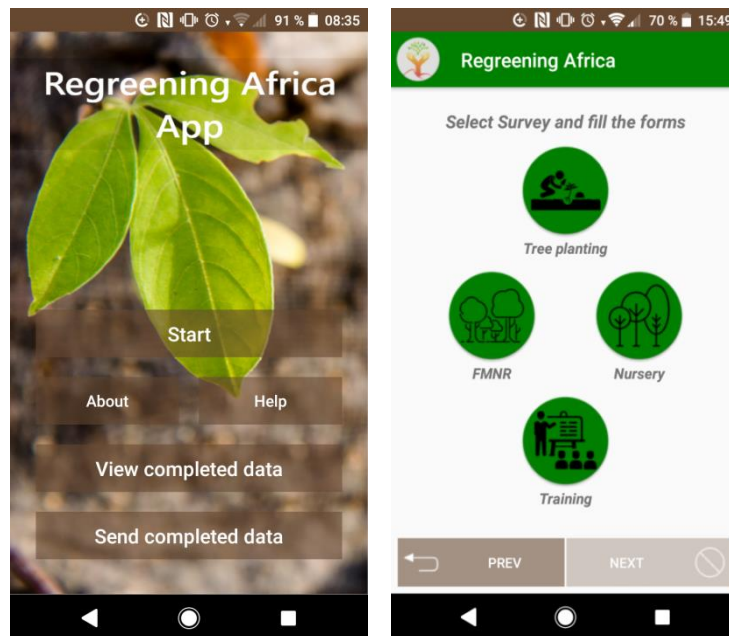




# THE REGREENING AFRICA APP

## USER GUIDELINES



Funded by European Union



The Regreening Africa App is a free mobile-based Android application designed and developed by World Agroforestry (ICRAF), to help partners and users collect information on how farmers are managing and protecting trees on their farms. This Application was developed under the Regreening Africa project, which targets to Reverse Land Degradation in Africa by Scaling up Evergreen Agriculture in eight countries: Ethiopia, Ghana, Kenya, Mali, Niger, Rwanda, Senegal and Somalia. The App has four modules that focus on tree planting, nursery establishment, Farmer-Managed Natural Regeneration (FMNR) and Training, whose objectives are highlighted below:

**1. Tree Planting Module:**

- Record the targeted households having adopted tree planting practices
- Record the number of hectares regreened by tree planting
- Mapping tree planting plots
- Identify the agroforestry systems established (objectives, disposition of the trees, density, tree species)
- Recording and analyzing management practices
- Evaluate the performances of the planting practices
- Tracking growth of trees by making references and management practices assessments
- Geotagging selected trees

**2. FMNR Module:**

- Record the targeted households having adopted FMNR practices
- Record the number of hectares regreened through FMNR
- Mapping the FMNR plots
- Recording tree species composition of the FMNR plot
- Recording management practices
- Tracking growth of trees by making references and management practices assessments
- Geotagging selected trees

**3. Nursery Module**

- Record nurseries supported by the Regreening Africa Project
- Record seedlings production (species composition, production capacity, seedlings quality)
- Recording and assessment of the seedling production practices
- Geotagging nurseries

**4. Training module:**

- Documenting the trainings carried out: the number, location, topic, e.t.c.
- Connect the topic of the trainings carried out in a given location to the practices and issues identified that will guide the training schedule(s)
- Documenting participation in the trainings in terms of number and gender

Some of the application features include:

- Support of simple text and numeric data, images, and location data of tree/ shrub and nurseries.
- Offline data collection, thus, making data submission possible when internet connectivity is available using mobile network or Wi-Fi.

To achieve the projects' target to regreen one million hectares of Africa's degraded land and restore livelihoods of 500,000 households, the application development is guided by the following objectives:

1. Facilitating the **collection, reporting and verification** of the **number of households** reached and the **number of hectares** regreened. The number of households and total number of hectares restored are required by the donor.
2. **Enable monitoring of near-real-time (NRT) progress** of the project by ALL project managers (e.g. trainings conducted, tree nurseries supported in their jurisdiction, farmer groups supported, e.t.c.).
3. **Bridging data gaps from existing data collection tools and methods for triangulation.**

This manual is developed to ensure the applications' full potential is realized/used by the users. This document contains step by step instructions for each module thus making sure the application can be used by anyone who has knowledge of android based smart phone. Data collected by the implementing teams and farmers will be trained by ICRAF staff and provide help if required. Once data is loaded on the server/ dashboard, it is accessible to authorized project partners at the click of a button.

#### **Best practices for app usage:**

**Battery:** charge smartphone the night before the survey every time you go into the field. Older mobile phones will lose battery power much quicker than the new mobile phones, thus, if possible, always carry a power bank. Do not start a survey if your battery is below 25% as GPS uses more battery power than rest of the components.

**Storage:** at least 10MB of free space is required on a mobile device to install the app. Additional 50 to 100MB should be available to store data and picture taken during data entry.

**Camera:** please make sure that you have selected appropriate camera resolution to avoid exceeding 6MB. Otherwise it will take more time to upload. The photo size can be set in camera app -> picture size. Please do not apply any filter/ effect.

#### **Equipment List:**

The following equipment is required for field work:

1. Android cell phone with GPS (minimum android 4.0.1)
2. 1.5 meter measuring stick (for tree height)
3. 3 to 5 meters length measuring tape (for DBH (Diameter at breast height)/ RCD (Root Collar Diameter))

**LEGEND:**



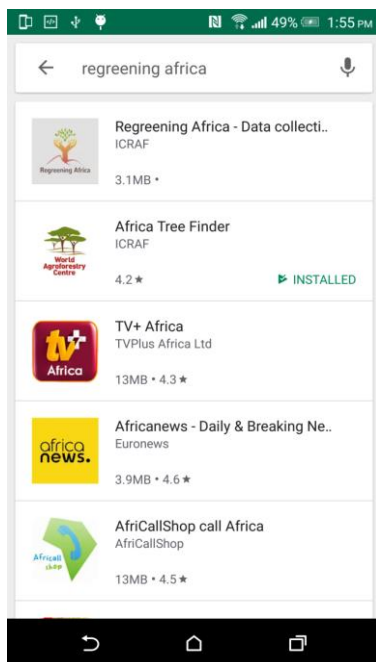
Connect your phone to Wi-Fi or to mobile network



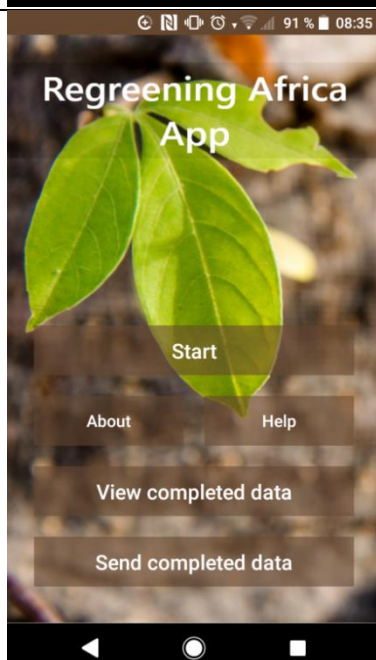
No mobile connectivity is needed



Connect the GPS of your phone



- In the Menu of your android phone, go to Play Store (please note this app cannot be downloaded or used on iPhone)
- Enter "Regreening Africa" in the browser (top of the screen)
- Select the Regreening Africa App (the first one in the list) and install it by clicking on "Install" button. Once the process is complete, click on "Open"



- Make sure that you have the latest version of the App (version 1.4). Click on "About", first line, before starting data collection. If you have the previous version, please uninstall it, restart your phone and download the latest version.
- Press "Start" to select a survey (access following screen)
- Press "About" for general information about the Regreening Africa App
- Press "Help" to remember how to start collecting data, how to send data and definitions of some technical terms used in the App
- Press "View completed data" to see the details of the survey you have done
- Press "Send completed data" to submit the completed surveys

**NB: Wi-Fi or mobile networks are necessary to send data**



- Select one survey to record tree planting practices, FMNR, nurseries or training, depending on the context or data being collected
- Press "Prev" to go back to the first screen of the app

## When the TREE PLANTING Module has been selected



Is this a new farmer/Institution or an additional plot by the previous farmer/Institution?

New profile →

Additional plot →

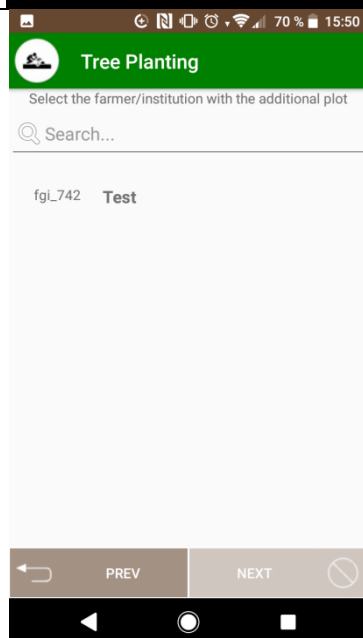
PREV NEXT



- To record a new farmer, select "New profile"
- To record another plot cultivated by a previously recorded farmer, select "Additional plot"
- Press "Prev" to select another survey

### Objectives:

- **Record new farmer/ institution**
- **Record multiple plots owned by the same farmer**



Tree Planting

Select the farmer/institution with the additional plot

Search...

fgi\_742 Test

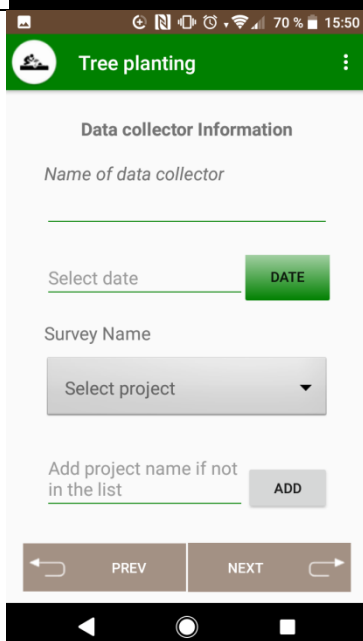
PREV NEXT



- This screen appears if you have selected "Additional plot"
- Select the farmer cultivating whose plot you want to record by clicking on his/ her name. For instance, here, the name of the farmer cultivating the plot you want to record is "Test". Click on "Test" and fill the forms of the survey by recording the geopoints around the plot (in the next screen)
- In case the name of the farmer doesn't appear on the first page, type up his/ her name in the "Search..." section
- Press "Prev" to come back to the previous screen

### Objectives:

- **Record multiple plots for a single farmer**



Tree planting

Data collector Information

Name of data collector

Select date DATE

Survey Name

Select project

Add project name if not in the list ADD

PREV NEXT



- "Name of data collector" = Enter your name
- If the survey is a test, please enter "Test" as name of data collector
- Select the date when you are doing the survey clicking on "Date"
- Select the survey name through the dropdown menu once you click the "select project" button
- If you don't find the name of the project for which you are doing the survey, please enter the name of the project in "Add project name", click on "Add" and then select it under the "select project" menu
- Press "Next" to proceed
- Press "Prev" if you want to select another survey

**Tree planting**

**Farmer/institution details**

Farmer/Group/Institution Name

Country Name

Select Country first

PREV NEXT



- Enter the name of the farmer/ group/ institution cultivating the plot you are recording
- Select the country where the tree planting plot is located, then the Region/ County/ State/ Province and finally the District/ Commune/ Woreda/ Cercle/ sub-County
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

- **Record geographical area of a farmer/ group/ institution surveyed**

**Tree planting**

**Tree planting land ownership**  
(Select the land ownership where tree planting is being practiced)

Own farm Community land

Government land Churches Mosques

PREV NEXT



- Select the ownership of the plot you are recording. There can be several owners for the same plot
- If you don't find the appropriate category under the listed ownership(s) or you want to add more, select "Other(s)" and type up the new title
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

- **Record ownership of the plot, recorded as factor of greening practices adoption, of land tenure security and of institutional support**
- **Analyse ownership with respect to practices, performances, usage and agroforestry systems**

**Tree Planting**

**Tree planting plot information**

Does the plot have food crops?

☐ Yes ☐ No

Estimate the area size of the greening part of the plot [select unit below]

Add new unit to the list and select

ADD

Select unit

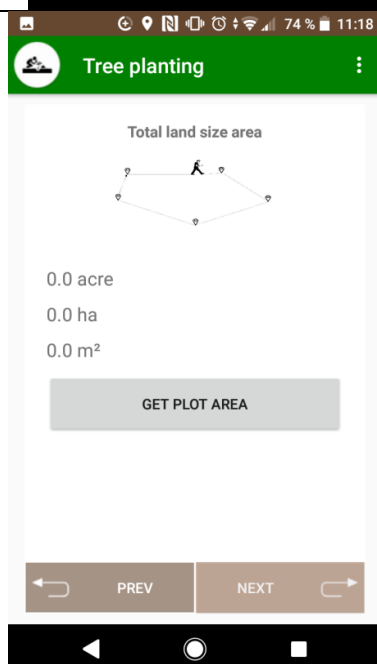
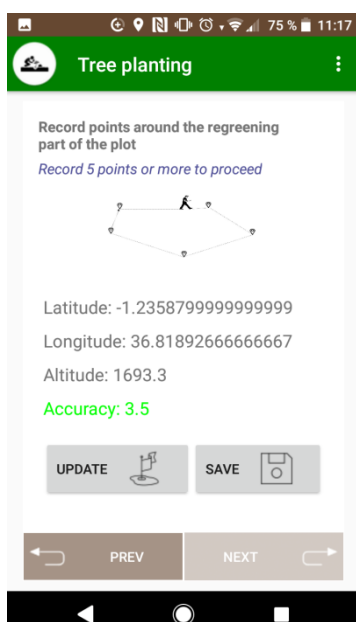
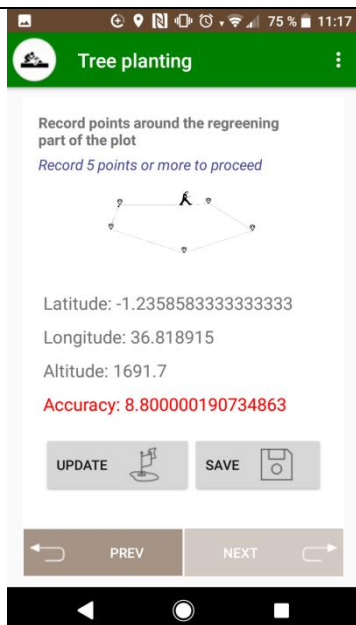
PREV NEXT



- Does the plot have food crops? Select the correct option. If yes, write the crops associated with tree planting practices
- Enter plot size of the tree planting area estimated by the farmer
- Then select the unit of the previously entered figure using the dropdown menu under "Select Unit" button
- If you don't find the appropriate unit in the dropdown menu, add a new one in "Add new unit", click on "Add" and then select it from the dropdown menu
- Make sure that every data you entered at the beginning of the survey is correct before proceeding to the "Next" step
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

- **Assess relationship of trees with respect to crops**



- Activate GPS of your phone by clicking on the location icon on your device. Note, if the location component of your phone is set to GPS+WiFi, set it to GPS only
- The geopoints have to be taken on the external boundary of the regreened part of the plot, at least, at each change of direction of this boundary
- When you are at the location where you want to take the geopoint, stop, click on "Fix GPS", then "Get location"
- If the accuracy is over 5.5. (in red), keep clicking on "Update" until "Accuracy<5.5" (in green) if possible, and click on "Save". Then move to another geopoint
- When you are at the location of the next geopoint, stop, keep clicking on "Update" until "Accuracy<5.5" and then click on "Save"
- When you have registered all the geopoints allowing a perfect report of the external boundary of the regreened part of the plot (at least 5 geopoints), press "Next" to proceed.

#### Objectives:

- **Map the regreened part of the plot**
- **Calculate the exact area of the regreened part of the plot**
- **Test farmers' perception about his/ her regreened area compared to actual area calculation**



- Click on "Get Plot Area" to know the area of the plot you have just recorded
- Please don't let the farmers know this estimation because it's not an official calculation of the area of their plot. These measurements are not equivalent of official land measurement surveys (known as cadastral surveys), thus only provide area estimation possible, with non-survey grade GPSs.

#### Objectives:

- **Provide instant estimation of the area regreened**



**Tree planting**

**Add Trees**  
(Trees of the same species planted in the same rainy season)

Scientific/Local Name

Planted date DATE

Number of trees planted

Number of trees surviving

PREV NEXT

- Record the scientific name of the trees of a same species planted during the same rainy season. Enter the local name if the scientific name is unknown. Try to avoid mistakes in the name. Having with you a notebook with the frequent species names met could be helpful.
- Select, clicking on "Date", the month and the year of plantation of the trees part of the previously recorded tree group.
- Enter the number of trees of the species planted during the previously recorded date.
- Enter the number of trees still surviving
- Press "Next" to proceed

#### Objectives:

- **Record species composition (name, diversity, number of trees per species) of the regreened part of the plot.**
- **Evaluate plantation and management practices for assessing mortality rate (trees surviving/trees planted) according to agro-climatic zones (precipitations, elevation and temperature)**

**Tree planting**

**Tree planting area/part of the land**  
(Select the area or part of the land where tree planting is being practiced)

☐ Woodlot

☐ Internal Boundary

☐ External Boundary

☐ Home garden

☐ Crop field

☐ Pasture/grassland

☐ Fallow/bushland

☐ Other

PREV NEXT



- Select the type of location of the trees recorded on the previous screen. Several choices can be made
- If you don't find the type of location where tree planting is being practiced or you want to add more, select "Other" and write the correct area(s)
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

#### Objectives:

- **Analyze choices made by the farmers like species selection and planting arrangements, to understand the effectiveness of advisory services and provide better suggestions in future**

**Tree planting**

**Management practices**

Pruning

Fencing

Weeding

Watering

Organic fertilizer

Other(s)

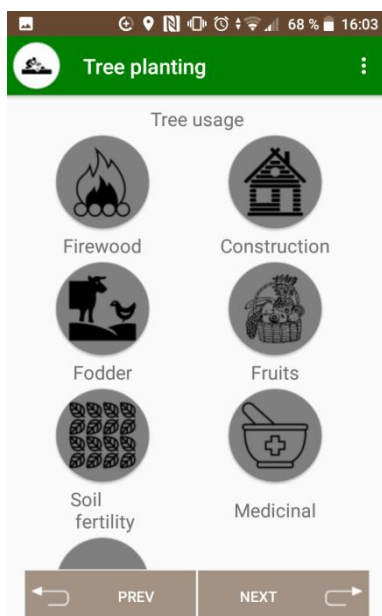
PREV NEXT



- Select management practice(s) done on trees in the previously recorded unit. Several management practices can be selected
- If the management practiced on the field is not in the list or you want to add more, select "Other(s)" and enter the new management practice(s)
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

#### Objectives:

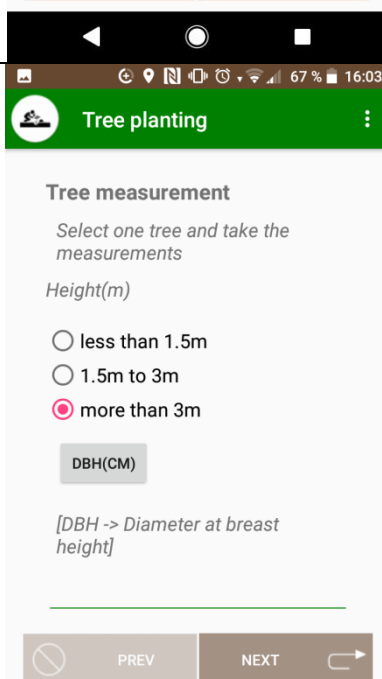
- **Relate management practices with tree species and location types to identify and analyze best practices**



- Select tree usage(s) or objective(s) (of the previously recorded tree species). Several usages can be selected
- If usage(s) of the trees on the field is/are not in the list, you can add more by clicking on "Other(s)" and type the new usage(s)
- Make sure that every data you entered at the beginning of the survey is correct before proceeding by pressing "Next"
- Press "Prev" if you want to modify something on the previous screen

#### Objectives:

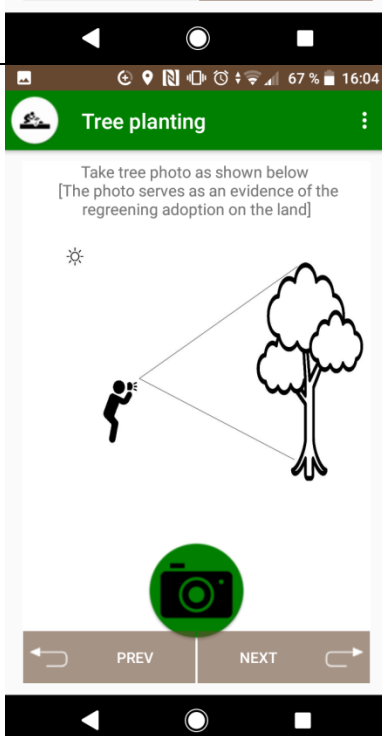
- **Record usage(s) or objective(s) of the tree species**



- Select one tree in the previously recorded unit
- Select the height class corresponding to this tree
- Measure the root collar diameter (diameter of the base of the tree) if the height of the tree is less than 1.5 meters
- Measure the diameter at breast height (diameter of the trunk at 1.3 meters height) of the tree for over 1.5 meters height
- Press "Next" to proceed

#### Objectives:

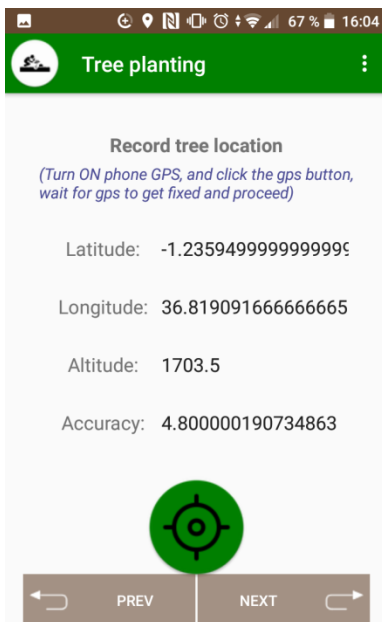
- **Record tree height and DBH/ RCD to assess growth of the tree with respect to similar species in same/ different geographical areas and conditions**
- **Validate statistical models for remote sensing-based image classifications**
- **Propose possible usage for woody biomass**



- Press the camera icon to take a photo of the tree
- Take a photo representing the entire tree as much as possible
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

#### Objectives:

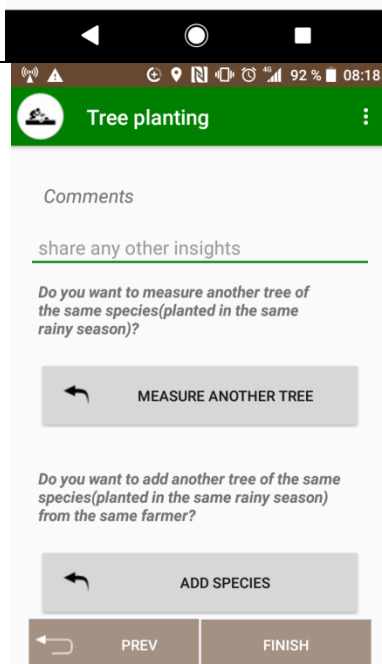
- **Document greening practices**
- **Track tree growth in comparison to previous recordings**



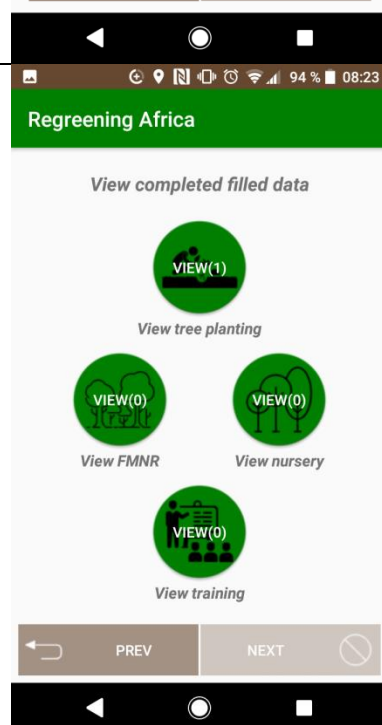
- Activate the GPS on your phone
- Put the phone next to the tree, the closest possible, and press on the target icon
- Wait for "Accuracy<5.5" and press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

#### Objectives:

- **Record GPS location of specific species that can be used to train remote sensing-based classification models**



- Write any relevant farmers' comments on his/ her tree planting practices
- If the unit has similar tree species planted in the same rainy session but with different height classes than the previously recorded (less than 1.5m/ 1.5m-3m / more than 3m) trees, press on "Measure another tree" and then add another tree
- When you want to record another tree, select a distant tree from the previously recorded one to avoid confusion between the geopoints representing the trees (at least 7 to 10 meters)
- If you have other trees of the same species but planted in a different rainy season or trees of another tree species than the previously recorded ones, press "Add species" and add a new tree by answering the set of questions related to the new group of trees
- If you have recorded everything on this plot, press "Finish". You will be redirected to the first screen of the App
- Press "Prev" if you want to modify something on the previous screen



- If you want to visualize the survey(s) you have done, on the first screen of the app select "View completed data"
- Here we have one tree planting survey (see the icon "view tree planting"). Click on "View tree planting" to see the detailed data of the survey(s)
- If you have several surveys recorded for the tree planting module, after clicking on "View tree planting", select the survey you want to see by clicking on the name of farmer you have recorded
- If you have recorded several plots for a same farmer, the plots will appear in the sending order starting from the first recorded plot
- Press "Prev" to come back to the first screen of the App



- If you want to modify some information on the survey, edit your changes and click on "Save"
- If you want to delete the survey, click on "Delete"

**Note: The Regreening Africa team highly recommends that you do not edit the information recorded in the field as this might cause more confusion and errors. Thus, it is very important to make sure that you record the correct information during the data entry in the field.**

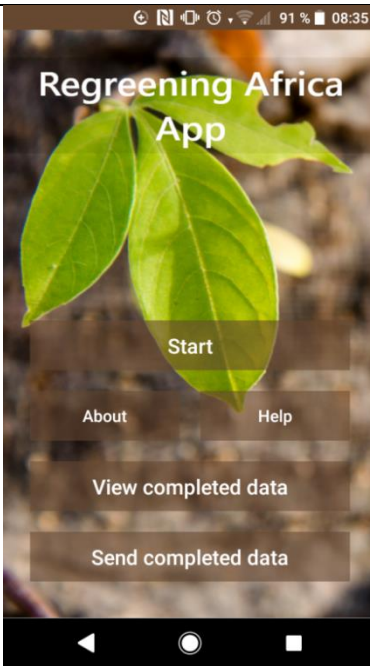


- If you want to send the previously completed tree planting surveys, **ideally at the end of every data collection day**, from the first screen of the App, press "Send completed data"
- Enter your personal username and password previously provided by World Agroforestry
- Click on "Login" to access the screen to send the data
- Click on "Cancel" to come back to the homepage of the App



- If you want to send the completed tree planting surveys, **ideally at the end of every data collection day**, go to the first screen of the App, press "Send completed data"
- You can see on that screen the number of completed surveys you have done. Here, one tree planting survey has been completed
- Before sending the data, make sure that you have recorded all plots of the recorded farmers in the tree planting module
- Activate your Wi-Fi connectivity and then click on "Send tree planting" to send the tree planting survey every tree planting survey will be sent
- Press "Prev" to come back to the first screen of the App

## When the FMNR Module has been selected



- Make sure that you have the latest version of the App (version 1.4) clicking on "About", first line, before starting data collection. If you have the previous version, please uninstall it, restart your phone and download the latest version
- Press "Start" to select a survey (access following screen)
- Press "About" for general information about the Regreening Africa App
- Press "Help" to remember how to start data collection, how to send data and definition of some technical terms used in the App
- Press "View completed data" to see the details of the survey you have done
- Press "Send completed data" to submit the completed surveys

**NB: Wi-Fi or mobile networks are necessary to send data**



- Select one survey to record tree planting practices, FMNR, nurseries or training, depending on the context or data being collected
- Press "Prev" to go back to the first screen of the App

Is this a new farmer/Institution or an additional plot by the previous farmer/Institution?

New profile →

Additional plot →

PREV NEXT



- To record a new farmer, select "New profile"
- To record another plot cultivated by a previously recorded farmer, select "Additional plot"
- Press "Prev" to select another survey

#### Objectives:

- **Record new farmer/ institution**
- **Record multiple plots owned by the same farmer**

FMNR

Select the farmer/institution with the additional plot

Search...

fgi\_8626 Test

PREV NEXT



- This screen appears if you have selected "Additional plot"
- Select the farmer cultivating the plot you want to record clicking on his/her name. For instance, here, the name of the farmer cultivating the plot is "Test". Click on "Test" and fill the forms by recording the geopoints around the plot
- You can "Search..." the name of the farmer you want to select to find him/her directly
- Press "Prev" to come back to the previous screen

#### Objectives:

- **Record multiple plots for a single farmer**

FMNR

Data collector Information

Name of data collector

Select date DATE

Survey Name

Select project

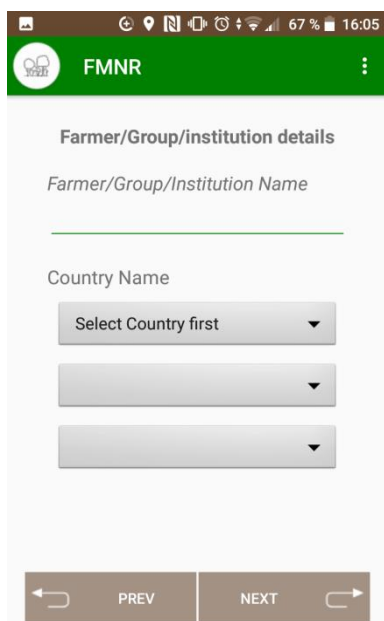
Add project name if not in the list ADD

PREV NEXT



- "Name of data collector" = Enter your name
- If the survey is a test, please enter "Test" as name of data collector
- Select the date when you are doing the survey clicking on "Date"
- Select the survey name through the dropdown menu once you click the "select project" button
- If you don't find the name of the project for which you are doing the survey, please enter the name of the project in "Add project name", click on "Add" and then select it under the "select project" menu
- Press "Next" to proceed
- Press "Prev" if you want to select another survey





Farmer/Group/institution details

Farmer/Group/Institution Name

Country Name

Select Country first

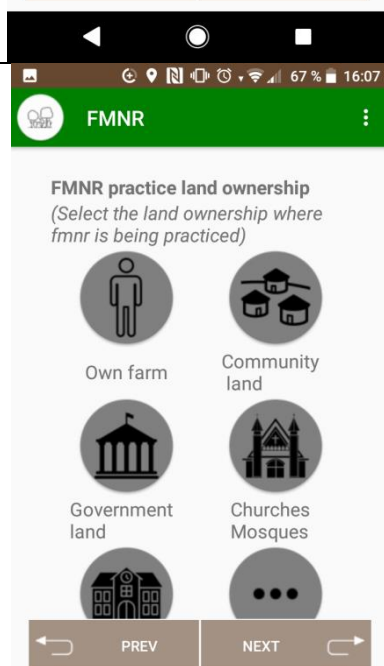
PREV NEXT



- Enter the name of the farmer/ group/ institution cultivating the plot you are recording
- Select the country where the FMNR plot is located, then the Region/ County/ State/ Province and finally the District/ Commune/ Woreda/ Cercle/ sub-County
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

- **Record geographical area of a farmer/ group/ institution surveyed**



FMNR practice land ownership  
(Select the land ownership where fmn is being practiced)

Own farm Community land

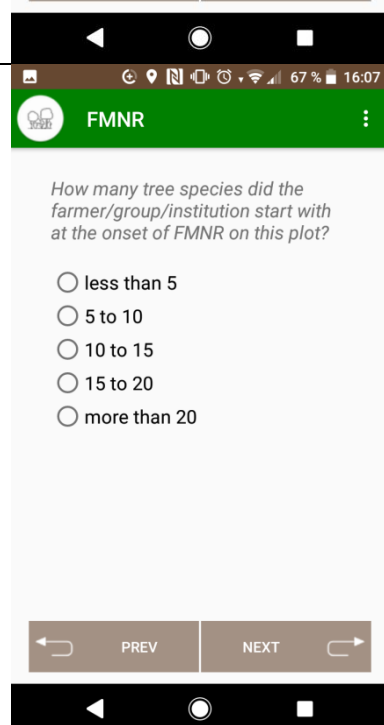
Government land Churches Mosques

PREV NEXT

- Select the ownership of the plot you are recording. There can be several owners for the same plot
- If you don't find the appropriate ownership(s) or you want to add more, select "Other(s)" and write the new ownership(s) categories
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

- **Recording the ownership of the plot, regreening practices adopted, land tenure security and institutional support given**
- **Analysing ownership with respect to practices, performances, usage and agroforestry systems**



How many tree species did the farmer/group/institution start with at the onset of FMNR on this plot?

☐ less than 5

☐ 5 to 10

☐ 10 to 15

☐ 15 to 20

☐ more than 20

PREV NEXT



- Select the number of tree species present on the plot when the farmer started the FMNR practices
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

- **Record tree species diversity on the FMNR plot**

**FMNR practice plot information**

Select month/year the FMNR was started on this plot

Select month/year SELECT

Is the land fenced?

☐ Yes ☐ No

Does the plot have food crops?

☐ Yes ☐ No

Estimate the area size of the re-greening part of the plot [select unit]

PREV NEXT



- Select the starting date of the FMNR practices, by pressing on "Select"
- Answer by selecting the appropriate option to the question "is the land fenced?"
- Does the plot have food crops (subsistence)? Select the right option. If yes, write the associated crops
- Enter the farmers' estimation of the area of the FMNR plot like in the tree planting module
- Make sure that every data you entered since the beginning of the survey is correct before proceeding by pressing "Next"
- Press "Prev" if you want to modify something on the previous screen

#### **Objectives:**

- ***Assess relationship of trees with respect to crops***
- ***Record FMNR practices***

**Record points around the regreening part of the plot**

Record 5 points or more to proceed

Latitude: -1.2358799999999999  
Longitude: 36.81892666666667  
Altitude: 1693.3  
Accuracy: 3.5

UPDATE SAVE

PREV NEXT



- Activate the GPS of your phone by clicking on the location icon on your device. Note, if the location component of your phone is set to GPS+Wi-Fi, set it to GPS only
- The geopoints have to be taken on the external boundary of the regreened part of the plot, at least, at each change of direction of this boundary
- When you are at the location where you want to take the geoint, stop, click on "Fix GPS", then "Get location"
- If the accuracy is over 5.5. (in red), keep clicking on "Update" until "Accuracy<5.5" (in green) if possible, and click on "Save". Then move to another geoint
- When you are at the location of the next geoint, stop, keep clicking on "Update" until "Accuracy<5.5" and then click on "Save"
- When you have registered all the geoints allowing a perfect report of the external boundary of the regreened part of the plot (at least 5 geoints), press "Next" to proceed

#### **Objectives:**

- ***Map the regreened part of the plot***
- ***Calculate the exact area of the regreened part of the plot***
- ***Test farmers' perception of his/ her regreened area compared to actual area calculation***

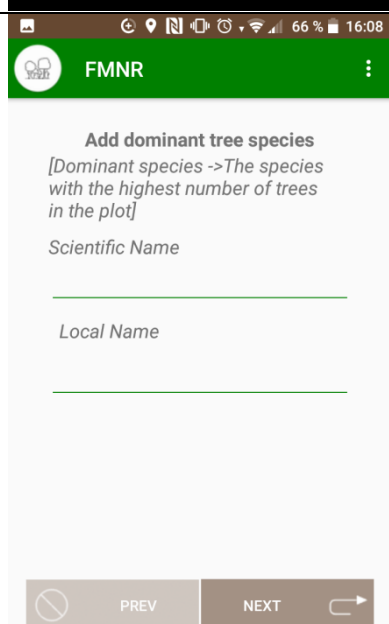




- Click on "Get Plot Area" to know the area of the plot you have just recorded
- Please don't let the farmers know this estimation because it's not an official calculation of the area of their plot. These measurements are not equivalent of official land measurement surveys (known as cadastral surveys) thus only provide area estimation possible with non-survey grade GPSs

**Objectives:**

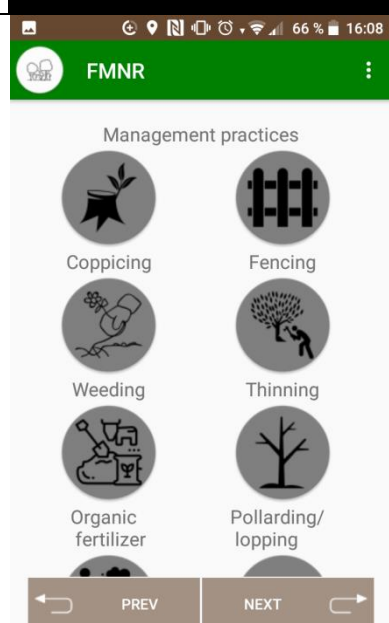
- ***Provide instant estimation of the area regreened***



- Enter the scientific name or/ and the local name of one of the dominant tree species on the FMNR plot
- Press "Next" to proceed

**Objectives:**

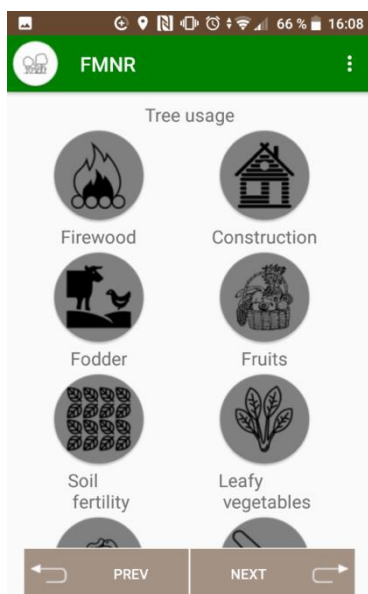
- ***Record tree species composition of the FMNR plot***



- Select the management practice(s) done on the trees of the previously recorded dominant species. Several management practices can be selected
- If the management practice on the plot is not in the list or you want to add more, select "Other(s)" and enter the new management practice category
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

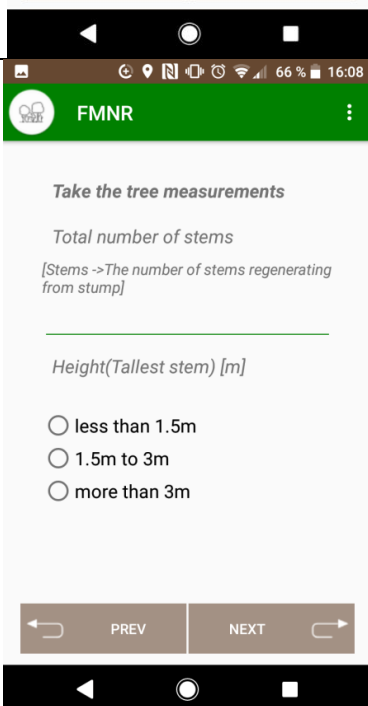
- ***Relate management practices with tree species and performances to identify and analyze best practices***



- Select the tree usage(s) or objective(s) of the previously recorded dominant species. Several usages can be selected.
- If usage(s) of the trees on the field is/ are not in the list or you want to add more, select "Other(s)" and enter the appropriate usage(s)
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

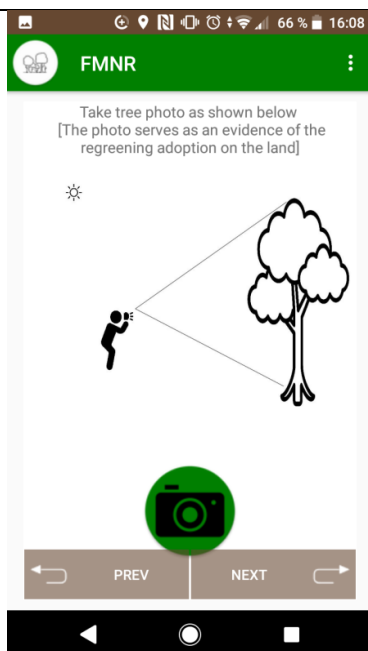
- **Record tree usage(s) or objective(s)**



- Select one tree of the dominant species previously recorded in a zone where more of the individuals of this species are
- Enter the number of stems of this tree
- Select the height class corresponding on the tallest stem of this tree
- Measure the root collar diameter (diameter of the base of the tree) if the height of this stem is less than 1.5 meters
- Measure the diameter at breast height (diameter of the stem at 1.3 meters height) of this stem for over 1.5 meters height
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

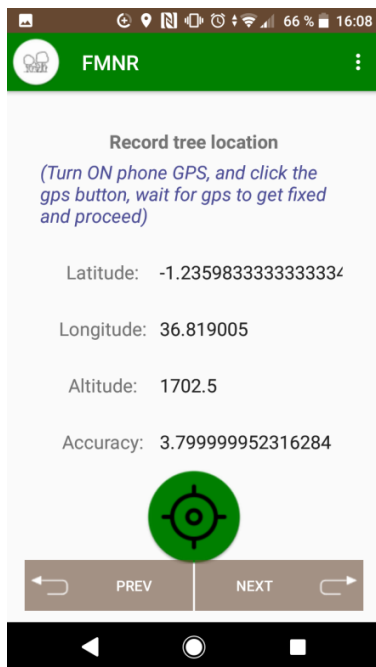
- **Record tree height and DBA/ RCD to access growth of this tree with respect to similar species in same/ different geographical areas and conditions**
- **Validate statistical models for remote sensing-based image classifications**
- **Relate the number of stems with the tree usage(s) and species**



- Press the camera icon to take a photo of the tree
- Take a photo representing the entire tree as much as possible
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

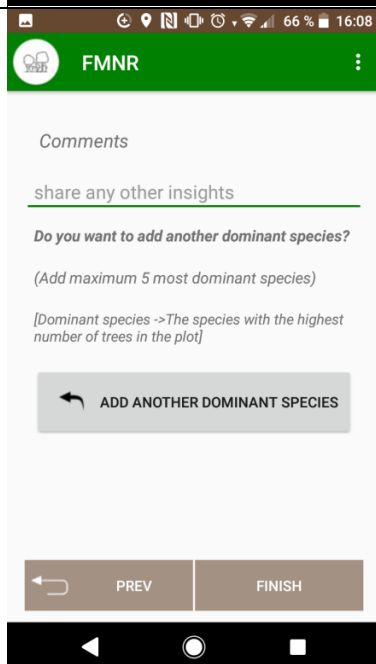
- **Document regreening practices**
- **Track tree growth in comparison to previous records**
- **Identify origin of the tree measured: sprouting or wild germination, relating it with the characterization of the clearing practices recorded previously**



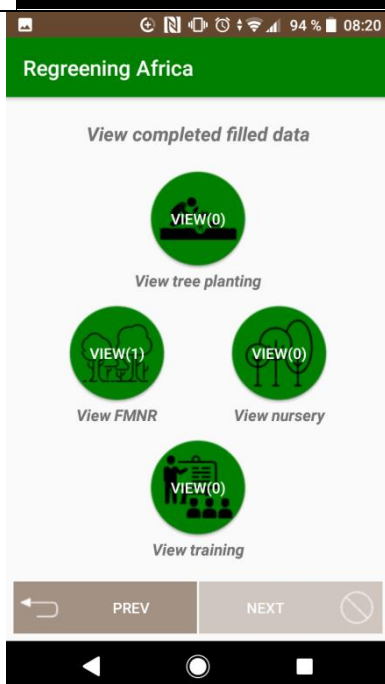
- Activate the GPS on your phone
- Put the phone next to the tree, the closest possible, and press on the target icon
- Wait for "Accuracy<5.5" and press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

#### Objectives:

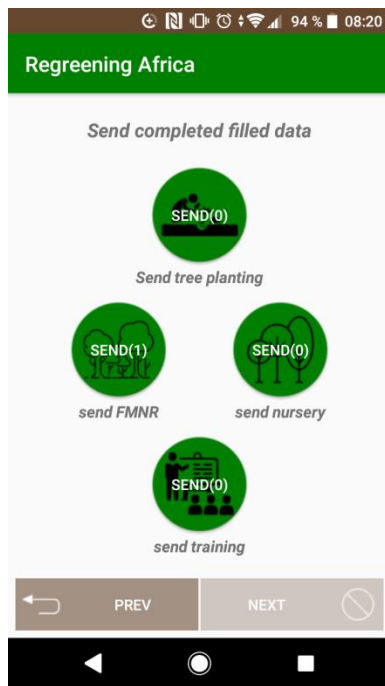
- **Recording GPS location of specific species that can be used to train remote sensing based classification models**



- Write any relevant farmers' comments on his/ her FMNR practices
- If there is another dominant tree species on that FMNR plot, click on "Add another dominant species" and then add another tree species
- When the survey is complete, click on "Finish" to record the survey and come back to the first screen of the App
- Press "Prev" if you want to modify something on the previous screen

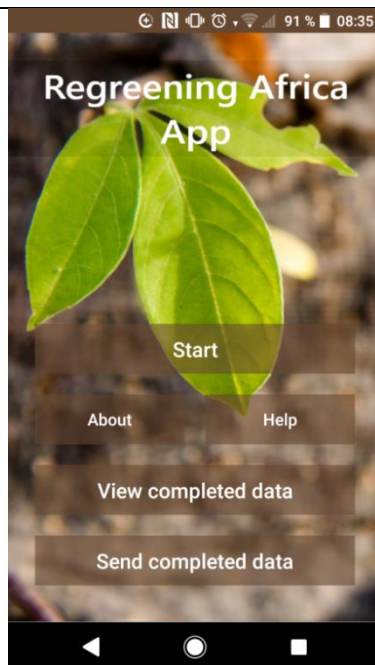


- If you want to visualize the survey(s) you have done, on the first screen of the App, select "View completed data"
- Here we have one FMNR survey (see the icon "view FMNR"). Click on "View FMNR" to see the detailed data of the survey(s)
- If you have several surveys recorded for the FMNR module, after clicking on "View FMNR", select the survey you want to see by clicking on the name of the farmer you have recorded
- If you have recorded several plots for one farmer, the plots will appear in the sending order starting from the first recorded plot
- As for tree planting, you can then edit or delete the recorded surveys
- Press "Prev" to come back to the first screen of the App



- If you want to send the completed FMNR surveys, **ideally at the end of every data collection day**, go to the first screen of the App, press "Send completed data" and sign in as previously explained
- You can see on that screen the number of completed surveys you have done. Here, one FMNR survey has been completed
- Before sending the data, make sure that you have recorded all the plots of the recorded farmers of the FMNR module
- Activate your Wi-Fi connectivity and then click on "Send FMNR" to send the FMNR survey, every FMNR survey will be sent
- Press "Prev" to come back to the first screen of the App

### *When the NURSERY Module has been selected*



- Make sure that you have the latest version of the App (version 1.3) clicking on "About", first line, before starting data collection. If you have the previous version, please uninstall it, restart your phone and download the latest version
- Press "Start" to select a survey (access following screen)
- Press "About" for general information about the Regreening Africa App
- Press "Help" to remember how to start collecting data, how to send data and some definitions of technical terms used in the app
- Press "View completed data" to see the details of the survey you have done
- Press "Send completed data" to submit the completed surveys

***NB: Wi-Fi or mobile networks are necessary to send data***



- Select one survey to record tree planting practices, FMNR, nurseries or training, depending on the context or data being collected
- Press "Prev" to go back to the first screen of the App

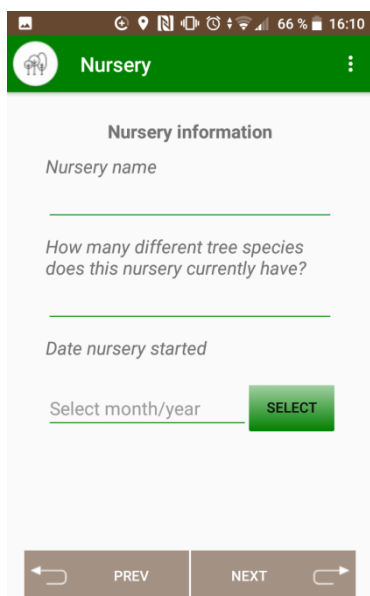


- "Name of data collector" = Enter your name
- If the survey is a test, please enter "Test" as name of data collector
- Select the date when you are doing the survey
- Select the relative project of the survey in the dropdown menu (Regreening Africa)
- If you don't find the name of the project for which you are doing the survey, please enter the name of the project in "Add project name", click on "Add" and then select it in the dropdown menu
- Press "Next" to proceed
- Press "Prev" if you want to select another survey

- Select the country where the nursery is located, then the Region/ County/ State/ Province and then the District/ Commune/ Woreda/ Cercle/ sub-County
- Enter the name of the nursery operator
- Enter the contact of the nursery operator previously recorded (phone number)
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

#### **Objectives:**

- **Record geographical location of the nursery**



**Nursery**

**Nursery information**

Nursery name

---

How many different tree species does this nursery currently have?

---

Date nursery started

Select month/year SELECT

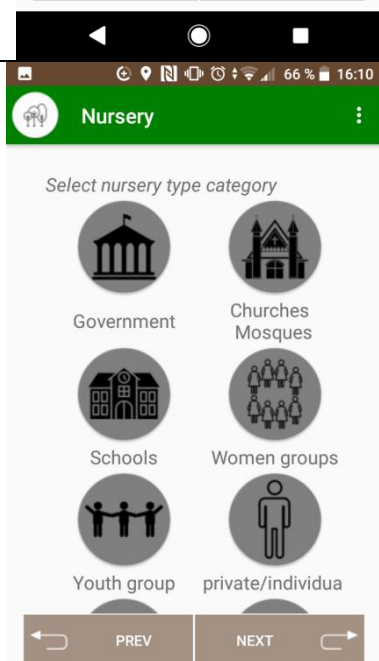
PREV NEXT



- Enter the name of the nursery
- Enter the number of tree species produced by the nursery
- Select the date of creation of the nursery clicking on "Select"



#### Objectives:



- **Record the seedlings production of the nursery**
- **Clearly define dates of when the nursery was established (before or during the projects' lifespan)**





**Nursery**

Select nursery type category

 Government
  Churches Mosques

 Schools
  Women groups

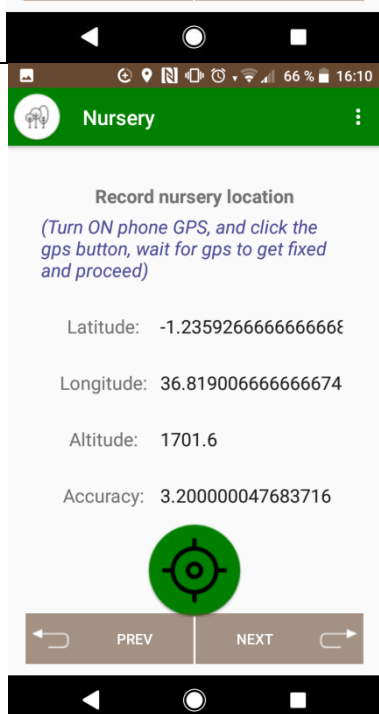
 Youth group
  private/individual

PREV NEXT

- Select the ownership of the nursery you are recording. Several choices can be made
- If you don't find the corresponding ownership(s), select "Other(s)" and write the appropriate ownership(s)
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

#### Objectives:

- **Record the nursery ownership as an indicator of the institutional support and of self-strengthening capacity**
- **Establish a link between different ownership types and nursery performance**



**Nursery**

**Record nursery location**


(Turn ON phone GPS, and click the gps button, wait for gps to get fixed and proceed)

Latitude: -1.2359266666666666

Longitude: 36.8190066666666674

Altitude: 1701.6

Accuracy: 3.200000047683716



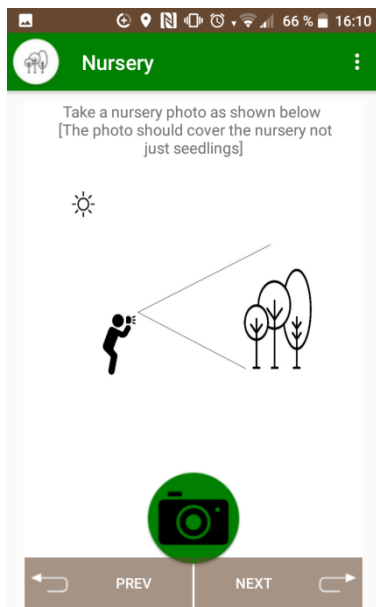
PREV NEXT



- Activate the GPS on your phone
- Stand in the middle of the nursery, and press on "Fix GPS" and then on the target icon
- Wait for "Accuracy<5.5" and press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

#### Objectives:

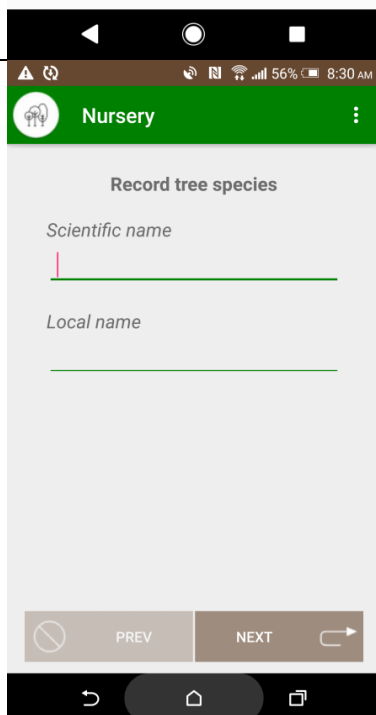
- **Record geolocation of nursery for mapping**



- Press the camera icon to take the photo of the nursery
- Take a photo representing the entire nursery as much as possible or at least a representation of the nursery's seedling production
- Make sure that every data you entered since the beginning of the survey is correct before proceeding by pressing "Next"
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

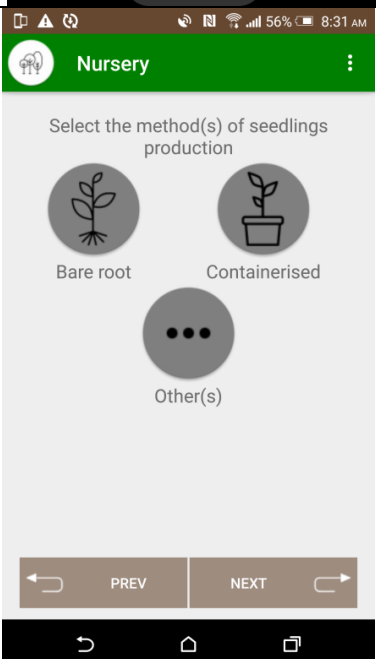
- ***Document and visualize the tree seedlings production process***



- Enter the scientific name and/ or local one of one of the tree species produced in the nursery
- Press "Next" to proceed

**Objectives:**

- ***Record name of tree species for seedlings production***

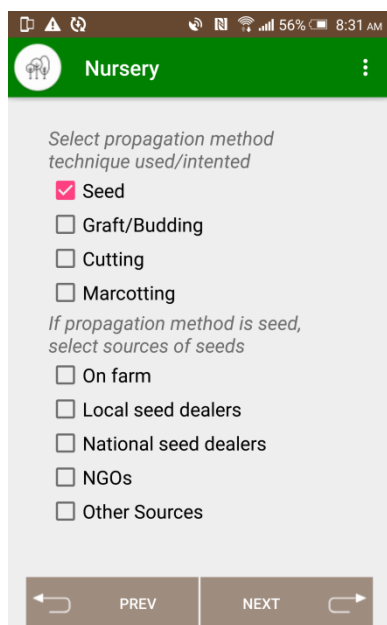


- Select the method(s) of seedling production done for the previously recorded tree species, several methods can be selected
- If you don't find the appropriate method(s) or you want to add more, select "Other(s)" and write the appropriate method(s)
- Bare root = several seedlings in a pot
- Containerised = one seedling in a pot
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

- ***Record the seedlings production method of to analyze different practices and their effects on production***





**Nursery**

Select propagation method technique used/intended

- ☒ Seed
- ☐ Graft/Budding
- ☐ Cutting
- ☐ Marcotting

If propagation method is seed, select sources of seeds

- ☐ On farm
- ☐ Local seed dealers
- ☐ National seed dealers
- ☐ NGOs
- ☐ Other Sources

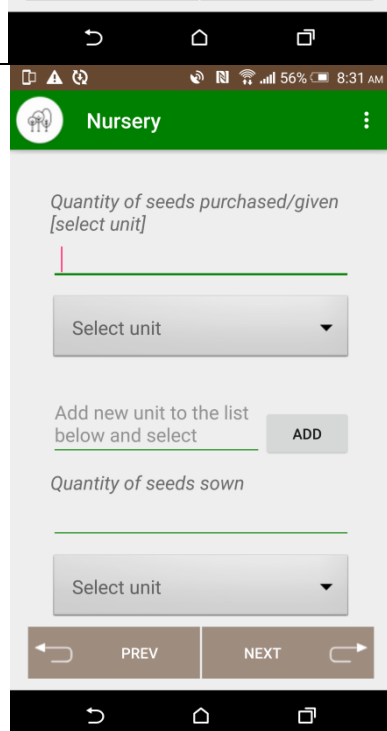
PREV NEXT



- Select the propagation method(s) used in the nursery for the previously recorded tree species. Several methods can be selected
- If you select "Seed" or/ and "Graft/ Budding" their sources will be required, several sources can be selected
- If you don't find the appropriate source(s) or you want to add more, select "Other Sources" and write the appropriate source(s)
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

#### Objectives:

- **Record propagation method and the source i.e. "seed" or "grafting/budding" for future planning and advisory**



**Nursery**

Quantity of seeds purchased/given [select unit]

Select unit

Add new unit to the list below and select

ADD

Quantity of seeds sown

Select unit

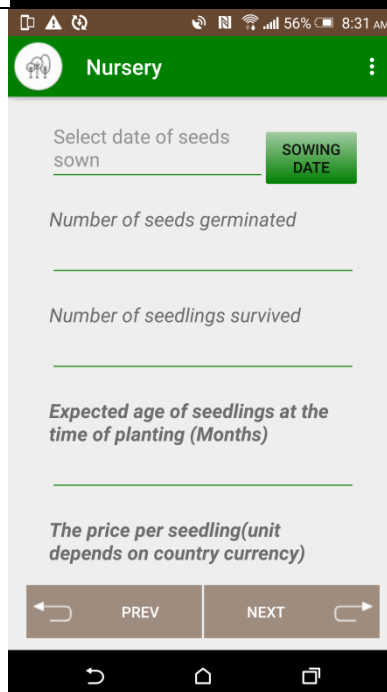
PREV NEXT



- Enter the quantity of seeds (of tree species being recorded) purchased/ given
- Select the unit of the previous figure in the dropdown menu
- If you don't find the suitable unit in the dropdown, add the appropriate one in "Add new unit", click on "Add" and then select it in the dropdown
- Enter the quantity of seeds (of the species being recorded) sown
- Select the unit as previously explained

#### Objectives:

- **The quantity of seeds purchased/ given is an indicator of the nursery's dependence to the market or donors for the seeds**



**Nursery**

Select date of seeds sown

SOWING DATE

Number of seeds germinated

Number of seedlings survived

Expected age of seedlings at the time of planting (Months)

The price per seedling(unit depends on country currency)

PREV NEXT

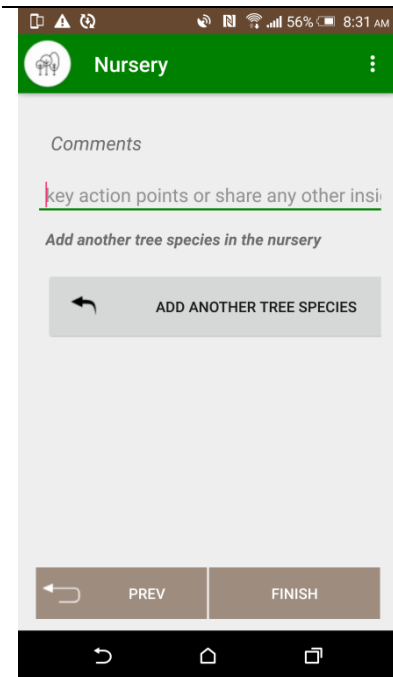


- Select the sowing date (of seeds of tree species being recorded) by clicking on "Sowing Date"
- Enter the number of seeds germinated (seedlings that sprouted)
- Enter the number of seedlings survived (survival means, for bare root production method, remaining saplings after transplantation in the containers, and, for containerized production method, just saplings surviving in the container)
- Enter the expected age (in months) of the seedlings (of the tree species being recorded) at time of planting in the field (or sold)
- Enter the price of one seedling (of the tree species being recorded). The currency will be deduced from the country where the nursery is located
- Please enter the previous data for a same sowing session
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen



### Objectives:

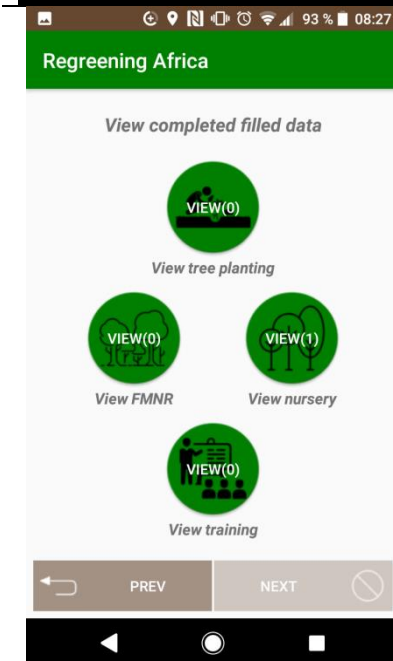
- *The germination rate (number of seeds germinated/ quantity of seeds sown) enables the assessment of the seeds viability*
- *The mortality rate (number of seedlings survived/ number of seeds germinated) enables the assessment of the transplantation (movement of seedling to container) practices*
- *The sowing date enables the interpretation of germination of the different tree species*
- *The expected age of the seedlings at the time of planting according to the tree species and the agroclimatic zone of the plantation field determines the plantation success*
- *Record prices for future analysis and better advisory for the nursery's operators*



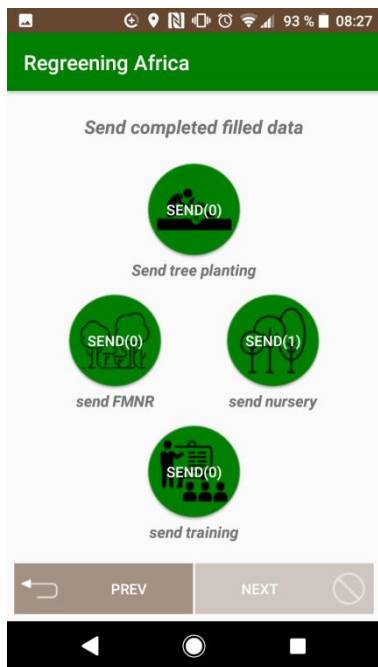
- Write any relevant comments about the nursery
- Select "Add another tree species" to add another tree species produced in the same nursery
- When the survey is complete, click on "Finish" to record the survey and come back to the first screen of the app
- Press "Prev" if you want to modify something on the previous screen

### Objectives:

- *Recording the tree seedling production of the nursery*

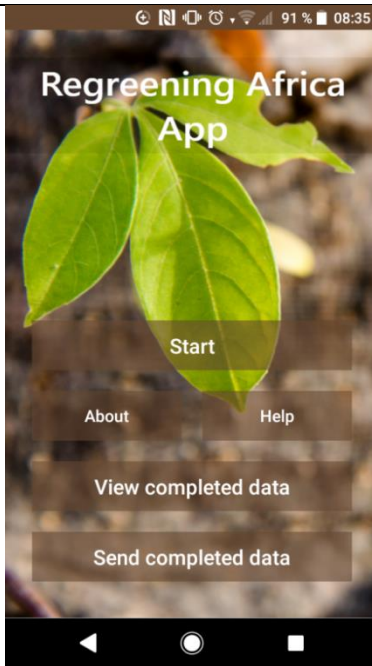


- If you want to visualize the survey(s) you have done, on the first screen of the App select "View completed data"
- Here we have one Nursery survey (see the icon "view nursery"). Click on "View nursery" to see the detailed data of the survey(s)
- If you have several surveys recorded for the Nursery module, after clicking on "View nursery", select the survey you want to see by clicking on the name of the nursery operator you have recorded
- If you have recorded several tree species for the same nursery, the last survey for this same nursery that appears in the list is the last species you have recorded
- As for tree planting, you can then edit or delete the recorded surveys
- Press "Prev" to come back to the first screen of the App



- If you want to send the completed nursery surveys, **ideally at the end of every data collection day**, go to the first screen of the App, press "Send completed data" and sign in as previously explained
- You can see on that screen the number of completed surveys you have done. Here, one nursery survey has been completed
- Activate your Wi-Fi connectivity and then click on "Send Nursery" to send the nursery survey, every nursery survey will be sent
- Press "Prev" to come back to the first screen of the App

## *When the TRAINING Module has been selected*



- Make sure that you have the last version of the App (version 1.4) clicking on "About", first line, before starting data collection. If you have the previous version, please uninstall it, restart your phone and download the last version
- Press "Start" to select a survey (access following screen)
- Press "About" for general information about the Regreening Africa App
- Press "Help" to remember how to start collecting data, how to send data and definitions of some technical terms used in the App
- Press "View completed data" to see the details of the survey you have done
- Press "Send completed data" to submit the completed surveys

***NB: Wi-Fi or mobile networks are necessary to send data***



- Select one survey to record tree planting practices, FMNR, nurseries or training, depending on the context or data being collected
- Press "Prev" to go back to the first screen of the App

**Training**

**Data collector Information**

Name of data collector

Select date DATE

Survey Name

Select project

Add project name if not in the list ADD

PREV NEXT

- "Name of data collector" = Enter your name
- If the survey is a test, please enter "Test" as name of data collector
- Select the date when you are doing the survey
- Select the survey by clicking on the dropdown menu "Select project"
- If you don't find the name of the project for which you are doing the survey, please enter the name of the project in "Add project name", click on "Add" and then select it in the dropdown
- Press "Next" to proceed
- Press "Prev" if you want to select another survey

**Training**

**Training information**

Country Name

Select Country first

Region/County/State/Province Name

District/Commune/Woreda/Cercle/Sub-county Name

PREV NEXT

- Select the country where the training has been carried out
- Write the Region/ County/ State/ Province of the training location
- Write the District/ Commune/ Woreda/ Cercle/ sub-County of this same training location
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

- **Record the training location**

**Training**

Topic of the training

Type of training

practical,theory etc

Date of the training DATE

Venue of training/workshop

Name(s) of partners conducting the training/workshop

PREV NEXT

- Enter the topic of the training
- Enter the type of training: theoretical, practical or both
- Select the date of the training clicking on "Date"
- Enter the name of the location where the training has been carried out (e.g.: World Vision, Lambwe office)
- Enter the name of the partner conducting the training
- Press "Next" to proceed
- Press "Prev" if you want to modify something on the previous screen

**Objectives:**

- **Record the training (topic, type, date, venue, partner conducting it)**
- **Facilitate the training schedule by the registration of the training process in a given area and by its comparison with the regreening practices' issues identified in this same area**

- Enter the total number of participants in the training
- Enter the number of male participants
- Enter the number of female participants
- The sum of male and female participants has to be equal to the total number of participants
- Enter the number of youth participants (15-24 years old) among all the participants
- Write any relevant comments about the training
- Press "Prev" if you want to modify something on the previous screen
- When the survey is complete, click on "Finish" to record the survey and come back to the first screen of the App

#### Objectives:

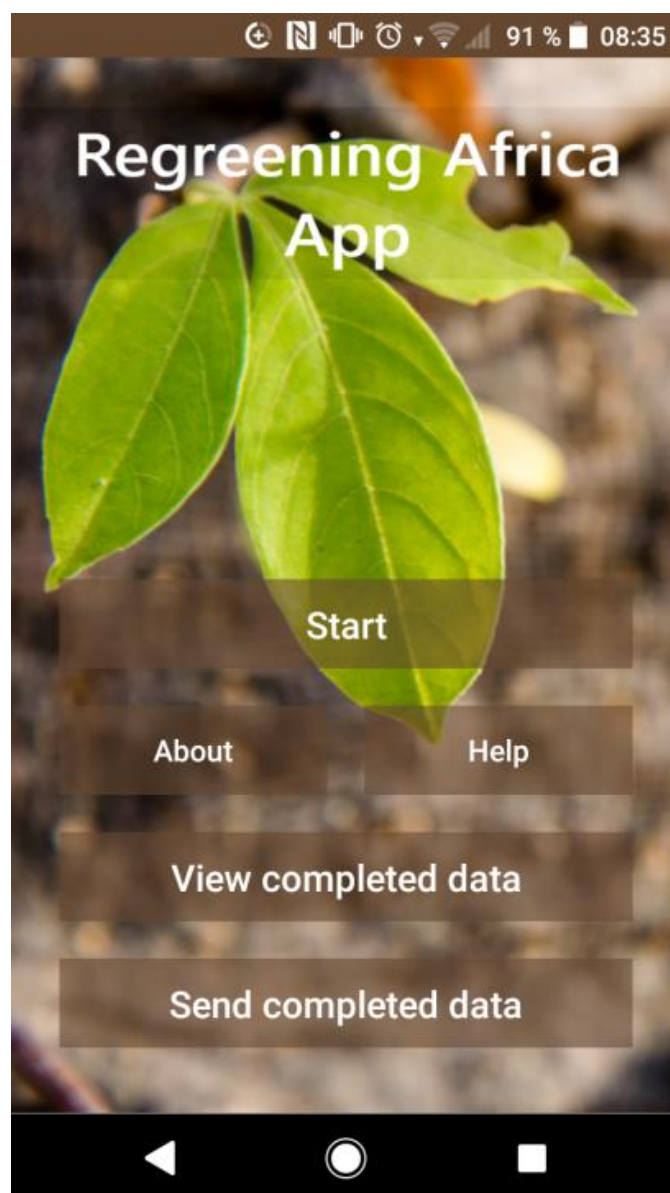
- **Record the participants in terms of number and gender**



- If you want to visualize the survey(s) you have done, on the first screen of the App select "View completed data"
- Here we have one training survey (see the icon "view training"). Click on "View training" to see the detailed data of the survey(s)
- If you have several surveys recorded for the training module, after clicking on "View training", select the survey you want to see by clicking on the name of venue of the training you have recorded
- If you have recorded several trainings for the same venue, the last survey for this same venue that appears in the list is the last one you have done
- As for tree planting, you can then edit or delete the recorded surveys
- Press "Prev" to come back to the first screen of the App



- If you want to send the completed Training surveys, **ideally at the end of every data collection day**, go to the first screen of the App, press "Send completed data" and sign in as previously recorded
- You can see on that screen the number of completed surveys you have done. Here, one training survey has been completed
- Activate your Wi-Fi connectivity and then click on "Send training" to send the training survey, every training survey will be sent
- Press "Prev" to come back to the first screen of the App



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