



**National Reconstruction Authority, (NRA)**  
Management Information System (MIS)

**Manual Part-3**

**NRA - MIS**

**User Manual Mobile-App**  
Mobile based data collection from site level





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## **1.0 About this user manual**

The User Manual contains all essential information for the user to make full use of the MIS and its operations parts of developed Management Information System. This manual includes a description of the system functions and capabilities, contingencies and alternate modes of operation, and step-by-step procedures for system access and use. Image and graphics has been used where ever possible to illustrate the software use steps of any event and activity under the software handling process.

NRA MIS user manual is the main document containing 3 parts of the software user manual developed under NRA MIS. This user manual is part 3 of the main user manual of NRA MIS covering mobile based applications uses for data capture, processing and uploading on the main server of NRA MIS.

### **1.1 NRA**

The NRA is the legally mandated agency for leading and managing the earthquake recovery and reconstruction in Nepal. NRA provides strategic guidance to identify and address to the priorities for recovery and reconstruction, taking into account both urgent needs as well as those of a medium- to long-term nature. The NRA was formed on 25 December 2015, when the government appointed the Chief Executive Officer. The NRA's overall goal is to promptly complete the reconstruction works of the structures damaged by the devastating earthquake of 25 April 2015 and subsequent aftershocks, in a sustainable, resilient and planned manner to promote national interest and provide social justice by making resettlement and translocation of the persons and families displaced by the earthquake. NRA is committed to reconstruct, retrofit and restore partially- and completely-damaged residential, community and government buildings and heritage sites, to make them disaster-resistant using local technologies as needed.

### **1.2 MIS**

NRA MIS has been developed primarily for Emergency Earthquake Assistance Project (EEAP) and other stakeholders supporting similar earthquake reconstruction initiatives in Nepal. The MIS has been developed for NRA and ministries to monitor the activities supported by the Asian Development Bank and other donors for monitoring of the projects, annual procurement plans, physical targets linked with line ministries and their financial budgets.



The MIS enables collection, analysis and monitoring the physical and financial progress for all civil work contracts and consultancies initiated for reconstruction post a disaster in the country. The data collection is supported by an online and android tab-based process, functional at all CLPIU and DLPIU levels. The data collection process includes real-time data capture and upload from GPS tagged location to see the actual progress at site level construction work linked with ongoing contracts. The data collection process will be monitored at NRA level with an administration support.

The MIS supports output generation. This includes tables, charts, maps, data consolidation reports, basic and advance analysis, pivot cross reports generation. These outputs facilitate monitoring the real-time progress on all the on-going projects.

Operationally, the NRA MIS is developed and organized to capture progress from different IAs functional as CLPIU for ministries and departments like DuDBC, DoE, DoR and DOLIDAR covering buildings, schools buildings, roads and rural roads respectively. The MIS is currently under finalisation and deployment trainings are being provided to the users of respective Govt. department to ministry.

### ***1.3 Scope of MIS mobile application under NRA MIS***

NRA MIS provides Google map based monitoring of GEO tagged reconstruction sites for all civil work contracts. Site engineers can use android TAB for real-time monitoring of site level activities for any allocated contract. The MIS server captures data from GPS enabled tab for real-time construction site visuals and data to produce reports for managers and top level decision makers. Data can be entered from Site level, DLPIUs for further monitoring at CLPIU and NRA level. This document provides the user level application operations information for android based data collection process. User using the android application under NRA MIS should use this manual to understand the application events and activities offered by the android based software. All the site level engineers, field surveyors etc. should take advantage of this user manual in order to utilise the application to its best.



## 2.0 Requirements

Listed below are the minimum hardware and software requirements that need to be ensured prior to start using the mobile software in any android device. This information can be checked by doing the following:

*Step 1:* Open android and click on “Settings”

*Step 2:* Select “About” or “About Phone” as last option on the menu.

### 2.1 Mobile Hardware

Listed below are the minimum hardware requirements that need to be checked before installation on android OS.

**Table 1: Minimum hardware Requirements as Android device**

1.	CPU	1.2 GHz or Higher
2.	RAM	1GB or Higher
3.	GPS version	20.2.xx.xx.xx Any version should be available
4.	WI-FI	4.xx.xx.xxx. Any version should be available

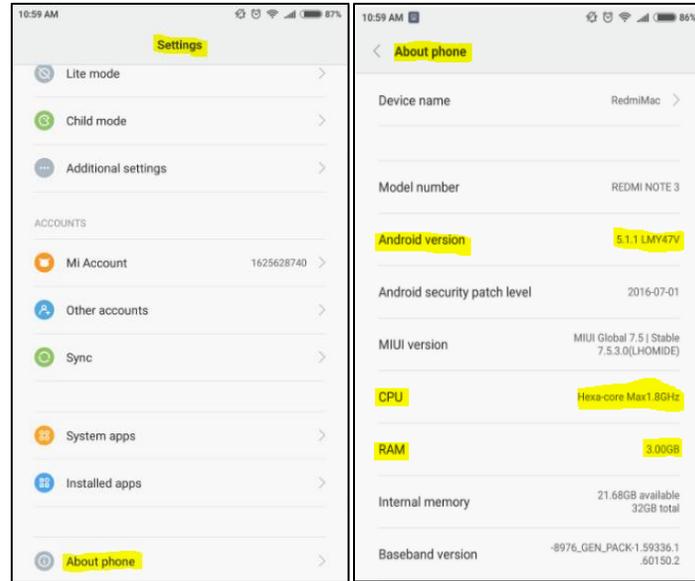
### 2.2 Mobile Software

Listed below are the minimum software requirements for using the android devices

**Table 2: Minimum Software Requirements as Android device**

1.	Android version	4.2+ Any version of android above 4.2 can work If version is less than 4.2 then please try to upgrade the version or device as software will not work correctly on version lower than 4.2
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See images



### ***2.3 Other important instructions***

User must be comfortable using android any other smartphone to be able to use this software for data capture and upload on the NRA MIS server. This software doesn't require any special training on the OS itself and any basic android user can easily use the device and software for site level survey and progress monitoring including other activities under NRA MIS. The application has been designed as offline data collection process and online transfer of the data. User needs to be connected to internet only for preparation of the device and data syncing period; rest of the data collection and saving in the device can be executed as offline system and there is no need to be online all the time during use of the application.



## **3.0 Installation**

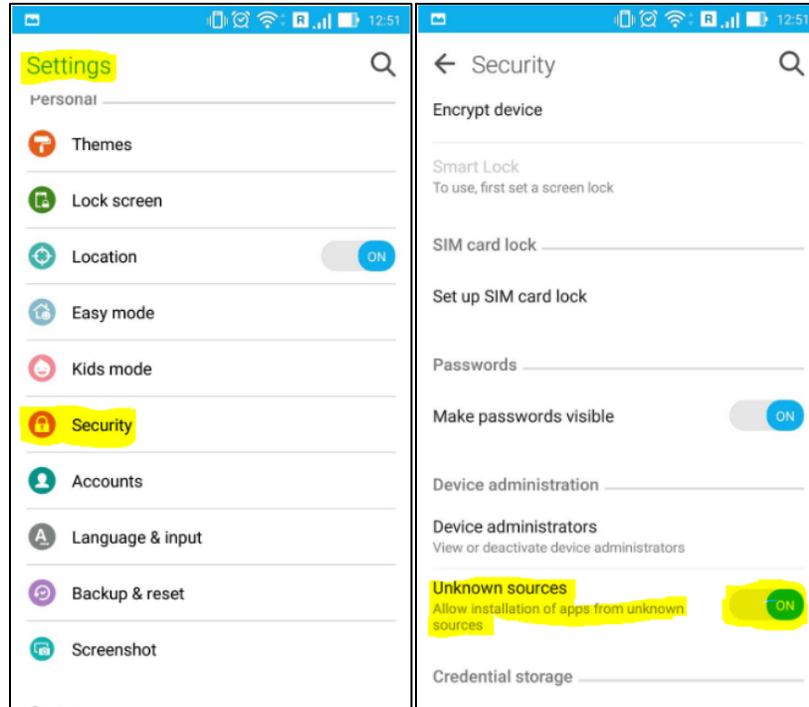
User needs to install the application before started working on the app in mobile/android device. The application has not been hosted on Google play store as of now but eventually will be available after some time. The site users/engineers are currently given application by the NRA MIS helpdesk person whereas application will be shared as email setup. Please contact helpdesk person to get the application or ask Govt. department head to provide application setup at the time of training/demo. Users can also download the application from [nramis.org](http://nramis.org) using this link. <http://nramis.org/tools/NRAMIS.zip>. This link can be changed in future.

### **3.1 Android**

Application can be installed on any android device passing through basic minimum hardware and software requirements provided in this document above. User using given version of software can download the application on their device and follow the steps below in order to start use of the application for survey. Users also need change the settings in android to make it open installation from unknown sources as application is not provided on Google play store as of now.

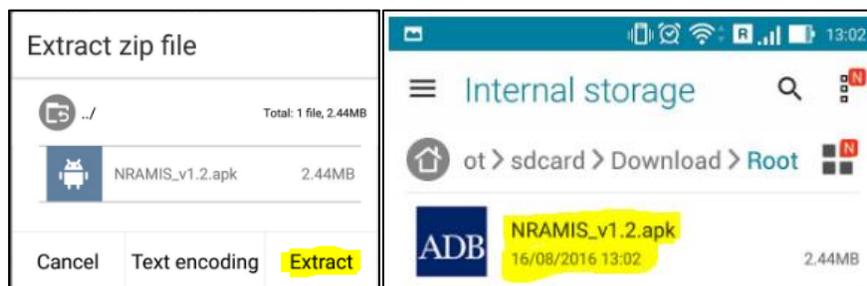
Step1. Open settings

Step2. Open “security” or “privacy” settings



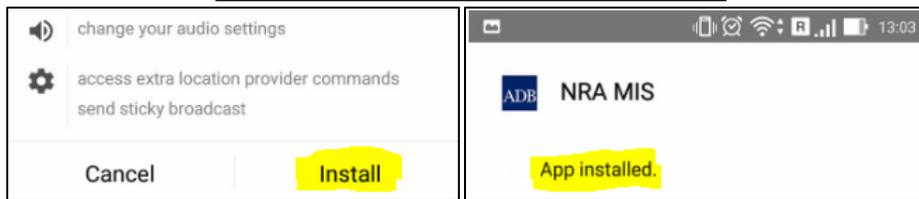
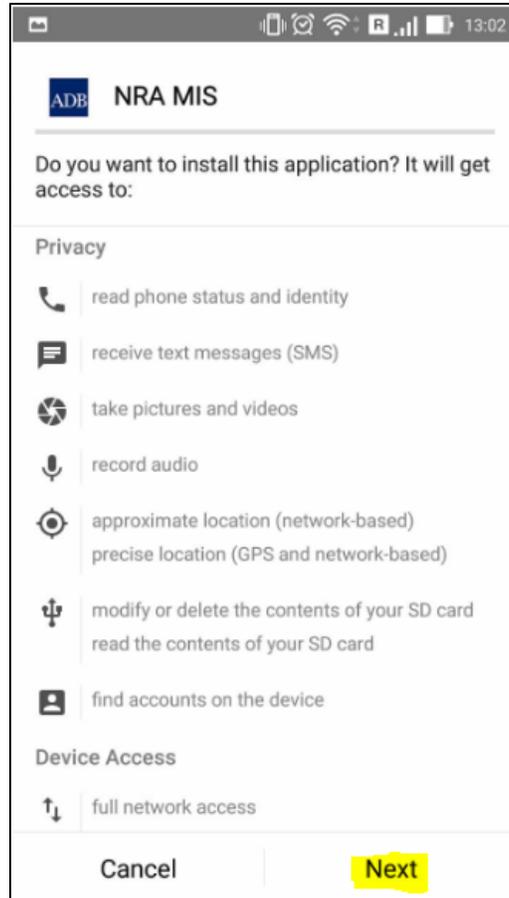
Step3. Make installation from “Unknown sources” as enabled (see images given above)

Step4. Run the application .apk file after downloading and extracting from .zip



Downloading and Extracting from .zip file as .apk

Step5. Accept the terms and install the app



Click on next to install the app

Step6. Click on open to run the app for first time

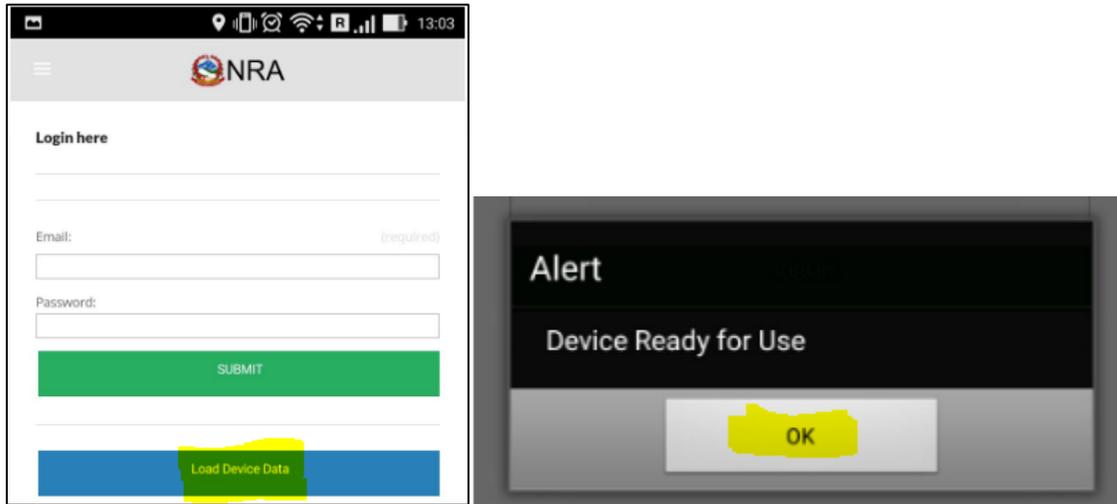


### ***3.2 Setting up software for first use***

After successful installation of the application users need to prepare the device for first time use with connected internet on the device. This part of the setup process cannot be executed without internet so please be connected with any stable Wi-Fi access point or be connected with 2G-3G connectivity of the service provider.



Step1. Please open application and click on button “Load device Data” to prepare the app for first time use. User needs to be connected with internet before using this option



Click this button to start the data loading activity

- Please make sure your device is connected with Internet before pressing button to “Load device Data” else nothing will happen in the preparation phase of the app.
- In case users not getting the button “Alert:OK” then please click on the home button and then re click on the app to get this as some of the app version is not able to show-up this screen .

After this user can login in the application with provided username and password to start the operations please contact with the facilitator in order to get the user name and password of the app based on your registration process and allocation of the GEO area in the field.



### 3.3 Login in the application

User now can login in the installed application with provided user name and password. Application already received the valid access credentials in the first time use which can be refreshed later also in case of any password change. Please follow the steps below to login in the application. User must enter valid credentials to login in the application.

Step1. Open the app for first time after setup

Step2. Enter valid user name and password given and click on “Submit”

The screenshot shows the login interface of the NRA mobile application. At the top, there is a header with the NRA logo and the text 'NRA'. Below the header, the text 'Login here' is displayed. There are two input fields: one for 'Email: (required)' and one for 'Password:'. A green button labeled 'SUBMIT' is positioned at the bottom of the form.

Step3. User should be able to see the after login screen with these buttons

The screenshot shows the 'About NRA' screen of the mobile application. At the top, there is a header with the text 'Menu' and the NRA logo. Below the header, the heading 'About NRA' is displayed. The main content consists of a paragraph of text describing the organization's mission and the app's purpose. At the bottom, there are three green buttons: 'View School Survey List', 'View Building Survey List', and 'Refresh Project Master'.

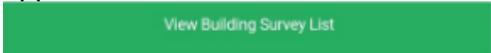


## 4.0 Software modules

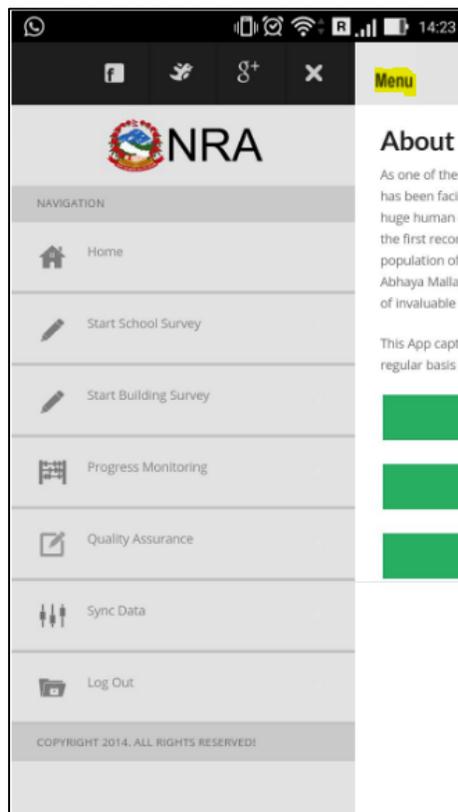
There are various software module attached in the mobile app for various type of users. App provides different application uses for users of site and building survey and different modules access to users of progress monitoring and quality assurance monitoring from the site level against any contracts being monitored using the android device. Please follow steps below to see the various application modules and its uses.

### 4.1 Main menu

User can click on **Menu** on the main screen after logging in the app to see all the options and modules of the app. User can also click on the main screen buttons for quick access of the

application  school survey list and  building survey list along with maser refresh button  to refresh all the masters again.

Step 1: Click on the “Menu” button to see the main menu as shown below.



Main menu and listed modules



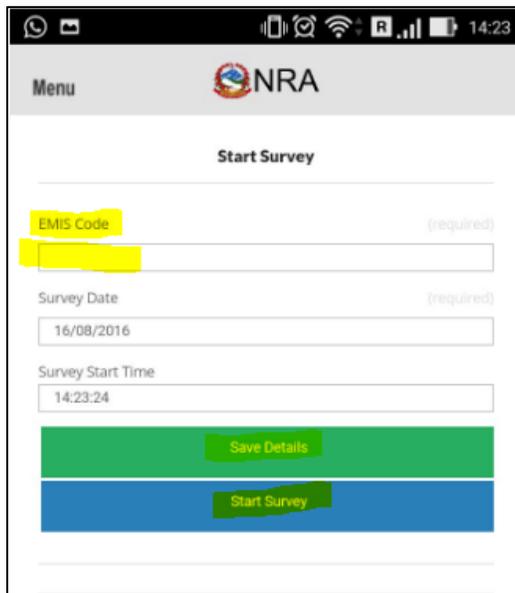
## 4.2 School survey

User can click on  in the main menu to start the module. Module provides options and events to execute the field level school survey to record and report the status of damage happened on the school building at the time of disaster. The module can record the data from the official's interview and school location survey using the app. The survey has got 15 parts of the forms in order to complete the survey activity which includes clicking images and storing the GEO location from the satellite using the built-in android GPS chip in the user android device. Please follow the steps below to entry and edit data in the school survey module.

### 4.2.1 Data entry

User can open the module and can click on the start survey to start the survey of the school building after reaching to the location. Please see instructions and steps below to complete the 15 parts of the survey form.

Step 1: Click on the “Start school survey” in the main menu.



The screenshot shows a mobile application interface for starting a survey. At the top, there is a 'Menu' button and the NRA logo. The main heading is 'Start Survey'. Below this, there are three input fields: 'EMIS Code' (required), 'Survey Date' (required), and 'Survey Start Time'. The 'EMIS Code' field is highlighted in yellow. Below the input fields, there are two buttons: a green 'Save Details' button and a blue 'Start Survey' button.

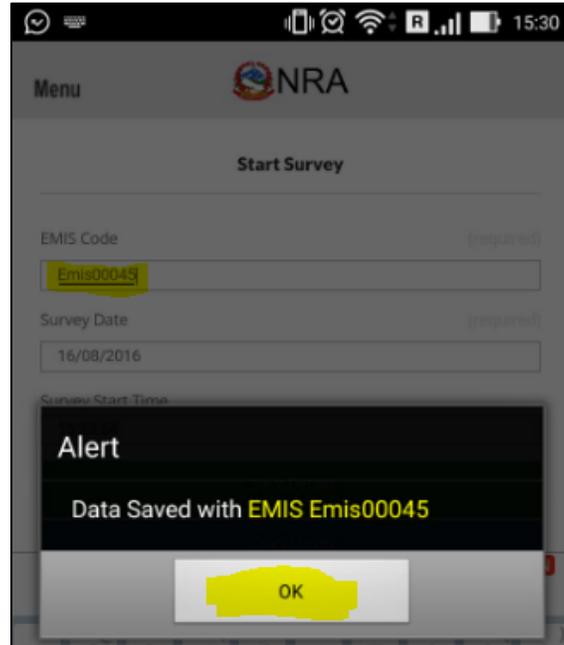
Step 2: Enter EMIS code (Most important to start and run the survey). And click on “Save Details”.

➤ Option to enter data and click on “save details” is on every part of the forms and user must follow this carefully while entering data in the app.

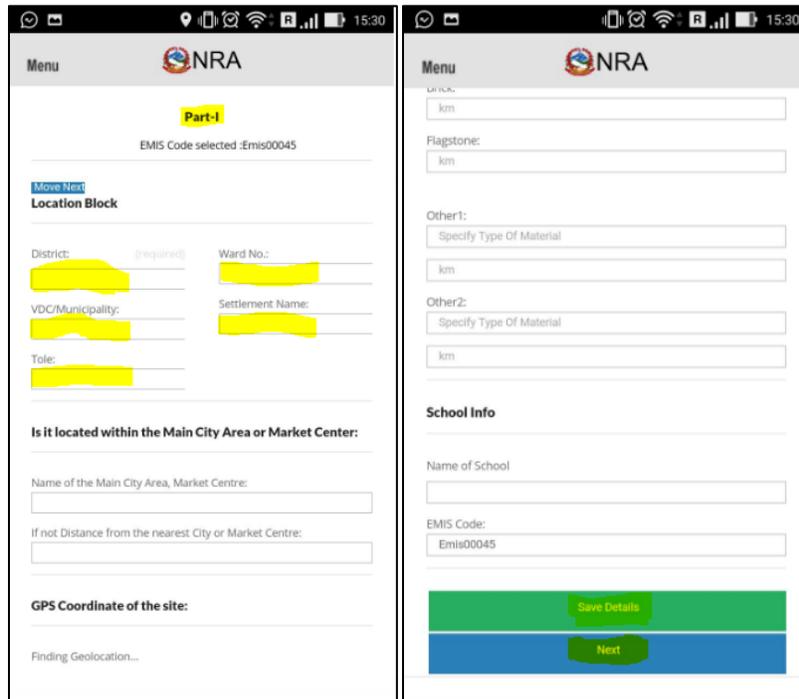


Step 3: After entering the EMIS code and saving the information please click on “Start survey”.

Step 4: Enter details in the form and click on “save” and then user will get this message for saving of the data confirmation see below.



Step 5: Enter data in Part 1 for all required fields and “Save” data to continue to part 2 by pressing “Next”





Step 6: Enter data in Part 2 for all required fields and “Save” data to continue to part 3 by pressing “Next”

The image displays two screenshots of the NRA mobile application interface. The left screenshot shows the 'Part-II' screen with the following fields: 'EMIS Code selected :Er', a 'Move Next' button, '3.', 'Survey Team:', 'Survey Group ID:', 'Survey Date:', and 'Survey Team Leader:' with sub-fields for Name, Contact No., and Signature. The right screenshot shows the 'Part-III' screen with fields for 'Contact No.', 'Signature', and 'Organization', followed by a 'Team Members' section with four rows of 'Name:' and 'Organization:' fields. Both screens feature a green 'Save Details' button and a blue 'Next' button at the bottom.

Step 7: Enter data in Part 3 for all required fields and “Save” data to continue to part 4 by pressing “Next”



The first screenshot shows the 'Part-III' section of the form. It includes a 'Menu' header with the NRA logo, a yellow 'Part-III' label, and the text 'EMIS Code selected :Emis0004'. Below this is a 'Move Next' button. The section is titled '4. Accessibility [Y/N]' and contains three sub-sections: '4.1 Select Type of Road:' with an 'N/A' input field, '4.2 If no vehicular access, walking distance from the nearest main road:' with a text input field containing '.....km/.....Hr (e.g 10/2)', and '5. Services' which includes '5.1 Is the school connected to electrical supply line' with an 'N/A' input field and a 'Type Source :' label with an empty text input field. The second screenshot shows the 'Part-IV' section, which includes '5.1 Is the school connected to electrical supply line' (repeated), '5.2 Does the school have regular water supply source' with an 'N/A' input field and a 'Type Source :' label with an empty text input field, and '5.3 Does the school have internet facility' with an 'N/A' input field and a 'Type Source :' label with an empty text input field. At the bottom of the second screenshot are two buttons: a green 'Save Details' button and a blue 'Next' button.

Step 8: Enter data in Part 4 for all required fields and “Save” data to continue to part 5 by pressing “Next”

The first screenshot shows the 'Part-IV' section of the form. It includes a 'Menu' header with the NRA logo, a yellow 'Part-IV' label, and the text 'EMIS Code selected :E'. Below this is a 'Move Next' button. The section is titled '6. School Brief' and contains three sub-sections: '6.1 Select Type of School:' with an 'N/A' input field, '6.2 Year of Establishment (AD/BS):' with an empty text input field, and '6.3 Details of Head Master/School In-charge:' with three text input fields labeled 'Name :', 'Contact No.:', and 'Address :'. The second screenshot shows the 'Part-V' section, which includes '6.4 Details of SMC Chairperson/Secretary:' with a 'Name' text input field. Below this are two sub-sections: '6.6' with three text input fields labeled 'Total No. of Staffs:', 'No. of Teachers:', and 'No. of Admin. Staffs:', and '6.7' with three text input fields labeled 'Total No. of Students:', 'No. of Boys:', and 'No. of Girls:'. At the bottom of the second screenshot are two buttons: a green 'Save Details' button and a blue 'Next' button.



Step 9: Enter data in Part 5 for all required fields and “Save” data to continue to part 6 by pressing “Next”. In this part users can enter data for multiple rows as shown below.

The first screenshot shows the 'Part-V' form with fields for Block No, No. of Story, Classroom, Age of bldg. (year), Structure Type (A-G), Roof Type (a-d), Damaged State (1-4), Assessment needed (Y/N), and Remarks. A 'Move Next' button is visible.

The second screenshot shows the 'Save Details' and 'Next' buttons, along with a 'Note' section defining Structure Type and Roof Type options.

The third screenshot shows a table with two rows of data:

Block No	No. of Story	Class room	Open Record	Delete
1	1	2	Open	Delete

Below the table, the 'Note' and 'Damaged State' sections are repeated.

➤ Multiple rows can be entered and removed if required using the delete option. User must confirm the actual no. of rows entered in the device for any school before data syncing as once data is uploaded that cannot be removed by user.

Step 10: Enter data in Part 6 for all required fields and “Save” data to continue to part 7 by pressing “Next”. In this part users can enter data for multiple rows as shown below.



The first screenshot shows the 'Part-VI' form with the following fields:

- Menu
- NRA Logo
- Part-VI
- EMIS Code selected :Emis00045
- Move Next
- 8. Condition of Toilet Facility
- No. of Toilet Blocks: 2
- No. of Boy's Toilet: 2
- No. of Girl's Toilet: 1
- Are all the toilets functional (Y/N): No
- If NO, what type of facility is not working? Damaged

The second screenshot shows the continuation of the form with:

- Menu
- NRA Logo
- Part-VI
- Are all the toilets functional (Y/N): No
- If NO, what type of facility is not working? Damaged
- Any comments about cleanliness:
- Save Details
- Next

Step 11: Enter data in Part 7 for all required fields and “Save” data to continue to part 8 by pressing “Next”. In this part users can enter data for multiple rows as shown below.

The first screenshot shows the 'Part-VII' form with the following fields:

- Menu
- NRA Logo
- Part-VII
- EMIS Code selected
- Move Next
- 9. Condition of Temporary Buildings
- Table with 6 columns: Block No, Classroom / Other, Structure Type(A-D), Is Material reusable (Y/N), Easy to relocate (Y/N), Remarks
- Save Details
- Next

The second screenshot shows the continuation of the form with:

- Menu
- NRA Logo
- Part-VII
- Move Next
- 9. Condition of Temporary Buildings
- Table with 6 columns: Block No, Classroom / Other, Structure Type(A-D), Is Material reusable (Y/N), Easy to relocate (Y/N), Remarks
- Table with 6 columns: Block No, Class room, Is Material Reusable, Open Record, Delete
- Save Details
- Next

Step 12: Enter data in Part 8 for all required fields and “Save” data to continue to part 9 by pressing “Next”.



The first screenshot shows the 'Part-VIII' form with the following sections:

- EMIS Code selected: Emis00045
- Section 10: New Construction Space
- 10.1 Is there space available for storing construction materials in the site? (Input: N/A)
- 10.2 Is there enough water available for construction activities? (Input: N/A)
- 10.3 Is there space available for new building construction without demolishing Temporary Building? (Input: N/A)
- 10.4 If Temporary Building is demolished for construction of new building, is there any alternative solution possible? (Input: N/A)

The second screenshot shows the 'Part-IX' form with the following sections:

- 10.10 Land ownership (Input: N/A)
- Land Ownership Certificate in the name of school (Input: N/A)
- Government Land & VDC/Municipality has given letter for use for school (Input: N/A)
- Government Land & VDC/Municipality has yet to issue letter for use to school (Input: N/A)
- Private Land & Land Owner has given the land for use for school (Input: N/A)
- Private Land & Owner has yet to issue the letter for use to school (Input: N/A)
- Buttons: Save Details (green), Next (blue)

Step 13: Enter data in Part 9 for all required fields and “Save” data to continue to part 10 by pressing “Next”.

The first screenshot shows the 'Part-IX' form with the following sections:

- Section 11: Environmental Information
- a) The school-site is adjacent to or within any of the following areas. (Input: N/A)
- Table with columns: Adjacent to or within, Yes/No, Remarks
- Items: Underground utilities, Protected area, Wetland, Mangrove, Estuarine, Buffer zone of protected area, Special area for protecting biodiversity, Bay, Others (Specify)
- b) Any Potential Environment Impacts that will caused by the school

The second screenshot shows a selection dialog with three options: N/A (selected), Yes, and No.

The third screenshot shows the continuation of the 'Part-IX' form with the following sections:

- Encroachment on historical/cultural areas (Input: N/A)
- Encroachment on precious ecology (Input: N/A)
- Impacts on the sustainability of associated sanitation and solid waste disposal systems (Input: N/A)
- Dislocation or involuntary resettlement of people (Input: N/A)
- Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups (Input: N/A)
- Occupational and community health and safety risks (Input: N/A)
- Requirements for disposal of fill, excavation, and/or spoil materials (Input: N/A)
- Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction (Input: N/A)
- Social conflicts if workers from other regions or countries are hired (Input: N/A)
- Risks to community safety caused by fire, electric shock, or failure of the buildings safety features during operation (Input: N/A)
- Others (Specify) (Input: N/A)
- Buttons: Save Details (green), Next (blue)



Step 14: Enter data in Part 10 for all required fields and “Save” data to continue to part 11 by pressing “Next”.

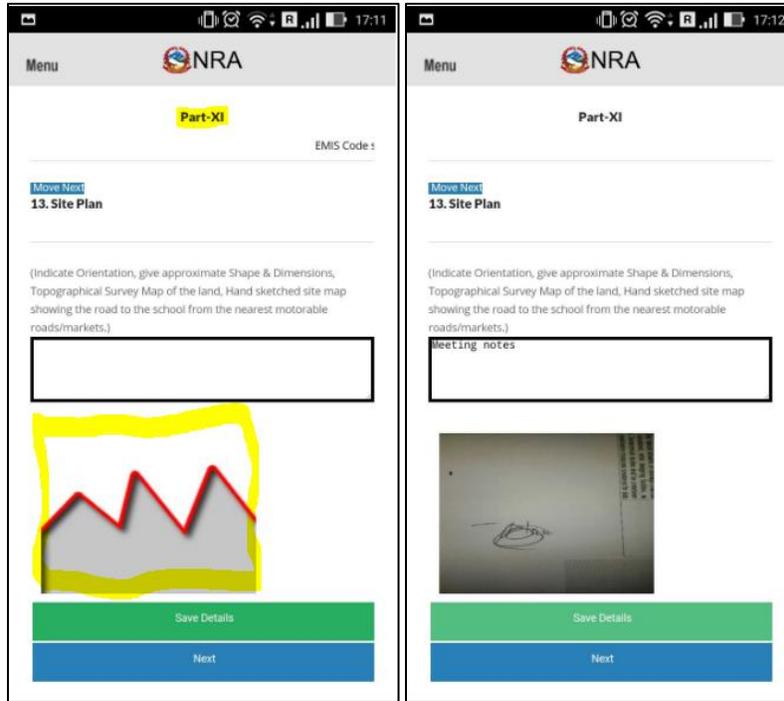
The image displays two screenshots of the NRA mobile application interface. The left screenshot shows the 'Part-X' section with a table for '12.1 Involuntary Acquisition of Land.' The table has columns for 'Particular', 'Yes/No', and 'Remarks'. The right screenshot shows the 'Information on Displaced Persons' section with three sections (a, b, c) for data entry and 'Save Details' and 'Next' buttons.

Particular	Yes/No	Remarks
Will there be any land acquisition?	N/A	
Is the site for land acquisition known?	N/A	
Is the ownership status & current usage of land to be acquired known?	N/A	
Will easement be utilized within the area where the school existed?	N/A	
Will there be loss of shelter & residential land due to land acquisition?	N/A	
Will there be losses of crops, trees & fixed assets due to land acquisition?	N/A	
Will there be loss of businesses or enterprises due to land acquisition?	N/A	
Will there be loss of income sources & means of livelihoods due to land acquisition?	N/A	

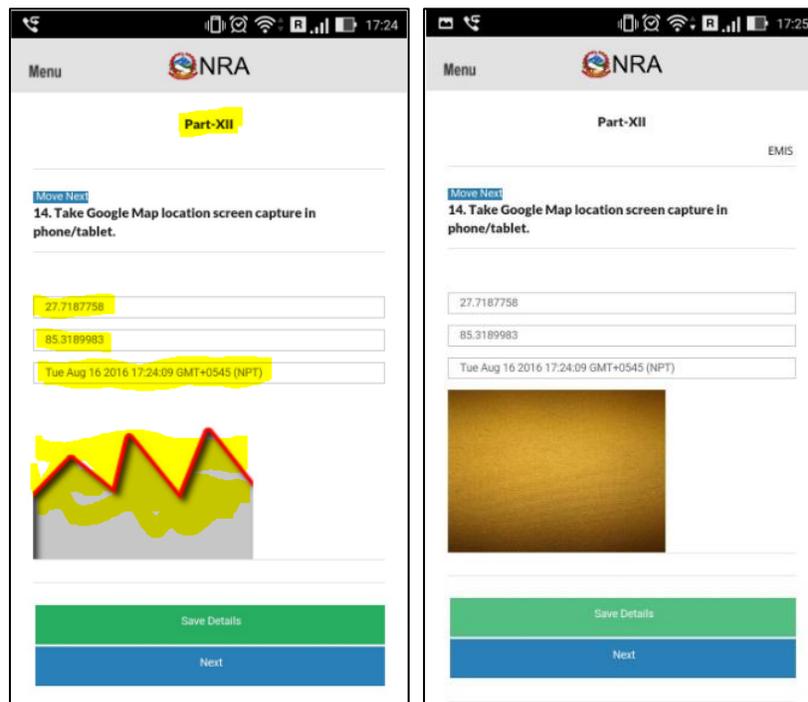
Step 15: Enter data in Part 11 for all required fields and “Save” data to continue to part 12 by pressing “Next”. In part 11 users also need to click the image by clicking the image button as shown below.



- After clicking the image capture button  the camera will open to capture image and saved images will re appear in the app for further saving to database.
- User should be careful in taking images using the camera. It should be correct in light and sharpness balance and should be taken from perfectly above the site plan paper.
- Image can be re-clicked by pressing the same button in order to edit the image.



Step 16: Enter data in Part 12 for all required fields and “Save” data to continue to part 13 by pressing “Next”. In part 12 users also need to click the image by clicking the image button as shown below.

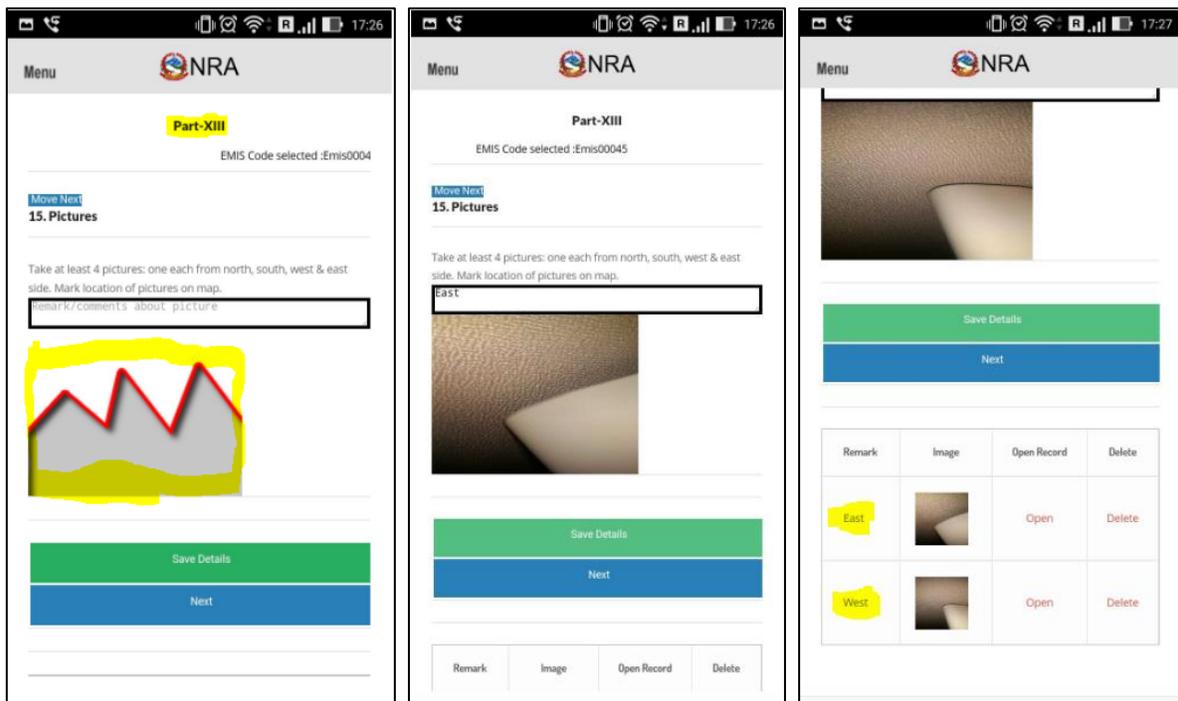




➤ User should see longitude and latitude information up to 6 decimal places appearing on the screen automatically but in case this information is missing then please enter this information up to 6 decimal places using other GEO coordinates finder.

➤ If GEO coordinates information is missing then users android hardware is not supporting GPS hence this needs to be corrected manually by entering the data in the app.

Step 17: Enter data in Part 13 for all required fields and “Save” data to continue to part 14 by pressing “Next”. In part 13 users also need to click the image by clicking the image button as shown below.



➤ User need to enter 4 images for east, west, north and south location by capturing directly from different locations in app. The image capture should cover whole building correctly.

Step 18: Enter data in Part 14 for all required fields and “Save” data to continue to part 15 by pressing “Next”. In part 14 users also need to click the image by clicking the image button as shown below.



Menu NRA

Part-XIV

EMIS Code selected :Emis00045

Move Next

16. Minutes of Meeting with Local Representatives, SMC members, Staffs & Others.

Date:

Venue:

List here

Save Details

Next

Step 18: Enter data in Part 15 for all required fields and “Save” data. Part 15 is last part for any one survey and user can continue with next survey or can sync data to server.

Menu NRA

Part-XV

selected :Emis00045

17. Any other important information.

a) If there is any other schools within 2 km distance (if it is in hilly rural region) or within 1 km distance (if it is in a densely populated area),

S.N.	Name of the school	School Type
1	<input type="text"/>	N/A
2	<input type="text"/>	N/A
3	<input type="text"/>	N/A
4	<input type="text"/>	N/A
5	<input type="text"/>	N/A

b) Any displaced persons from indigenous or ethnic minority groups?

Remarks

c) Major profession/trades in the catchment (approximately)

school catchment area (if the information can be collected):

Obtain climatic records of last 50 years from elderly persons (asking them about the highest/lowest temperature, rainfall, landslides/flood/snowfall/storm etc. during the span of 50 years).

Any other relevant information:

Submit

Sync Data

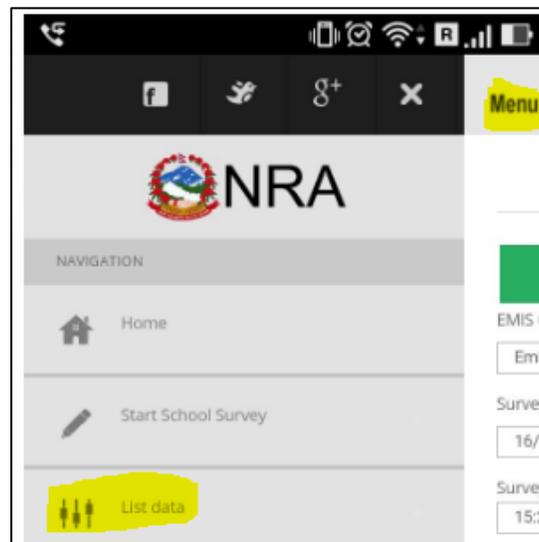
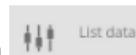


➤ User can continue data entry for next survey or can sync data also if connectivity is available. Same data or schedule can be re loaded for editing also in case of any requirements before syncing of the data to server.

#### 4.2.2 Data modification in school survey

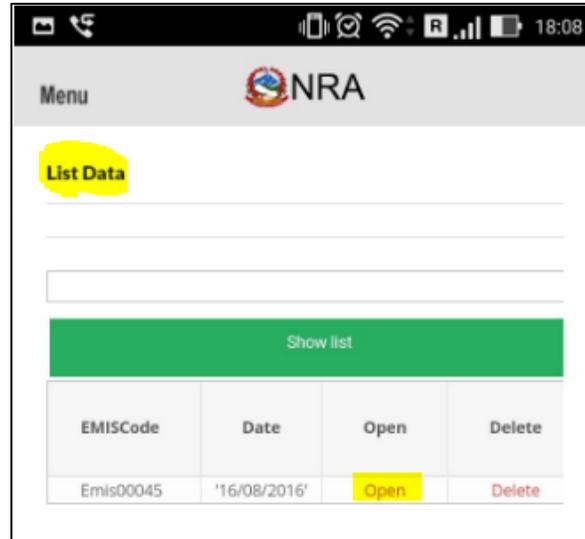
User can open the entered data for editing in the list mode. This option allows user to edit any schedule entered in the app before syncing process. User can also change images and text based on the requirements. But user needs to be careful as all image capture also takes note of GPS information from GPS satellite so it is recommended to recheck all the data before leaving the site. Please follow steps mentioned below in order to modify the information of any entered sire survey schedule.

Step 1: Open list from main menu by pressing this button

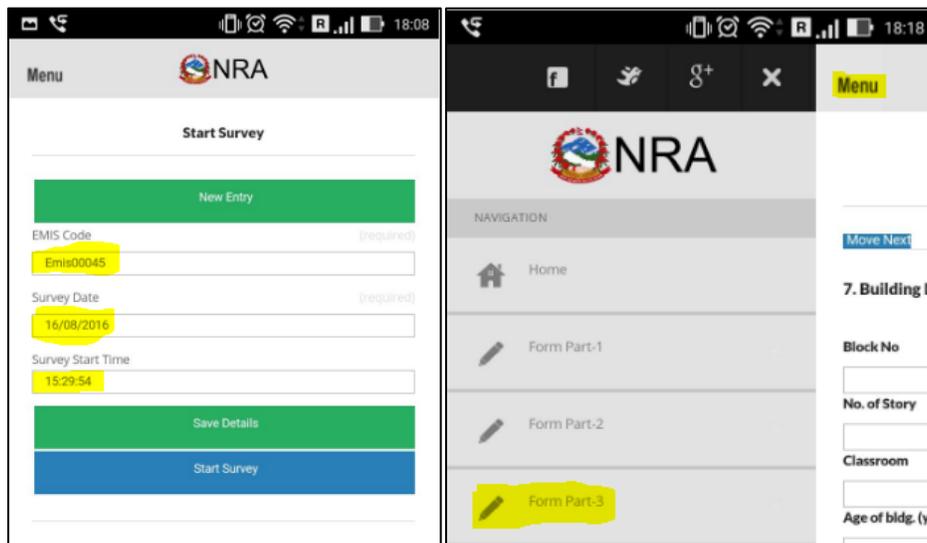


Step 2: Check and select the schedule to be modified and click on “Open”

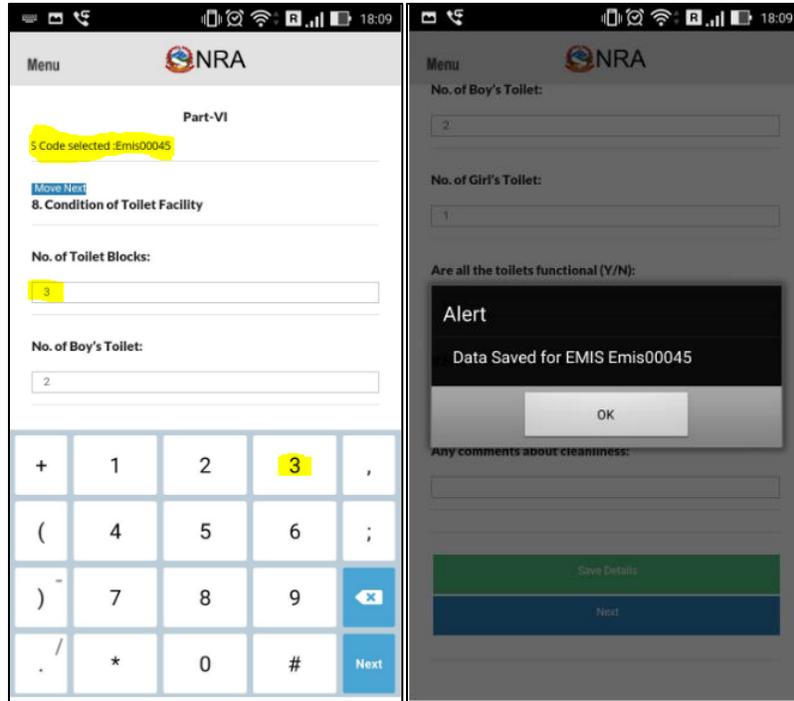




Step 3: Loaded schedule will appear in the same form where data entry happened. Now select the menu again.

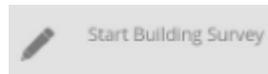


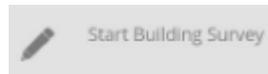
Step 4: Click on the part that needs to be modified from menu and jump to the part where modification needs to be done and make required changes and press “Save” button again.



➤ User can follow the same method to modify the images also before syncing process. Data can be modified wherever required.

### 4.3 Building survey



User can click on  in the main menu to start the module. Module provides options and events to execute the field level building survey to record and report the status of damage happened on the building at the time of disaster. The module can record the data from the official's interview and building location survey using the app. The survey has got 15 parts of the forms in order to complete the survey activity which includes clicking images and storing the GEO location from the satellite using the built-in android GPS chip in the user android device. Please follow the steps below to entry and edit data in the building survey module.

#### 4.3.1 Data entry

User can open the module and can click on the start survey to start the survey of the building after reaching to the location. Please see instructions and steps below to complete the 15 parts of the survey form.



Step 1: Click on the “Start building survey” in the main menu.

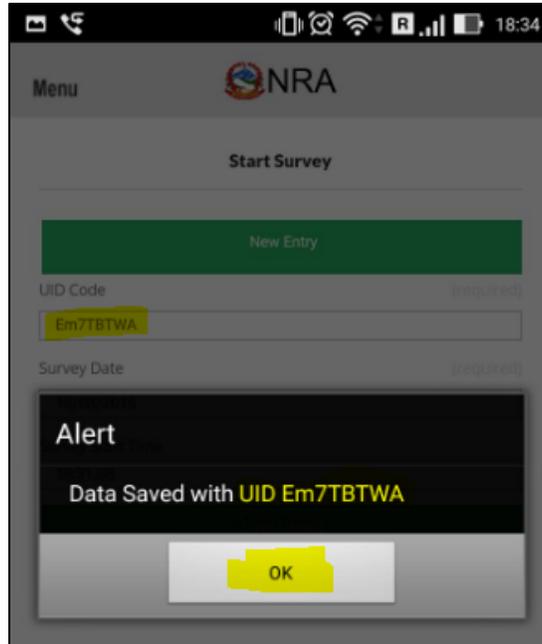
The screenshot shows a mobile application interface for starting a survey. At the top, there is a 'Menu' header and the NRA logo. Below this, the title 'Start Survey' is displayed. The form contains three input fields: 'UID Code' with the value 'Em77BTWA', 'Survey Date' with the value '16/08/2016', and 'Survey Start Time' with the value '18:31:08'. Each field is followed by '(required)'. At the bottom of the form, there are two buttons: a green 'Save Details' button and a blue 'Start Survey' button.

Step 2: UID code for building is auto generated and no need to enter and/or modify the same (This is Most important to start and run the survey for building). And click on “Save Details” to continue.

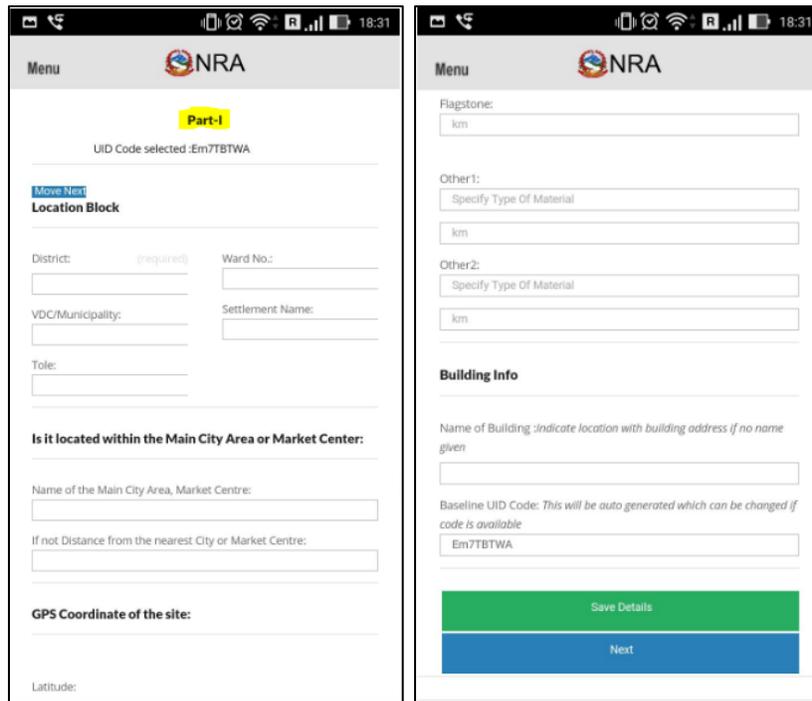
➤ Option to enter data and click on “save details” is on every part of the forms and user must follow this carefully while entering data in the app.

Step 3: After entering the UID code and saving the information please click on “Start survey”.

Step 4: Enter details in the form and click on “save” and then user will get this message for saving of the data confirmation see below.



Step 5: Enter data in Part 1 for all required fields and “Save” data to continue to part 2 by pressing “Next”



Step 6: Enter data in Part 2 for all required fields and “Save” data to continue to part 3 by pressing “Next”



The first screenshot shows the 'Part-II' screen with the following fields: 'Contact No.: 319464999', 'Signature: Ndjsjdj', 'Organization: Djddjdd', 'Survey Team:', 'Survey Group ID:', 'Survey Date:', and 'Survey Team Leader:'. The second screenshot shows the 'Part-III' screen with the following fields: 'Name: Name 1', 'Organization: Org1', and a 'Save Details' button.

Step 7: Enter data in Part 3 for all required fields and “Save” data to continue to part 4 by pressing “Next”

The third screenshot shows the 'Part-III' screen with the following fields: '4. Accessibility [Y/N]: N/A', '4.1 Select Type of Road: N/A', and '4.2 If no vehicular access, walking distance from the nearest main road: \_\_\_\_ km/ \_\_\_\_ Hr (e.g 10/2)'. The fourth screenshot shows the 'Part-III' screen with the following fields: '5.1 Is the building connected to electrical supply line: Yes', 'Type Source: 2', '5.2 Does the building have regular water supply source: Yes', 'Type Source: Tttt', '5.3 Does the building have internet facility: N/A', 'Type Source: Gfgg', and a 'Save Details' button.



Step 8: Enter data in Part 4 for all required fields and “Save” data to continue to part 5 by pressing “Next”

The image displays two screenshots of the NRA mobile application interface, showing the data entry process for Part 4.

**Left Screenshot (19:18):**

- Menu: NRA
- Section: **Part-IV**
- UID Code selected: Em7TBTWA
- Move Next
- 6. Type of Building
- 6.1 Select Type of Building: N/A
- 6.2 Year of Construction (AD):
- 6.3 Details of Office Chief:
  - Name:
  - Contact No.:
- 6.4
  - Total No. of Staffs:
  - No. of Clerk:

**Right Screenshot (19:19):**

- Menu: NRA
- 6.2 Year of Construction (AD): 1971
- 6.3 Details of Office Chief:
  - Name: Jgffj
  - Contact No.: 31646494
- 6.4
  - Total No. of Staffs: 2
  - No. of Clerk: 1
  - No. of Others: 0
- Buttons: Save Details, Next

Step 9: Enter data in Part 5 for all required fields and “Save” data to continue to part 6 by pressing “Next”. In this part users can enter data for multiple rows as shown below.



The left screenshot shows the 'Part-V' screen with a 'UID Code selected' field and a 'Move Next' button. The right screenshot shows a table with columns 'Block No.', 'No. of Story', 'Class room', and 'Age of bldg. (year)', with a 'Save Details' button and a 'Next' button below it.

Block No.	No. of Story	Class room	Age of bldg. (year)	Open Record	Delete
1	2	5	12	Open	Delete

➤ Multiple rows can be entered and removed if required using the delete option. User must confirm the actual no. of rows entered in the device for any school before data syncing as once data is uploaded that cannot be removed by user.

Step 10: Enter data in Part 6 for all required fields and “Save” data to continue to part 7 by pressing “Next”. In this part users can enter data for multiple rows as shown below.



Step 11: Enter data in Part 7 for all required fields and “Save” data to continue to part 8 by pressing “Next”. In this part users can enter data for multiple rows as shown below.

Block No	Room / Other	Structure Type(A-D)	Is Material reusable (Y/N)	Easy to relocate (Y/N)	Remarks

Block No	Room	Is Material Reusable	Open Record	Delete	Remarks
1	2	Y	Open	Delete	Dndndnd

Step 12: Enter data in Part 8 for all required fields and “Save” data to continue to part 9 by pressing “Next”.



The first screenshot shows the 'Part-VIII' form with the following sections:

- Menu
- NRA Logo
- Part-VIII
- UID Code selected :Em7TB
- Move Next
- 10. New Construction Space
- 10.1 Is there space available for storing construction materials in the site?
  - N/A
  - Remark
- 10.2 Is there enough water available for construction activities?
  - N/A
  - Remark
- 10.3 Is there space available for new building construction without demolishing Temporary Building?
  - N/A
  - Remark
- 10.4 If Temporary Building is demolished for construction of new building, is there any alternative solution possible?

The second screenshot shows the continuation of the form with the following sections:

- Menu
- NRA Logo
- N/A
- d) Length of Boundary Wall needed:
  -
- Type of Wall (Please choose):
  - N/A
- e) Access Road to be built/developed
  - Number
  - m
- f) Remark
  - Remark
- 10.10 Land ownership
  - N/A
- Land Ownership Certificate in the name of office
  - N/A
- Save Details (Green button)
- Next (Blue button)

Step 13: Enter data in Part 9 for all required fields and “Save” data to continue to part 10 by pressing “Next”.

The first screenshot shows the 'Part-IX' form with the following sections:

- Menu
- NRA Logo
- Part-IX
- UID Code Selected :Em7BTWA
- Move Next
- 11. Environmental Information
- a) The Building-site is adjacent to or within any of the following areas.
  - N/A
  - Table with columns: Adjacent to or within, Yes/No, Remarks

The second screenshot shows a selection dialog with the following options:

- N/A (Selected)
- Yes
- No

The third screenshot shows the continuation of the form with the following sections:

- Menu
- NRA Logo
- Part-IX
- Encroachment on historical/cultural areas: N/A
- Encroachment on precious ecology: N/A
- Impacts on the sustainability of associated sanitation and solid waste disposal systems: N/A
- Dislocation or involuntary resettlement of people: N/A
- Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups: N/A
- Occupational and community health and safety risks: N/A
- Requirements for disposal of fill, excavation, and/or spoil materials: N/A
- Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction: N/A
- Social conflicts if workers from other regions or countries are hired: N/A
- Risks to community safety caused by fire, electric shock, or failure of the buildings safety features during operation: N/A
- Others (Specify): N/A
- Save Details (Green button)
- Next (Blue button)



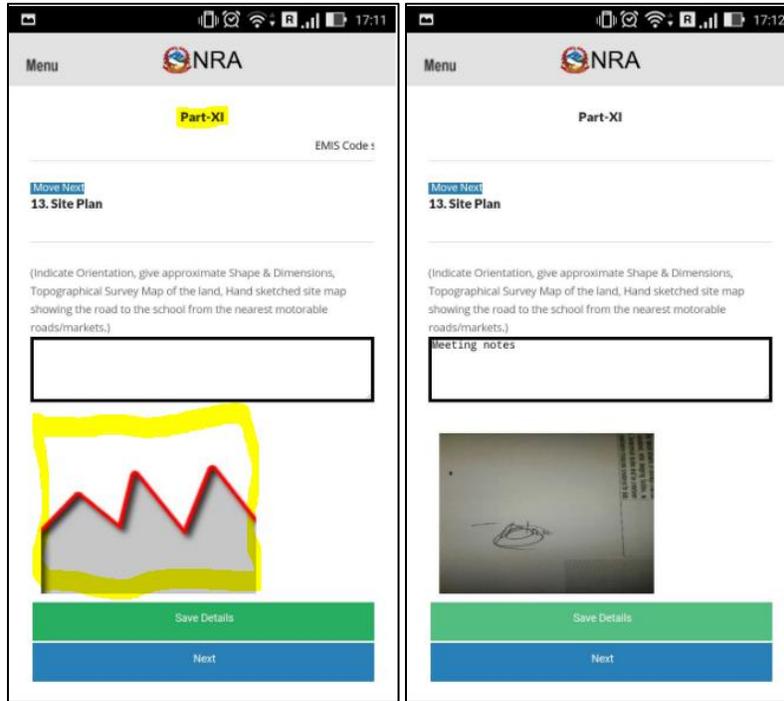
Step 14: Enter data in Part 10 for all required fields and “Save” data to continue to part 11 by pressing “Next”.

The left screenshot displays the 'Part-X' section of the application. It features a 'Menu' bar with the NRA logo and a 'Part-X' label. Below this, there is a 'Move Next' button and a section titled '12. Probable Involuntary Resettlement Effects'. Underneath, '12.1) Involuntary Acquisition of Land.' is detailed with a table. The table has three columns: 'Particular', 'Yes/No', and 'Remarks'. The rows include questions about land acquisition, site knowledge, ownership status, easement utilization, and potential losses of shelter, crops, businesses, and livelihoods. The right screenshot shows the 'Information on Displaced Persons' section. It includes three sub-sections: 'a) Any estimate of the likely people that will be displaced by the school-project?', 'b) Any female-head of households or vulnerable to poverty risks?', and 'c) Any displaced persons from indigenous or ethnic minority groups?'. Each sub-section has input fields for 'N/A', 'If Yes, Approx. no. of people', and 'Remarks'. At the bottom, there are two buttons: a green 'Save Details' button and a blue 'Next' button.

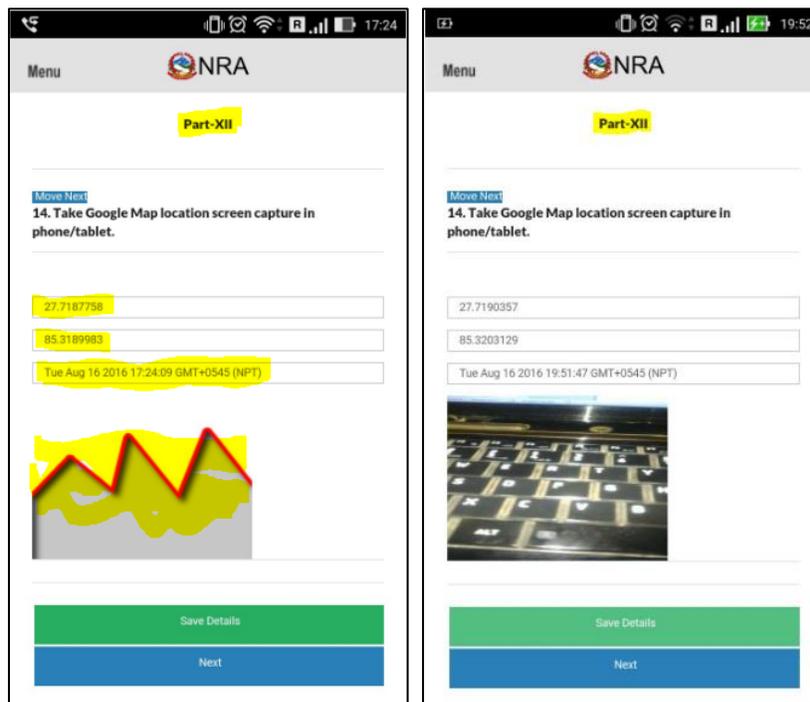
Step 15: Enter data in Part 11 for all required fields and “Save” data to continue to part 12 by pressing “Next”. In part 11 users also need to click the image by clicking the image button as shown below.



- After clicking the image capture button  the camera will open to capture image and saved images will re appear in the app for further saving to database.
- User should be careful in taking images using the camera. It should be correct in light and sharpness balance and should be taken from perfectly above the site plan paper.
- Image can be re-clicked by pressing the same button in order to edit the image.



Step 16: Enter data in Part 12 for all required fields and “Save” data to continue to part 13 by pressing “Next”. In part 12 users also need to click the image by clicking the image button as shown below.

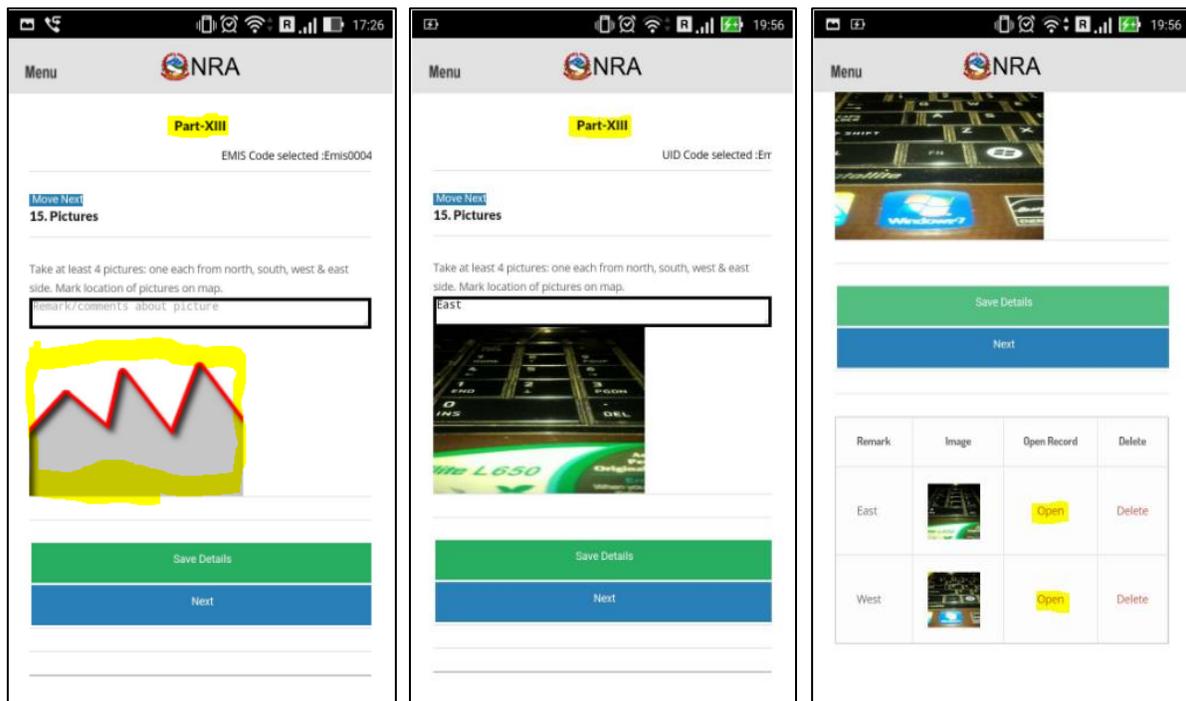




➤ User should see longitude and latitude information up to 6 decimal places appearing on the screen automatically but in case this information is missing then please enter this information up to 6 decimal places using other GEO coordinates finder.

➤ If GEO coordinates information is missing then users android hardware is not supporting GPS hence this needs to be corrected manually by entering the data in the app.

Step 17: Enter data in Part 13 for all required fields and “Save” data to continue to part 14 by pressing “Next”. In part 13 users also need to click the image by clicking the image button as shown below.



➤ User need to enter 4 images for east, west, north and south location by capturing directly from different locations in app. The image capture should cover whole building correctly.

Step 18: Enter data in Part 14 for all required fields and “Save” data to continue to part 15 by pressing “Next”. In part 14 users also need to click the image by clicking the image button as shown below.



The first screenshot shows the 'Part-XIV' screen. It includes a 'Menu' header with the NRA logo, a 'UID Code sel' field, a 'Move Next' button, and a text prompt: '16. Minutes / requirements / detailed note if any (Click image)'. Below this are input fields for 'Date' (08/12/2016) and 'Venue', and a text area for 'Attendees'. A keyboard image is overlaid on the text area. At the bottom are 'Save Details' and 'Next' buttons.

The second screenshot shows the 'Part-XV' screen. It features a 'Menu' header with the NRA logo, a 'UID Code selected :Em7TBTWA' field, and a text prompt: '17. Any other important information.' Below this is a table with 5 rows for recording nearby buildings. The table has columns for 'S.N.', 'Name of the Govt. Building', and 'Building Type'. Below the table is a text prompt: 'b) Any displaced persons from indigenous or ethnic minority groups?' with a 'Remarks' field. At the bottom are 'Submit' and 'Sync Data' buttons.

S.N.	Name of the Govt. Building	Building Type
1		N/A
2		N/A
3		N/A
4		N/A
5		N/A

Step 18: Enter data in Part 15 for all required fields and “Save” data. Part 15 is last part for any one survey and user can continue with next survey or can sync data to server.

The third screenshot shows the 'Part-XV' screen. It features a 'Menu' header with the NRA logo, a 'UID Code selected :Em7TBTWA' field, and a text prompt: '17. Any other important information.' Below this is a table with 5 rows for recording nearby buildings. The table has columns for 'S.N.', 'Name of the Govt. Building', and 'Building Type'. Below the table is a text prompt: 'b) Any displaced persons from indigenous or ethnic minority groups?' with a 'Remarks' field. At the bottom are 'Submit' and 'Sync Data' buttons.

S.N.	Name of the Govt. Building	Building Type
1		N/A
2		N/A
3		N/A
4		N/A
5		N/A

The fourth screenshot shows the 'Part-XVI' screen. It features a 'Menu' header with the NRA logo, a text prompt: 'building catchment area (if the information can be collected):', and a text area containing 'ddjjddd'. Below this is another text prompt: 'Obtain climatic records of last 50 years from elderly persons (asking them about the highest/lowest temperature, rainfall, landslides/flood/snowfall/storm etc. during the span of 50 years).', and a text area containing 'duohdhd'. At the bottom are 'Submit' and 'Sync Data' buttons.

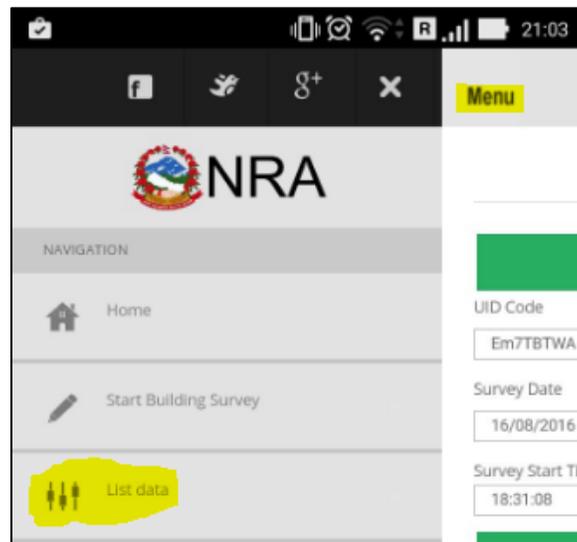
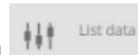


➤ User can continue data entry for next survey or can sync data also if connectivity is available. Same data or schedule can be re loaded for editing also in case of any requirements before syncing of the data to server.

#### 4.2.2 Data modification in building survey

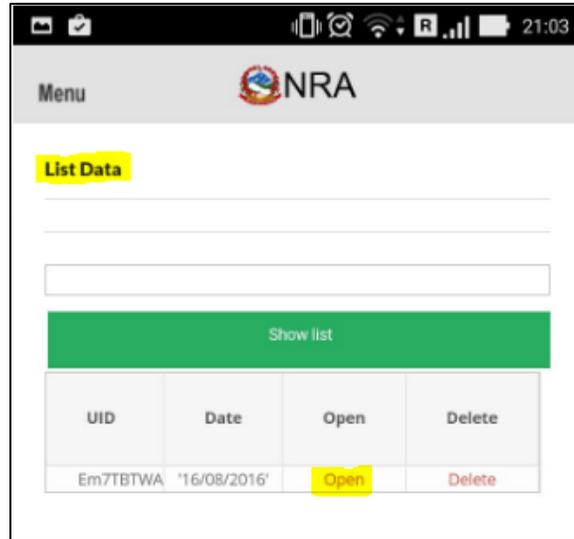
User can open the entered data for editing in the list mode. This option allows user to edit any schedule entered in the app before syncing process. User can also change images and text based on the requirements. But user needs to be careful as all image capture also takes note of GPS information from GPS satellite so it is recommended to recheck all the data before leaving the site. Please follow steps mentioned below in order to modify the information of any entered sire survey schedule.

Step 1: Open list from main menu by pressing this button

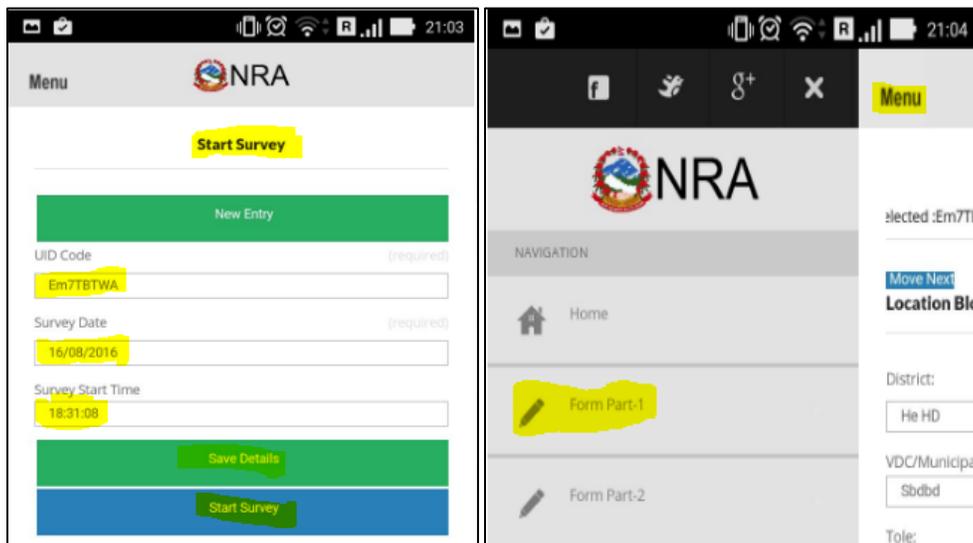


Step 2: Check and select the schedule to be modified and click on “Open”

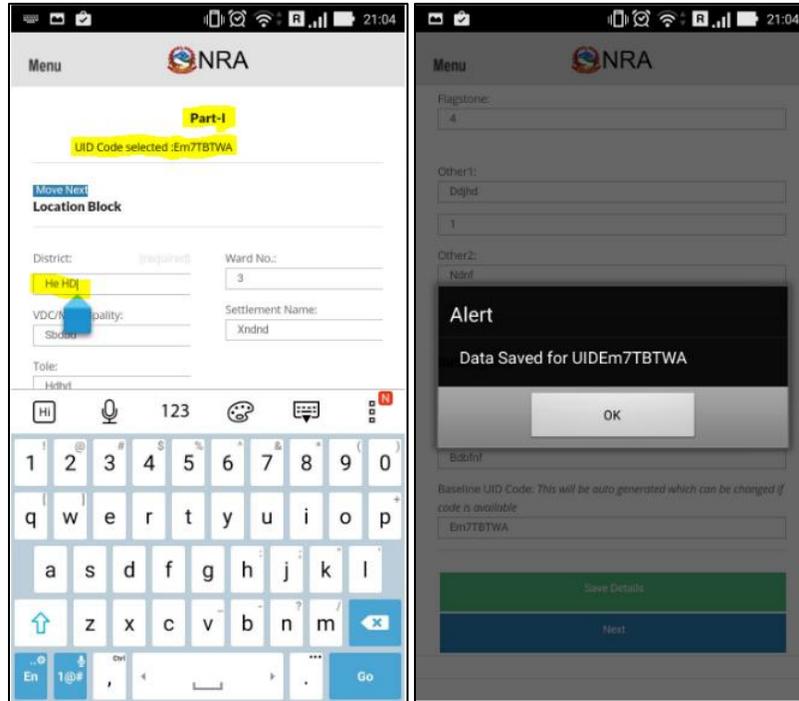




Step 3: Loaded schedule will appear in the same form where data entry happened. Now select the menu again.



Step 4: Click on the part that needs to be modified from menu and jump to the part where modification needs to be done and make required changes and press “Save” button again.



➤ User can follow the same method to modify the images also before syncing process. Data can be modified wherever required.

#### **4.4 Progress Monitoring site level**

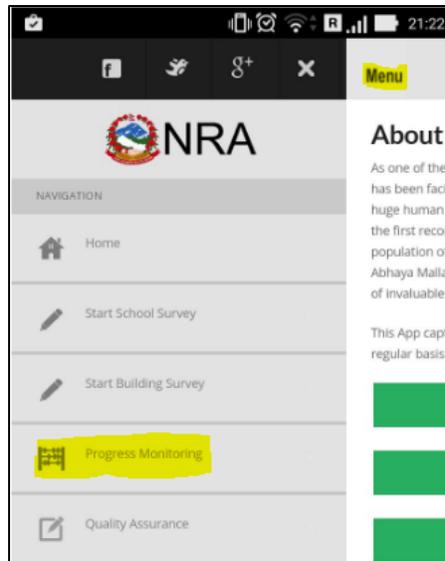
User can click on  Progress Monitoring in the main menu to start the module. Module provides options and events to execute the field level progress monitoring for any given contract to record and report the status of progress being done at the field level with visual images and data. The module can record the data from engineers point of view based on the guidelines provided to the site engineers to undertake survey of the site for progress monitoring at the site location using the app. The progress monitoring has got only few indicators and images to record the progress against each indicator head created at the time of project creation in order to complete the data collection activity which includes clicking images and storing the GEO location from the satellite using the built-in android GPS chip in the user android device. Please follow the steps below to entry and edit data in the progress monitoring module.



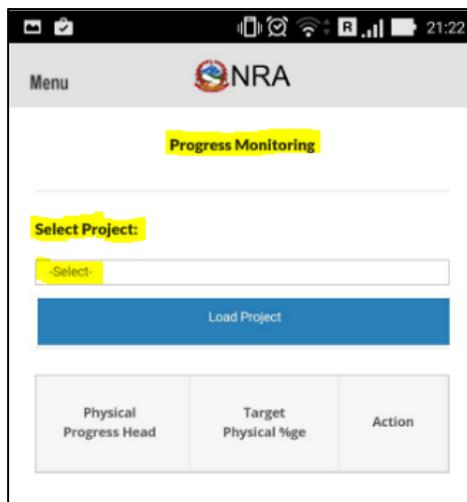
#### 4.4.1 Data entry in progress monitoring module

User can open the module and can click on the progress monitoring to start the data collection of the site construction activities after reaching to the location. Please see instructions and steps below to complete the process

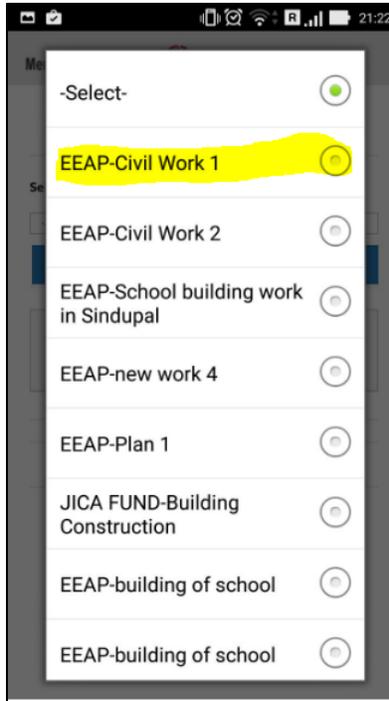
Step 1: Click on the “Menu” and then “Progress monitoring” to open the module



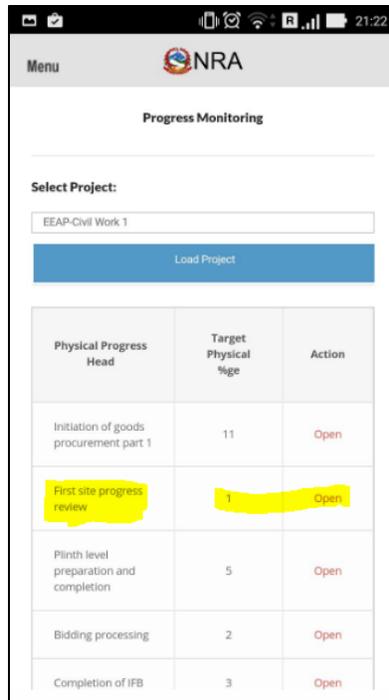
Step 2: Select the project from the list



Step 3: Select project and click on “Load Project”



Step 4: Select indicator head and click on “Open”





Step 5: Enter data in the module questions and click on “select site”

Menu **NRA**

**Progress Monitoring Submission**

Finding Geolocation...

Description	EEAP-Civil Work 1
Date	
Remarks	
Physical Progress %age	%
Site	-Select-

 [Add Images](#)

Step 6: Select site from the list given for the selected contact.

Menu **NRA**

Date: 08/11/2016

Remarks: Test

Physical

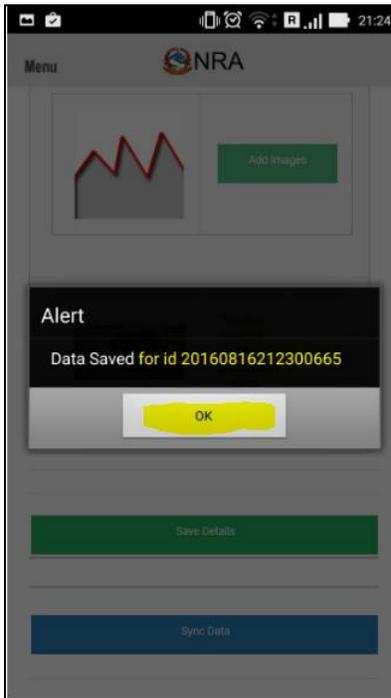
- Select-
- 
- Thani chandi pra v



Step 7: Click on the image box and add images to the record



Step 8: Click on “Save details” to add records in the data base





Step 9: User can see the list and edit option to make and required changes in the record

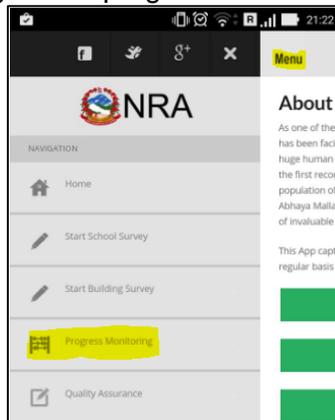


➤ User can follow the same method to modify the images also before syncing process. Data can be modified wherever required. User can add all the data as offline application.

#### 4.4.2 Data modifications in progress monitoring module

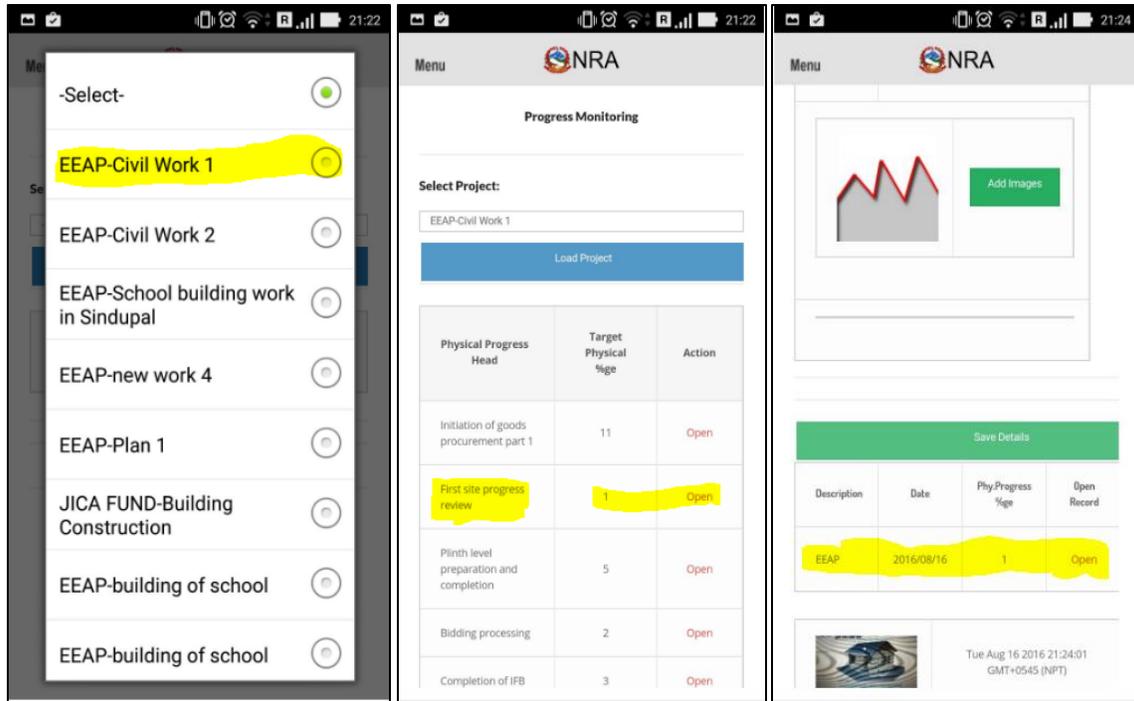
User can open the module and can click on the “Progress Monitoring” under the main menu to start the module for listing of data for editing. Data edit should be done before sending the record to the main server. Please follow steps below to modify the data in the module.

Step 1: Open module by clicking on the progress monitoring





Step 2: Open module data by clicking on the “Open” from the displayed list for the selected contract and reporting head as shown below

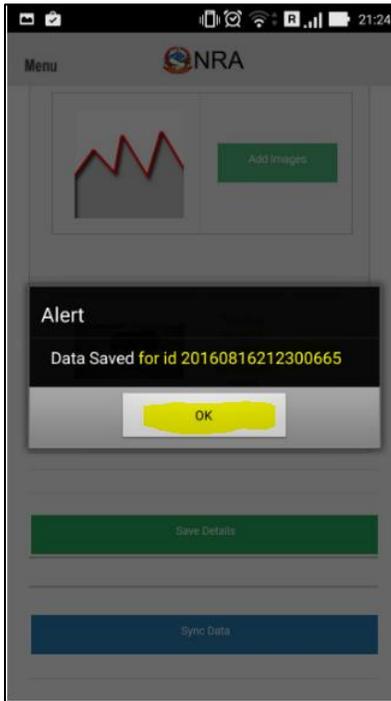


Step 3: Data and images will be loaded in the same form for editing





Step 3: Make required changes in the data and save again



➤ User should complete the editing of the data before syncing process. User should not make changes after sending data to server.

#### ***4.5 Quality Assurance (QA) site level***

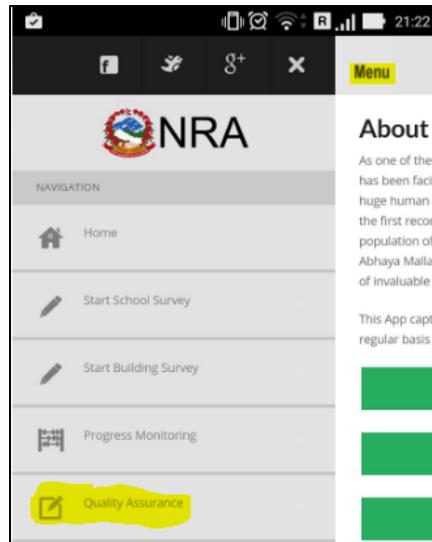
User can click on  Quality Assurance in the main menu to start the module. Module provides options and events to execute the field level quality assurance for any given contract to record and report the status of quality assurance being done at the field level with visual images and data. The module can record the data from engineers point of view based on the guidelines provided to the site engineers to undertake survey of the site for quality assurance at the site location using the app. The quality assurance has got only few indicators and images to record the quality level against each indicator head created at the time of project creation in order to complete the data collection activity which includes clicking images and storing the GEO location from the satellite using the built-in android GPS chip in the user android device. Please follow the steps below to entry and edit data in the quality assurance module.



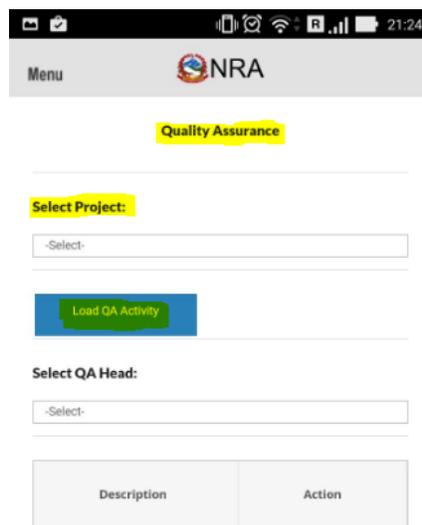
#### 4.5.1 Data entry in quality assurance (QA) module

User can open the module and can click on the quality assurance to start the data collection of the site construction activities after reaching to the location. Please see instructions and steps below to complete the process

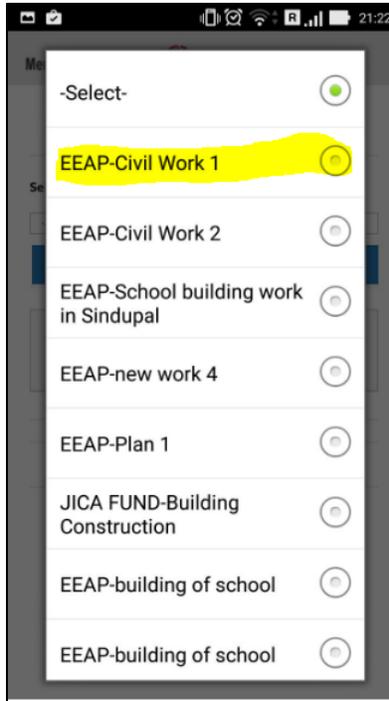
Step 1: Click on the “Menu” and then “Quality Assurance” to open the module



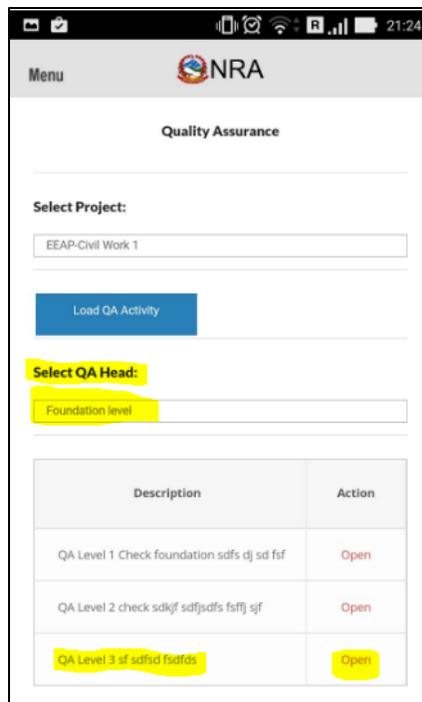
Step 2: Select the project from the list



Step 3: Select project and click on “Load Activity”

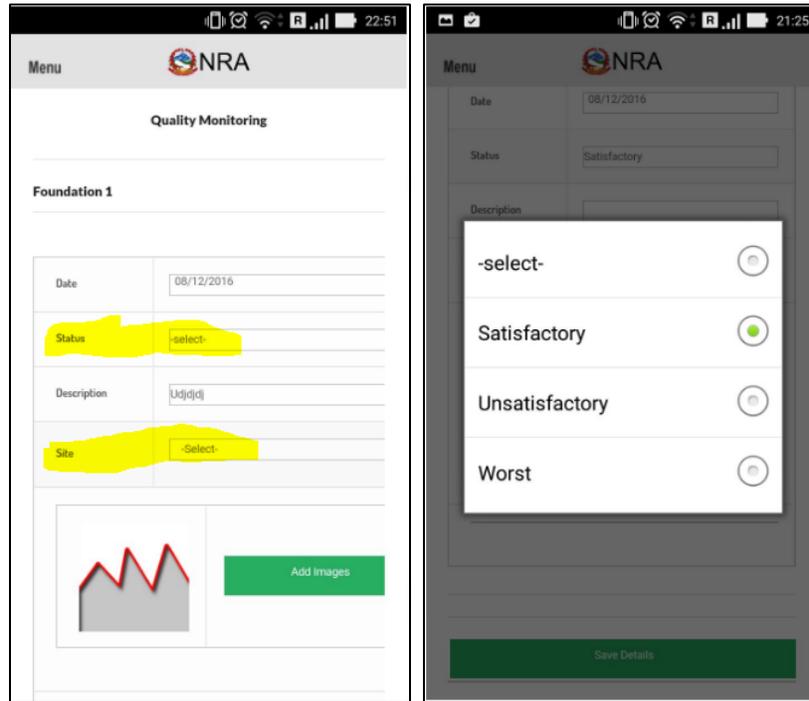


Step 4: Select QA indicator head and click on “Open”





Step 5: Enter data in the module questions and click on “select status”



Step 6: Select site from the list given for the selected contact.

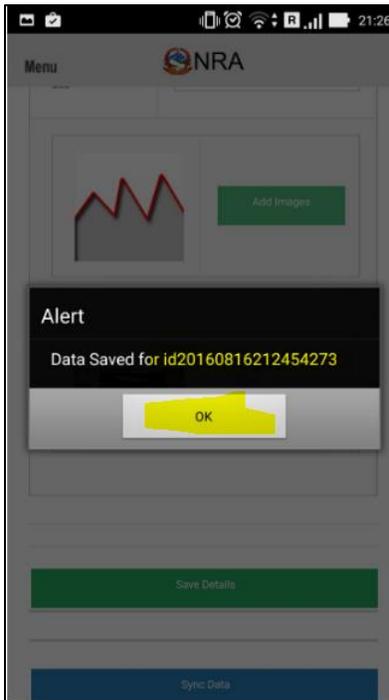




Step 7: Click on the image box and add images to the record

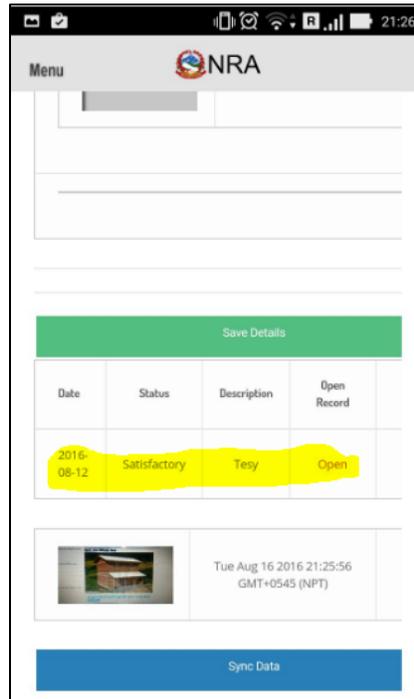


Step 8: Click on “Save details” to add records in the data base





Step 9: User can see the list and edit option to make and required changes in the record

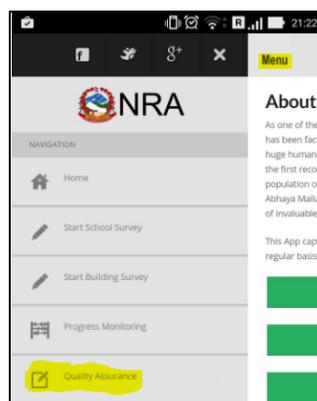


➤ User can follow the same method to modify the images also before syncing process. Data can be modified wherever required. User can add all the data as offline application.

#### 4.5.2 Data modifications in quality assurance (QA) module

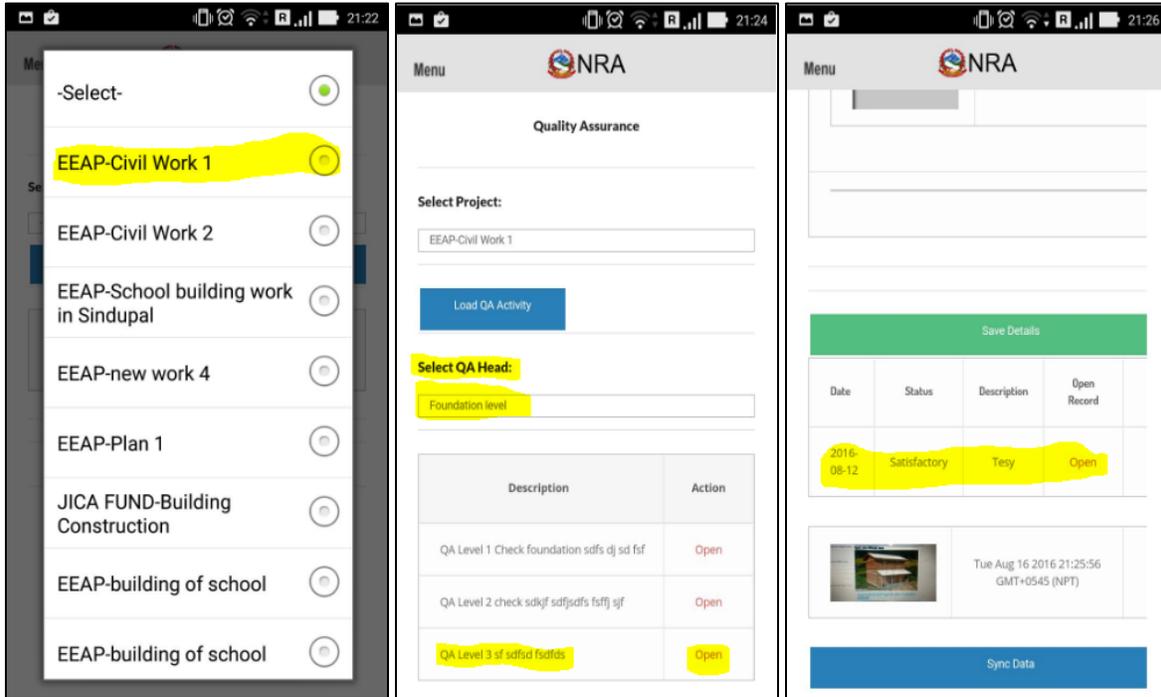
User can open the module and can click on the “Quality Assurance” under the main menu to start the module for listing of data for editing. Data edit should be done before sending the record to the main server. Please follow steps below to modify the data in the module.

Step 1: Open module by clicking on the quality assurance





Step 2: Open QA module data by clicking on the “Open” from the displayed list for the selected contract and reporting head as shown below

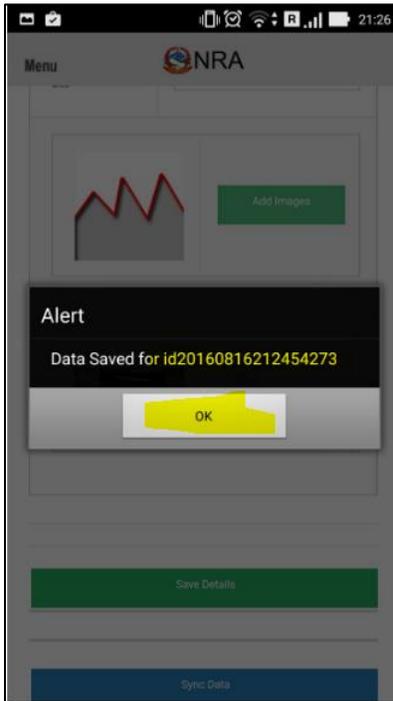


Step 3: Data and images will be loaded in the same form for editing





Step 3: Make required changes in the data and save again



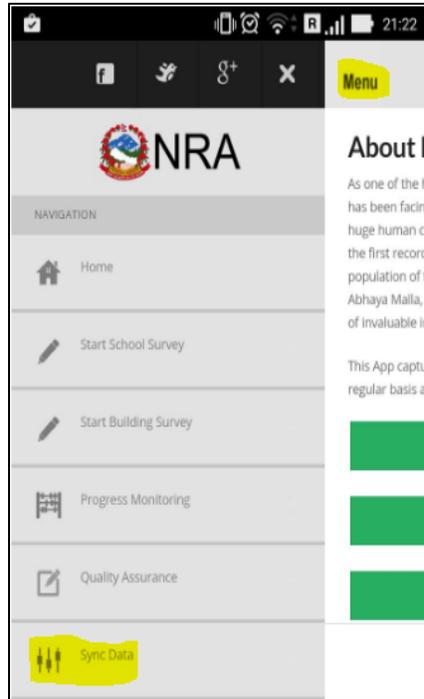
➤ User should complete the editing of the data before syncing process. User should not make changes after sending data to server.

#### **4.6 Data syncing to server**



User can click on  in the main menu to start the module. Module provides options and events to execute for data syncing process in order to upload all the data on the main server. The module will undertake all the possible data sinking activities from last know sync process happened on the device. No data will be re synced on the server without making any changes in the records. Data syncking should be done only with good and stable internet connections of either Wi-Fi or 2G/3G connectivity. Please follow the steps given below.

Step 1: Open the module by clicking on the “Sync Data” button in the main menu



Step 2: Click on the button “Click to Sync” to start the syncing process



Step 2: Monitor the progress in the progress window and give sufficient time to upload all the data including images on the server. Repeat the process multiple times.

➤ User should complete sync process after every data collection process in case net connectivity is available. In case of no connectivity at the field level, user should give more



time during the sync process after reaching back to connectivity area; as all images might take more time to sync. This process is very crucial and should be executed carefully



## **5.0 Contact information**

### **National Reconstruction Authority:**

Singh Darbar  
Kathmandu 44600

### ***5.1 NRA IT Support contacts***

Nawaraj Gurung  
Mobile: +977 9841333398  
support@nramis.org

### ***5.2 Online issue/bug reporting***

User can report the encountered bugs and can further follow-up the solution provided online. User can visit the site given below and can register themselves to be able to report the bug in the system.

Please visit <http://support.nramis.org> to register and report any issue related to NRA MIS