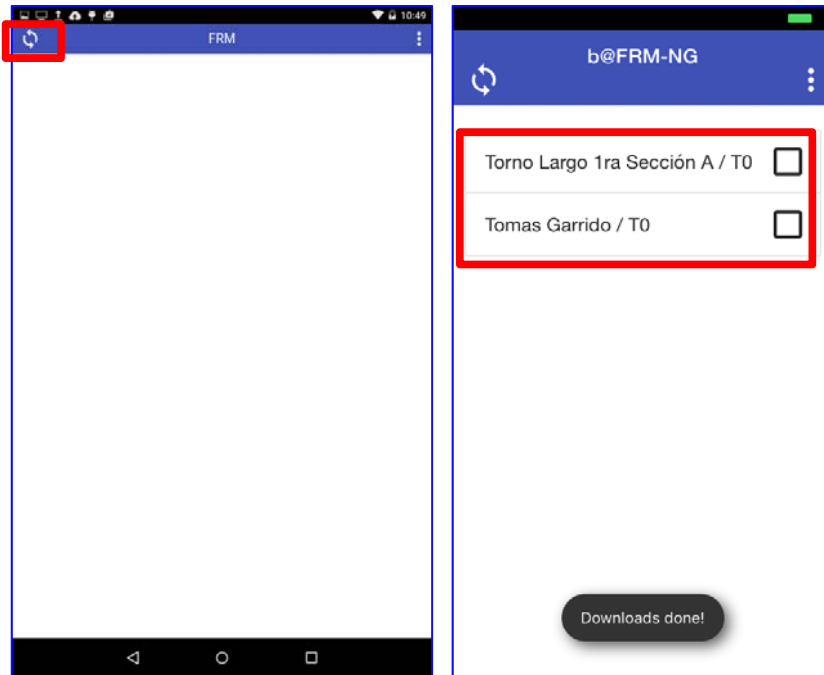
You need to have a Wi-Fi or other data connection to download new work or upload completed work to and from your device. When logging in and expecting new work to be downloaded, ensure the data connection is already established. You will see the following screen (at left) if no outstanding work is on your device.

Click the two circled arrows (red box at left) to synchronize and check for new work. If new work has been allocated to you, it will be downloaded to your device and show the communities that need work (at right). The tick boxes on the right will display whether work is incomplete (unticked) or complete (ticked). Once a community name has a ticked box, it is ready for uploading. You can then synchronize using the two circled arrows again, and the community will disappear from your device.

To make a backup of your current studies, select sync. All available studies will be uploaded in the background (but not deleted from your device) and if new studies are available they will be downloaded after that. A progress bar will appear during the sync process and will disappear automatically once the synchronization is completed. During the sync process at the bottom of the screen different messages will pop up and inform on the progress in the background.

The administrator is able to delete studies on the website. If you are trying to upload an invalid study, you get a notification with the invalid studies on your list. Click on 'Delete studies' if you agree to delete the invalid studies entry. As a result these studies will be deleted and do not appear on the screen anymore. If you do not want to delete these invalid studies, then click on 'no'. You can delete studies also manually by swiping left. You must confirm the following confirm message that you really want to delete the selected study. Warning: You can also delete valid studies. In case you delete a valid study then synchronizing will download the study again with your last updated data.

If a study is not completed but you want to declare it as complete then you swipe right. A confirm message will appear and you must confirm with 'YES!'. If you want to unmark a study then swipe right again and confirm with 'Yes'. Warning: You should avoid closing incomplete studies. Only when it is absolutely necessary because of problems getting the right information should you use this functionality. Avoid it whenever possible, e.g. by interpreting existing data or finding new sources of information rather than just 'complete' and incomplete study!



Right on top you will see an icon with 3 dots. When you click on that icon a list of 3 items will appear (see below).

#### Delete user data

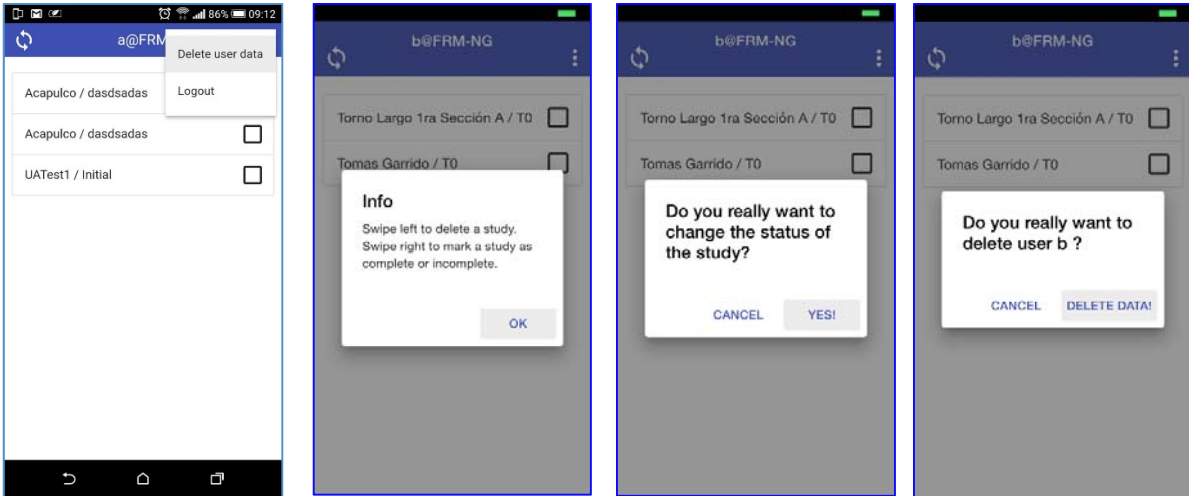
When you click on delete user data the studies and data of the current user will be deleted from the device. If the user wants to use the app again he must have an active network connection and click 'synchronize' to cover his uploaded studies. Warning: To save the last version of the studies you should sync first and after that you can click 'delete user data'. If two users are using the app with the same device, you are only deleting your data. The data of the other user will stay as it is.

#### Info

When you click on 'Info' then a message box will remind you how to use the swipe functionality.

#### Logout

Performs a logout where the current user will be logged out and redirected to the login page.



## New App Version

After successful login or when synchronizing your data it is possible that a notification will inform you that you are using an older version of the app and a newer version is available. Please sync your data and install the new app version. You do not need to uninstall the old version. After installing the new version your studies will be available.

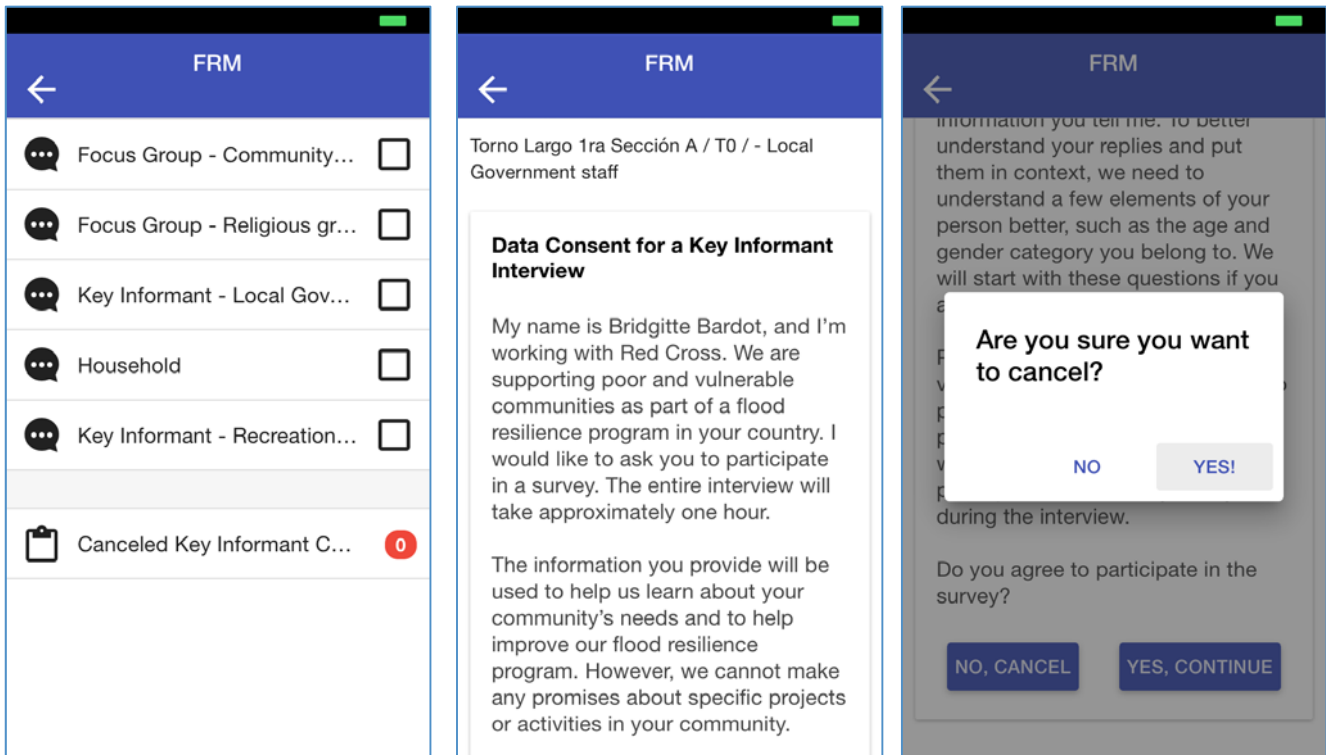
#### 4. Completing work on a community study

Once a community study has been allocated to you and is downloaded to the device, you can start collecting the information and answering the questions. In order to make navigation through the tool easier, we explain the data structure below:

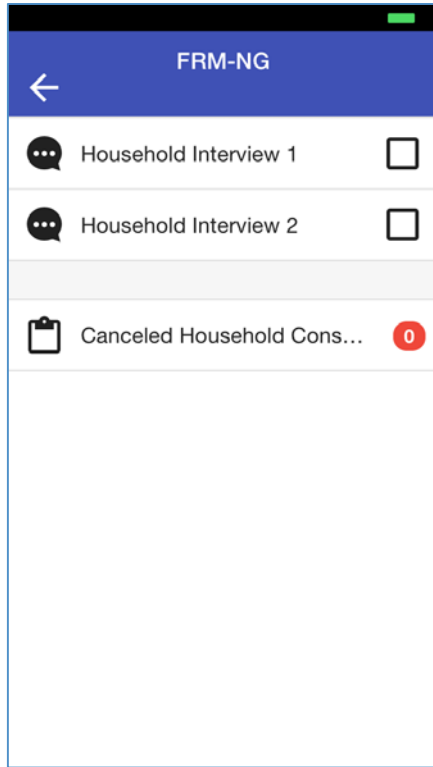
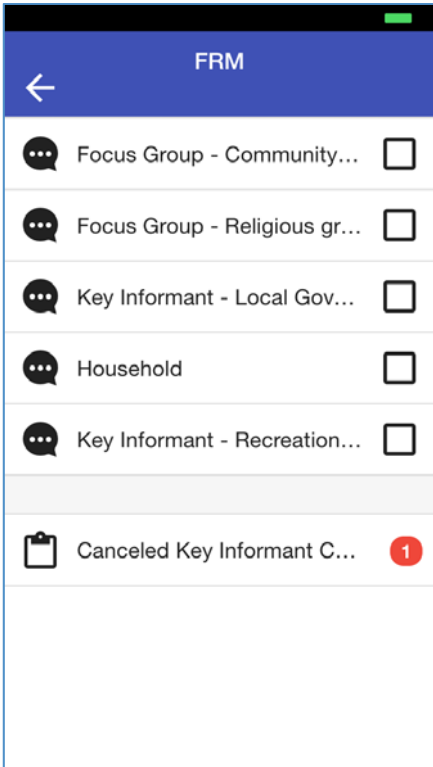
Communities are organized by Collection Methods. Remember that there are four data collection methods, three of which can be allocated to you (secondary sources are answered by the project leads), and each will be individually displayed on your device in the Collection Method Overview Screen (screenshot below). Again, tick boxes indicate whether corresponding work is complete (ticked) or still incomplete (unticked).

A new community study with all three methods allocated to you may look as follows. Depending on what your project leader has allocated to you, you may get only one or several methods to collect information for each community study. In the example screen below, the study allocated to you has various incomplete collection methods and groups / people allocated to you for focus group discussions and key informant interviews.

For household and key informant interviews, a consent needs to be read out and acknowledged by the interviewee. If they do not agree to take part in the interview, you must click “No, cancel”. The date and time of this situation will be recorded and the count of “canceled key informant” or “canceled household interviews” will be incremented by one. The questionnaire will be reset and you will have to find another interviewee for that questionnaire.







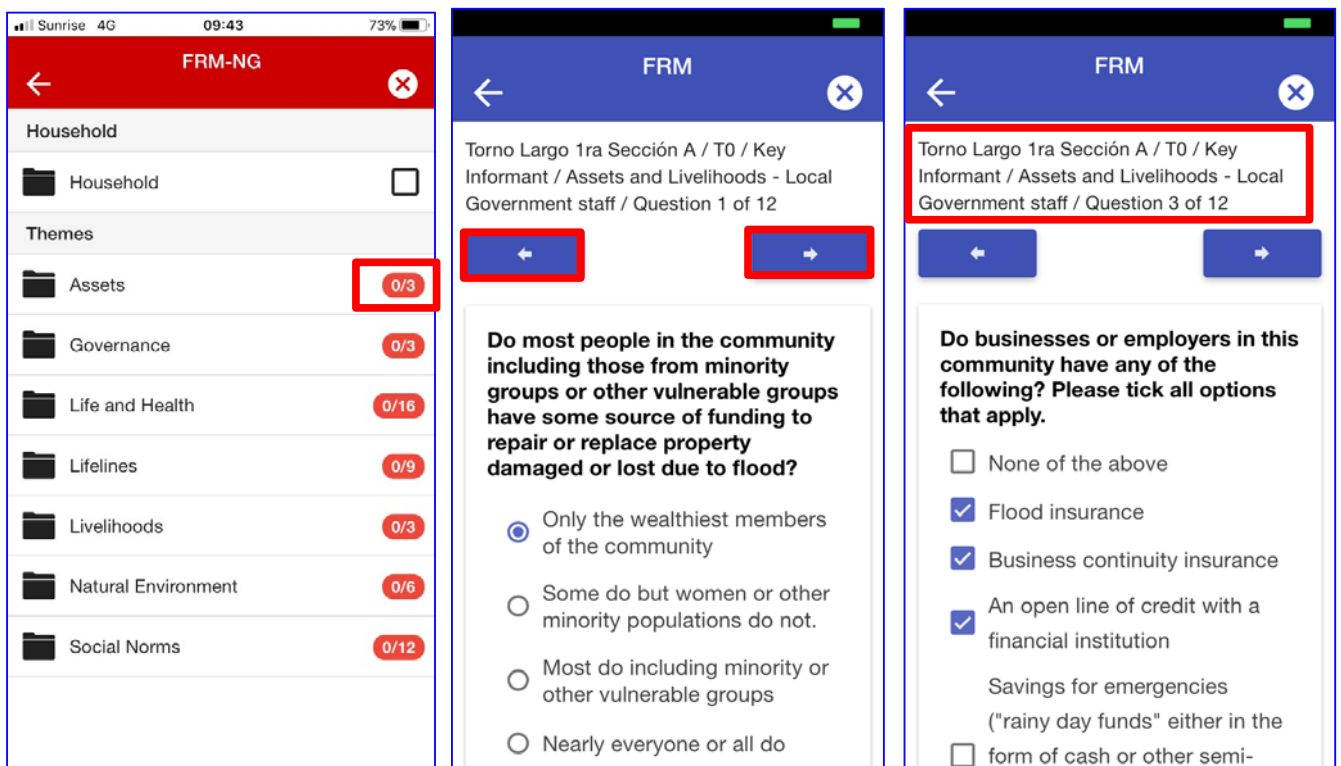
#### 4.1 The Theme Selection Screen

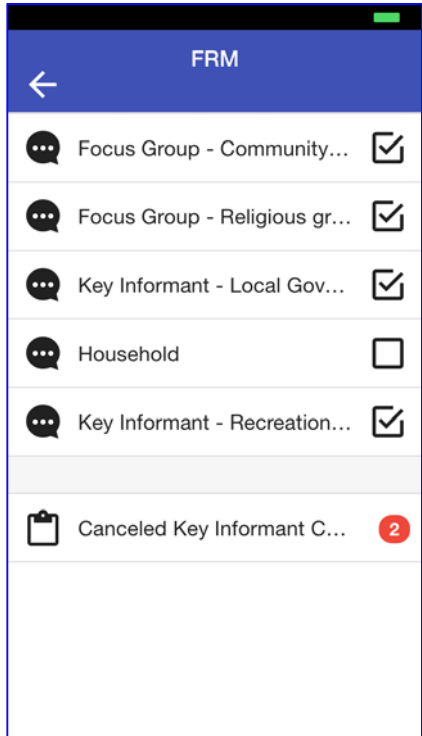
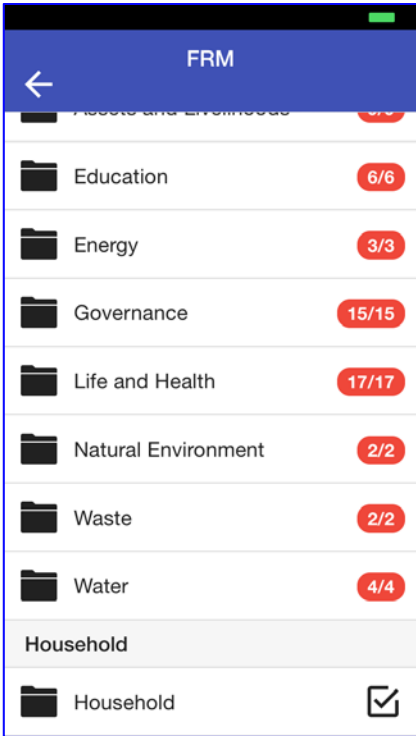
When entering one of the Collection Methods screens (with the exception of the Household Interview, see below), you will see the next data level. Questions and answers are organized around topics, or ‘themes’, by which to ask for and collect information. For each method, you will see the different themes allocated to you depending on the study setup. A screen may look as follows (at left), where you see themes in that data collection method (focus group). The red boxes to the right of each theme show how many questions you have already completed, and how many there are in total (eg. 0/3).

You can enter either theme by clicking the corresponding line. This will take you to the questions displayed and allow you to record the corresponding answers. To do this, follow the instructions above each of the questions (center).

In the question display (center), click the ‘forward’ or ‘backward’ arrow (in red box) to navigate to the next question in that theme. You can navigate the questions until you reach the first question again, which now should show a recorded answer. The ‘breadcrumb’ at the top of the question will give you some information about the position of the current question, i.e. to which category and community it belongs, in order to help you with the navigation within the tool.

Once all questions are completed in that theme, you can return to the previous theme selection screen by using the back-arrow button on top of the App. You will now see that the theme you have worked on shows the number of questions complete (e.g. 4/4). Repeat for all other themes in that collection method until all are complete.





## 4.2 The different types of questions

Depending on the information to be asked, one of the following types of questions will be asked and limited the type of answer that can be given:

- Radio-button choice (at left): One single answer can be given based on the question asked. Read the instructions carefully to check whether possible answers can be prompted by you, or whether you need to find the best matching choice to the answer given by the respondent. Then tick the line which is the best matching answer (red box).
- Multiple-choice box (center): Multiple answers can be given based on the question asked. Read the instructions carefully to check whether possible answers can be prompted or not. Be careful that certain choices cannot be combined logically, as they would not make sense. The device would not prevent you from selection multiple but illogical choices.
- Number (at right): Enter the number from 0 to n as a possible answer, using the keyboard function of your device
- Percentage: Enter the percentage from 0 to 100 percent as a possible answer, using the percentage slider
- Free text: Enter free text up to the maximum length permitted using the keyboard function or the dictation function of your device. Use a spell checker to ensure the answer is intelligible.

The image displays three screenshots of the FRM-NG mobile application interface, illustrating different question types:

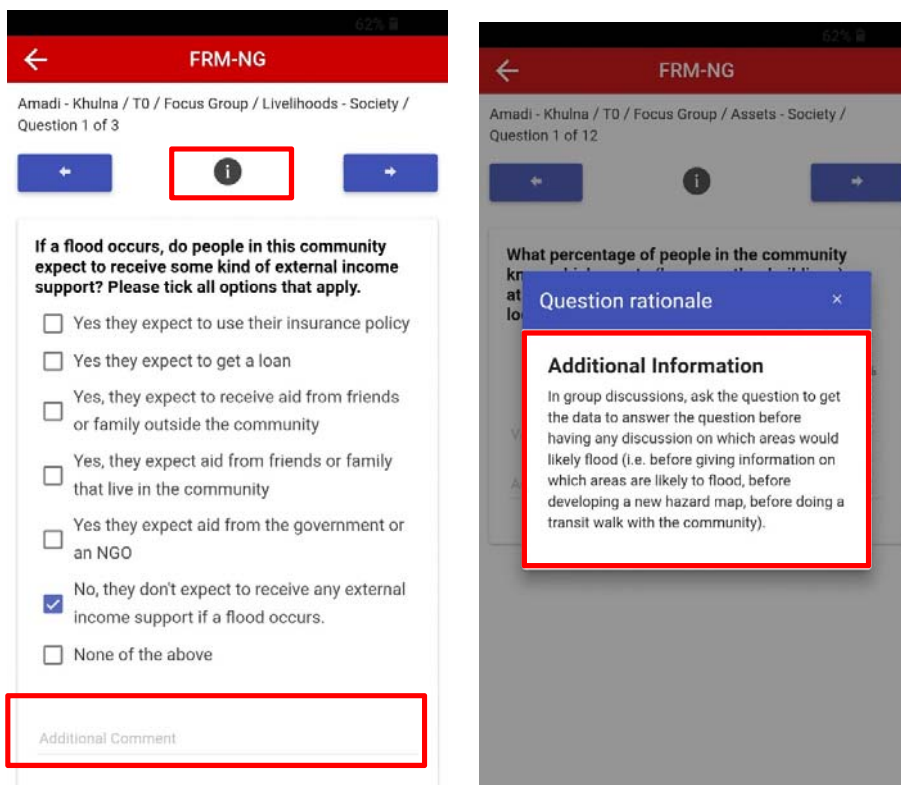
- Left Screenshot (Radio-button choice):** The question is "Has anyone in the household taken any actions already to protect their home or property from being damaged by a flood?". The answer options are "Yes", "No", and "I don't know". The "Yes" option is highlighted with a red box.
- Middle Screenshot (Multiple-choice box):** The question is "If a flood event occurs that destroys your property, how do you plan to restore it? Please tick all options that apply.". The answer options are: "I will use flood insurance.", "I will use my own emergency money savings.", "I will sell non-essential assets saved for emergencies.", "I will get a loan or grant through a government program.", "I will get a loan from my bank.", "I will get a loan from a friend or relative outside the community", and "I will get a loan from a relative in the community". The last two options are checked.
- Right Screenshot (Number input):** The question is "For the person who has lived in this village/neighbourhood the longest, how long have they lived here?". The answer field is labeled "Answer (Number)" and is highlighted with a red box. A numeric keypad is visible below the input field.

### Further advice using the info button:

Use the info-button between the arrow navigation to get additional advice, information or instructions for this question. It is important that you consult this information before asking this question for the first time.

### Additional information:

For each question, you can enter additional context information in the free text field below the answer options. Use this restrictively where it is really of value to the project lead for the grading stage, otherwise leave empty. An important additional information could for example be that the focus group had a really intense discussion on this one and did not agree collectively on this question, or that a key informant seemed not to know the answer although they responded that it was.



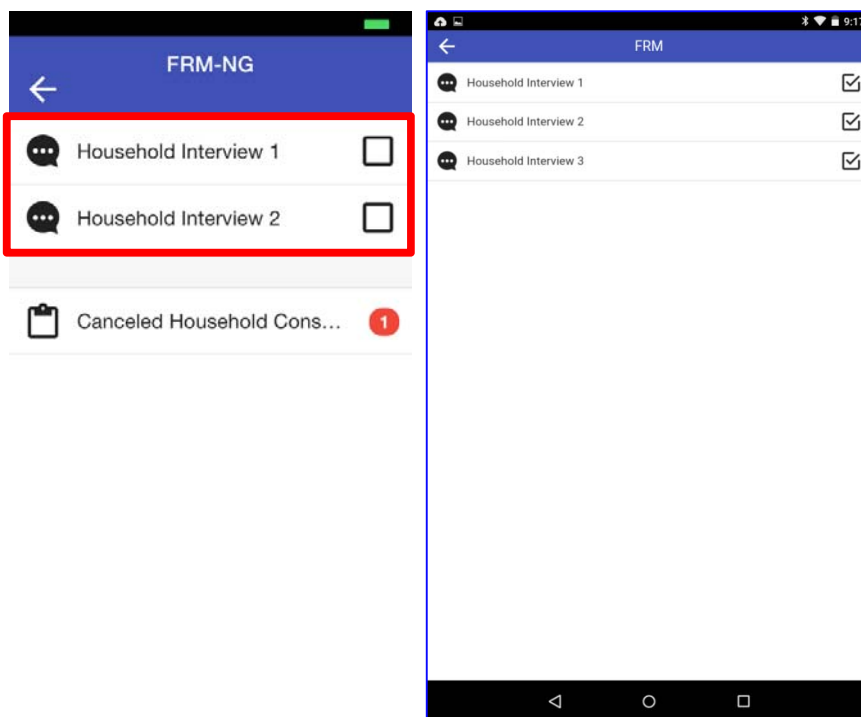
Use the back-arrow button to return to the collection method overview screen.

### 4.3 The Household Interview Screen

The household interview screen has two additional data layers. We need to gather household information from a statistically representative sample. The number of households you have to sample will have been allocated to you by the project leader setting up the study.

When you enter the household interview screen by clicking on the corresponding line, the following is the number of households you will have to gather data from (either unticked for complete or ticked for complete, at left): Choose any household interview number to enter the household interview overview screen, again sorted by 'theme'. In addition, you find one additional screens for 'household' and (center).

It is best to start with the household questionnaire first, and then the input methods.



Complete all the information for this household interview and return to the previous household interview overview screen. Repeat for all household interviews allocated to you. Once all interviews are complete, return to the previous data collection method screen.

## 5. Completing the study and sending it back to the server

Once you have completed all the information for all the data collection methods allocated to you in this study, return to the previous data collection method screen. All boxes should now be ticked, and you can return to the community study screen, which also should be ticked. You have completed all the data gathering. The study is ready for sending back to the server by using the synchronization button. The study will disappear from your device if successfully loaded back to the server. Contact your project leader now to let him know you have completed your work. The project leader would then need to wait for any other field workers completing information for this study, and can then move into the data assessment step. This data assessment is not covered in this user guide. You have completed your work.



## 6. Troubleshooting

The following is an incomplete guide to locate the cause of errors and how you might fix them. Please read this chapter carefully first. If you cannot resolve the problem yourself, please ask your direct project manager for support first. If the problem still cannot be resolved, reach out to your organization's trainer of flood resilience management, who will help you out and know next possible steps to resolve the error.

### I cannot install the App

Ensure you have acquired the latest version of the App from the currently valid link.

### I receive a security error message when installing the App

Ensure you read the installation guide carefully. You need to have the right security settings in order to install the device.

### I receive an error message, such as a 'parse error', when installing the App

Ensure you have a reasonably recent Operating System (OS) version of your Android device. If your OS is several years old, you may need to check if you can upgrade the OS on your device. Delete the downloaded App file. Upgrade the OS. Then download and try to install the App again, following the installation guide. Please understand that while we have tried to make the App compatible for as many devices and OS versions as possible, there might be a remote chance that your device is incompatible.

### The App has worked before but now I get error messages when entering or using the App

Please check the possible error explanations above. If this does not help, the following is advice how to troubleshoot this:

1. Force-close the App and reopen it. Force-closing means you open up the screen that shows you all currently opened Applications. Swipe this App to the side to close. Reopen and check if error still persists
2. Restart your device completely. Shutting off and restarting the device, making it to reboot fully, often resolves errors
3. Uninstall and reinstall the App, ensuring you download the latest version. **Important: You will lose all partially completed work that is only present locally on your device.** Go to your main application folder and uninstall the FRM App. How to do this may depend on your device and OS, but often by touching the App button long and then moving it to the 'Uninstall' section that has appeared. Then follow the installation guide to completely reinstall the App. Check if the error persists. If it does, contact your project leader.