

SOILS4AFRICA SURVEY DATA MANAGEMENT TOOL (SDMT) USER MANUAL

V3.0

IITA DATA MANAGEMENT UNIT

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LIST OF ABBREVIATIONS

SDMT – Survey Data Management Tool

IITA – International Institute of Tropical Agriculture

CCO – Central Coordination Officer

RHC – Regional Hub Coordinator

CS – Country Supervisor

DMU – IITA Data Management Unit

PSU – Primary Sampling Unit

SSU – Secondary Sampling Unit

TSU – Tertiary Sampling Unit

QC – Quality Control



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INTRODUCTION

Funded by the Horizon 2020 program of the European Union, Soils4Africa is a project that aims to develop a Soil Information System (SIS) that uses a sound sampling framework and uniform methodologies for data gathering. The SIS will enable farmers, agri-businesses, scientists, and policymakers in their efforts towards sustainable intensification of agriculture and boosting food security; by improving the quality and availability of soil data for Africa.

IITA Data Management Unit (DMU) was tasked to design and develop the a web-based data and information management system for the Soil4Africa Project with specific reference to the field campaign, and which is used to validate the proposed sampling locations sampling units (as defined by the sampling design), to identify and recruit surveyors to conduct the field survey, to assign sampling locations to the surveyors, to collect and record field data and to upload the data to the system, to enable quality control on the data collected in the field as well as on the data on the sample preparation and analysis, and to generate reports on the progress of the field work. The data management tool includes dashboards that gives information and statistics on the status of the field campaign.

System Overview

The SDMT has the following main modules:

- a) Users Management Module
- b) Sampling Points Management Module
- c) Surveyors Management Module
- d) Jobs Management Module
- e) Submissions and Quality Control Module
- f) Reporting and Statistics Modules

User Access, Roles and Privileges

There are five types of users in the SDMT. The user groups include:

- Central Coordination Officers (CCO)
- Regional Hub Coordinators (RHC)
- Country Supervisors (CS)
- Survey Observers (SO)
- Surveyors

Recommended Devices

It is recommended that you access the system from a tablet, laptop or any other bigger screens. The system has a lot of information and infographics which might not be very user friendly when accessed from a mobile device.

Supported Browsers

All major browsers are supported i.e., Safari, Chrome, Firefox Mozilla and Edge. Internet Explorer is not supported thus some system functionalities might not work when used to access the system.



GETTING STARTED

How to access the system

Follow the link below using any internet browser to access the SDMT.

https://sdmt.soils4africa-h2020.eu/

Sign Up

All users are added to the system by CCOs except the surveyors who sign up by submitting their applications which is then approved or declined by the CSs using the surveyor onboarding process.

Once the users have been added to the system by the CCOs (described in the subsequent sections), they receive an account activation email with and account activation link and their initial password. The users need to click on the link to activate their account before they can login into the SDMT.

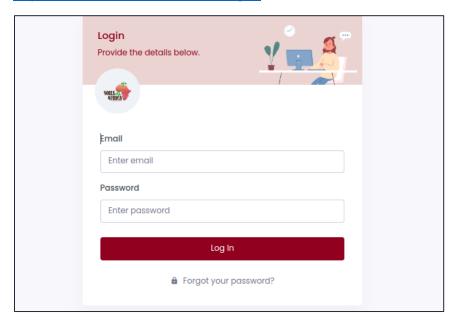
Sign In

A user can only sign in after they have been added to the system and they have verified their account.

A user can login into the system by following the link provided in the "How to access the system" above and they will be redirected to the login page if they are not already logged in.

Alternatively, they can follow the login link below

https://sdmt.soils4africa-h2020.eu/login/



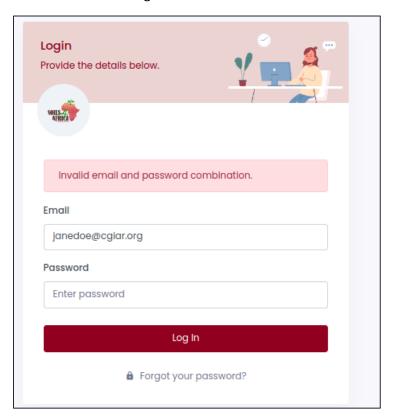
Enter the user email address and password in the login page and click on the "Log In" button to proceed.

On successful login, the user will be redirected to a dashboard depending on their user group or access levels. CCOs and Survey Observers will be redirected to the general system dashboard, RHCs will be



redirected to their respective region dashboards, CSs will be redirected to their respective country dashboards and surveyors will be redirected to surveyor's dashboard.

In the event that the user has provided an invalid email address or/and password on login, they will be shown an error message as shown below.

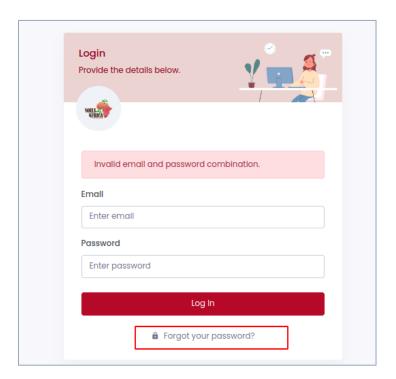


Password Reset

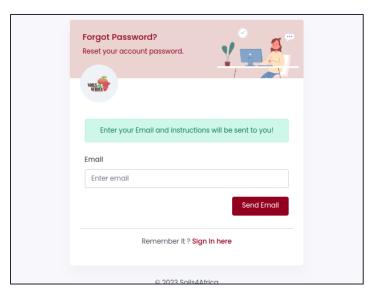
In the event that a user has forgotten their password, they can reset it from the login page.

Proceed to the login page as described in the previous step and click on the "Forgot your password" link which is below the "Login" button.





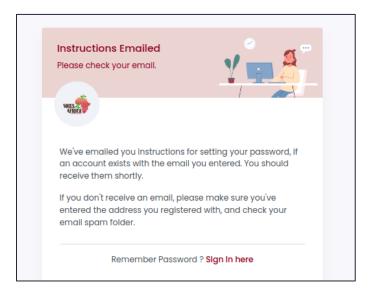
The user will be redirected to the password reset page as shown below.



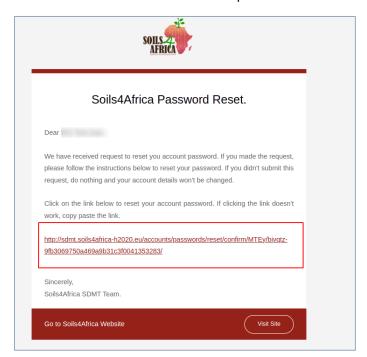
Enter the user email address and click on the "Send Email" button to receive instructions on how to set a new password.

The user will be redirected to a success page as shown below.



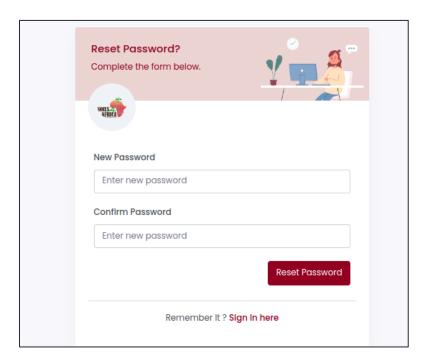


The user should check their email for password reset link and instructions.

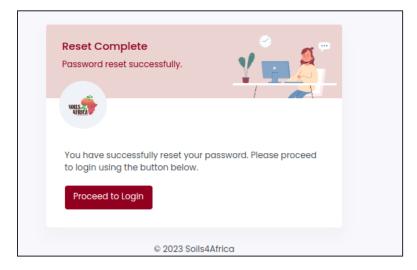


Click on the link sent in the email to set a new password. On clicking the link, the below page will be loaded.





Enter the new preferred password and confirm it in the next field. The two passwords should match. Click on "Reset Password" to save your new password.



Procced to login in with the new updated password by clicking on the "Proceed to Login" button.



USERS MANAGEMENT

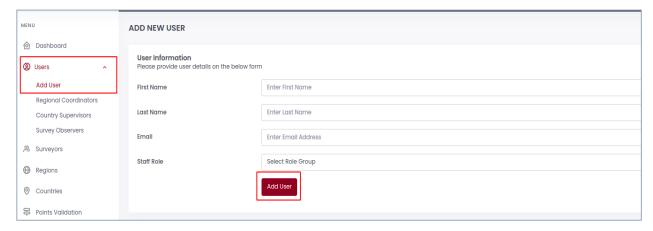
The SDMT has five groups of users: Central Coordination Officers (CCO), Regional Hub Coordinators (RHC), Country Supervisors (CS), Survey Observers (SO) and the Surveyors.

Apart from the surveyors, all the other users are added to system by the CCOs. This chapter will focus on the management of all the other system users who are not the surveyors.

Adding a new user

Only the CCOs can add users using the process described below.

On the Main Menu, click on the "Users" menu option and then click on the "Add User" sub-menu option.



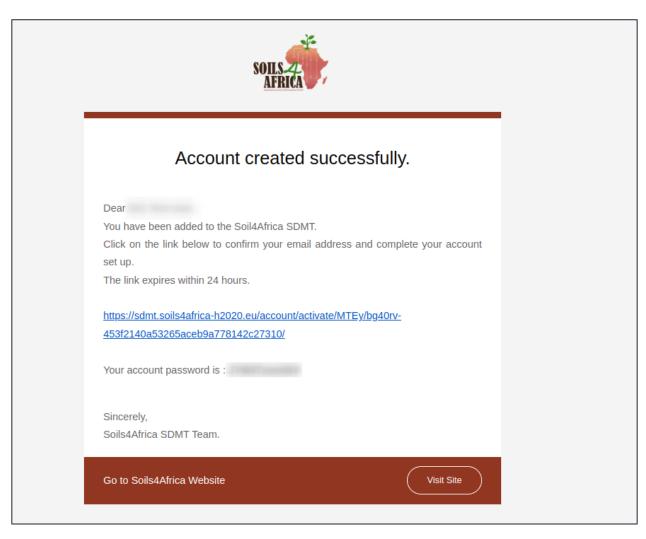
Provide the names and the email address of the user. Select a role that they user will be assigned.

If the role Regional Coordinator or Country Supervisor is selected, proceed to select the region or the country that the user will be assigned to respectively in the next field that will automatically appear.

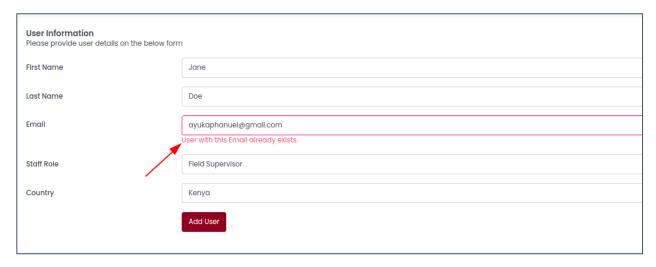
Click on the "Add User" button to save the user. A success message will be shown if user has been saved successfully.

The added user will receive an email with an account activation link and their initial password. The user needs to click on the activation link before they attempt to login. The link expires in 24 hours.





The email address for the new user should not have been used to create another user that is currently in the system. If the email address belongs to another user in the system the below error will be shown on the screen.

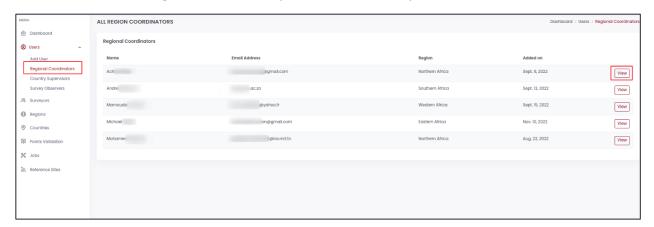




View all Regional Hub Coordinators

The list of all Regional Hub Coordinators can only be viewed by CCOs and the Survey Observers.

To view the coordinators, click on the "Regional Coordinators" sub-menu option in the "Users" menu which is available in the main system menu. The list of all the RHCs will be shown with their names, email addresses, their regions and when they were added to the system.



Click on the "View" button to see additional information about the coordinator such as their account status and the user who added them to the system.

View all Country Supervisors

The list of all Country Supervisors can only be viewed by CCOs and the Survey Observers.

To view the supervisors, click on the "Country Supervisors" sub-menu option in the "Users" menu which is available in the main system menu. The list of all the supervisors will be shown with their names, email addresses, their countries and when they were added to the system.



Click on the "View" button to see additional information about the supervisor such as their account status and the user who added them to the system.

View all Survey Observers

The list of all Survey Observers can only be viewed by CCOs and the Survey Observers themselves.

To view the observers, click on the "Survey Observers" sub-menu option in the "Users" menu which is available in the main system menu. A list of all the observers will be shown with their names, email



addresses, when they were added to the system, names of the user who added them to the system and a "Revoke" button which is only available to the CCOs.



View Regional Hub Coordinators in a specific region

The list of coordinators in a specific region is only available for the CCOs, Survey Observers and RHCs in that specific region.

Navigate to the region main page.

- For the region coordinator, this their main home page; the page where they are redirected to on login.
- For the CCOs and the Survey Observers, on the main system menu, click on the "Regions" menu option and then select the region whose coordinators is to be viewed.



On the region main page, click on the "Coordinators" menu option on the region menu and the page with all the coordinators in the region will be loaded.





Click on the "View" button to see additional information about the coordinator such as their account status and names of the user who added them to the system.

On the top-right corner of the coordinators table, there is a "Add Coordinator" button which is only available for the CCOs and can be used to add an existing user to the region as a coordinator.

Add an existing user as a Regional Hub Coordinator

This operation can only be performed by the CCOs.

Navigate to the specific region coordinators' page as described in the previous step. Click on the "Add Coordinator" button on the far-right end of the table.



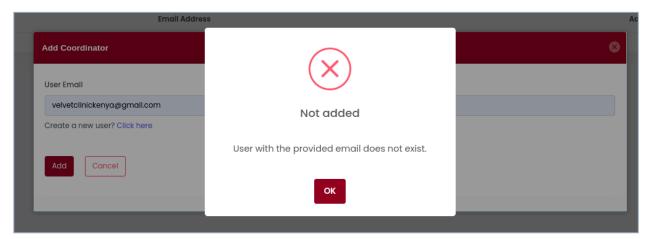
A pop-up with a form will be shown where the email address of the existing user should be filled.



Fill in the email address of the user and click on the "Add" button.



If a user with the email provided does not exist in the system, an error message is shown indicating that a user with the provided email does not exist. Click on the create new user link in the previous pop-up to add the user to the system.



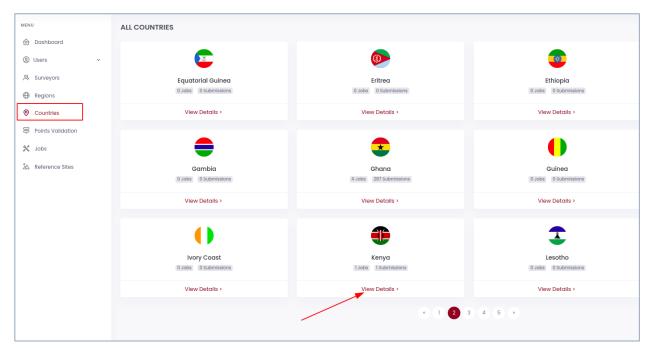
A success message is displayed if the user has been added to the country as a supervisor successfully.

View Country Supervisors in a specific country

The list of supervisors in a specific country is only available for the CCOs, Survey Observers, RHCs in the region to which the country belongs and the CSs in that specific country.

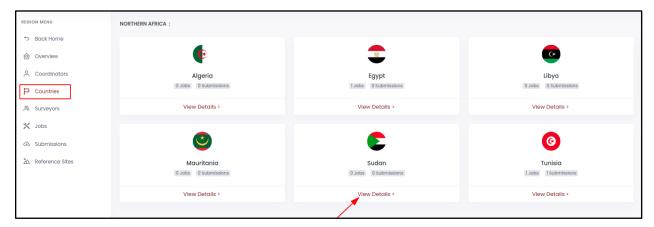
Navigate to the country main page.

- For the country supervisor, this is their main home page, the page where they are redirected to on login.
- From the main system menu, the CCOs and the Survey Observers can click on the "Countries" menu option and then select the country whose supervisors should be viewed.





 From the region's menu, the CCOs, RHCs and the Survey Observers can navigate to the country main page by clicking on the "Countries" menu option and then select the country whose supervisors should be viewed.



On the country's main page, click on the "Supervisors" menu option on the country's menu and a page with all the supervisors in the country will be loaded.



Click on the "View" button to see additional information about the supervisor such as their account status and names of the user who added them to the system.

On the top-right corner of the supervisors table, there is a "Add Supervisor" button which is only available for the CCOs and can be used to add an existing user to country as a supervisor.

Add an existing user as a Country Supervisor

This operation can only be performed by the CCOs.

Navigate to the specific country supervisors' page as described in the previous step. Click on the "Add Supervisor" button on the far-right end of the table.



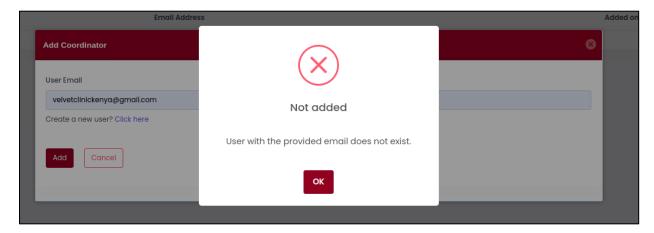


A pop-up with a form will be shown where the email address of the existing user should be filled.



Fill in the email address of the user and click on the "Add" button.

If a user with the email provided does not exist in the system, an error message is shown indicating that a user with the provided email does not exist. Click on the create new user link in the previous pop-up to add the user to the system.



A success message is displayed if the user has been added to the country as a supervisor successfully.

Revoke a user role

This functionality is only available to the CCOs. It is used to remove the users from the user groups; stripping them of the permissions to view the information and perform the functions they had access to before.



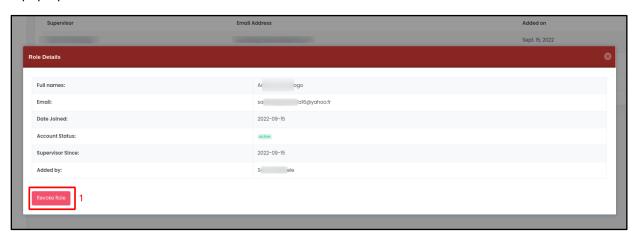
(i) CCOs, RHCs and CSs

For the CCOs, RHCs and CSs, navigate to their respective view tables as described in the previous sections.

Click on the "View" button for the user to be removed from the group.

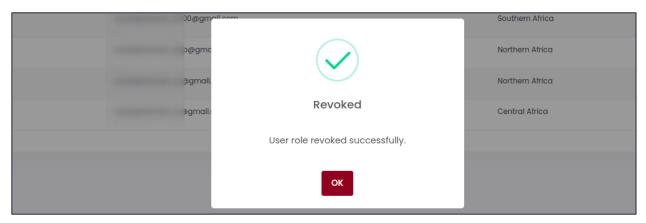


A pop-up with the user information will be loaded as shown below.



Click on the "Revoke Role" button at the bottom of the pop-up. A confirmation dialog will be shown on the screen. Click on the "Revoke" button to continue or "Cancel" button to cancel the operation.

On successfully revoking the role, a success message will be shown else an error message on why the operation did not succeed will be shown to the user.





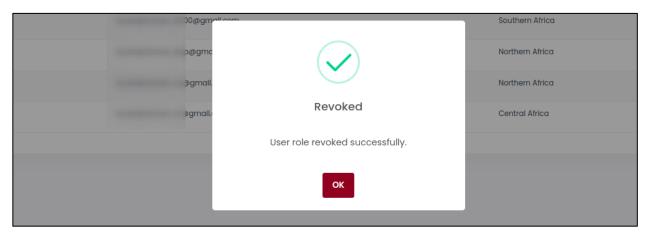
(ii) Survey Observers

Navigate to Survey Observers view table as described in the previous steps. Click on the "Revoke" button in the same row as the user to be removed from the group.



A confirmation dialog will appear on the screen. Click on the "Revoke" button to continue or "Cancel" button to cancel the operation.

On successfully revoking the role, a success message will be shown else an error message on why the operation did not succeed.





SURVEYORS MANAGEMENT

Surveyors are responsible for the soil sampling and data collection in the field.

They are added to the system through the surveyors onboarding module whereby they apply to be considered surveyors in their respective countries, submit their profile details, a photo of themselves, contact details, their institution details and their years of experience.

The CS go through the applications in their countries and approves or declines the applications depending on the details provided.

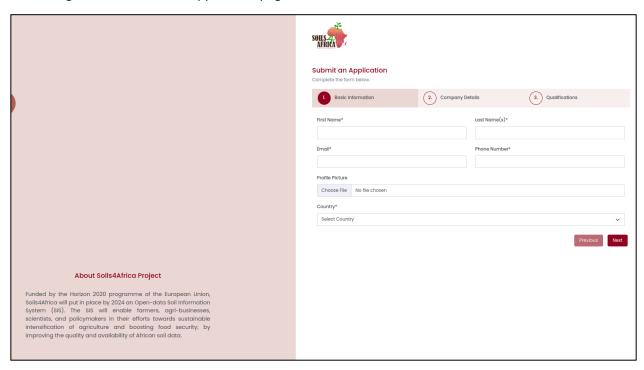
The approved applicants become surveyors and a user profile is created for them in the SDMT. They are able to login to the Surveyor Dashboard, view the jobs allocated to them and download the sampling units GPS coordinates.

New Surveyor Application

Follow the link below using any internet browser to access the SDMT Surveyor Application page.

https://sdmt.soils4africa-h2020.eu/surveyor/onboarding/

On visiting the link above, the application page as shown below will be loaded.



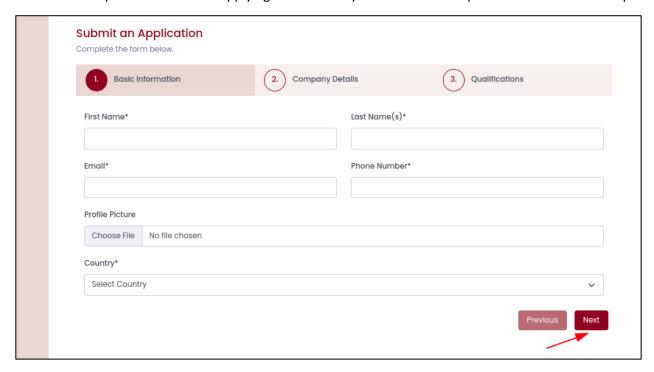
The application is divided into 3 steps: basic information, company/institution details and qualification steps.

i) Step1: Basic information

Fill in the user first name, last name and email address. Click on the profile picture field and select a passport photo of the user.

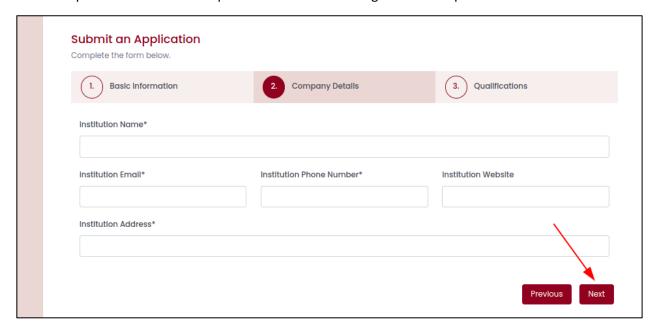


Select a country where the user is applying to be a surveyor. Click "Next" to proceed to the second step.



ii) Step2: Company details

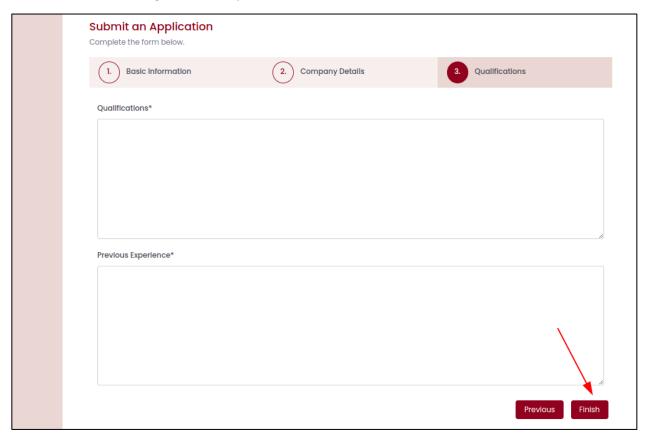
Fill in the user institution's name, email address, phone number, website and address. Click on "Next" button to proceed to the third step or "Previous" button to go back to step 1.



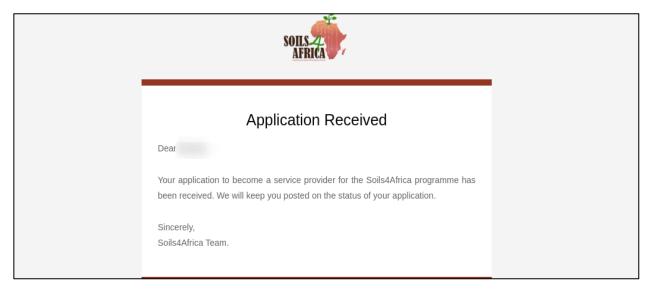


iii) Step 3: Qualifications

Fill in the user qualifications and previous experience. Click the "Finish" button to submit the application or "Previous" button to go back to step 2.



On submitting the application, the user will receive an email notification indicating that their application has been received successfully and is undergoing review.



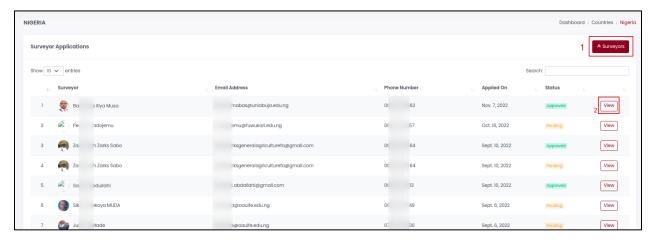


View Surveyors Applications

In the country's menu, click in the "Surveyors" menu option. This will load the surveyors' page. On the top-right corner, click on the "Applications" button to load the surveyor applications in the country.



Applications will be loaded with all the applicants' pictures, names, email address, phone number, date of application and the application status: pending, rejected and approved.

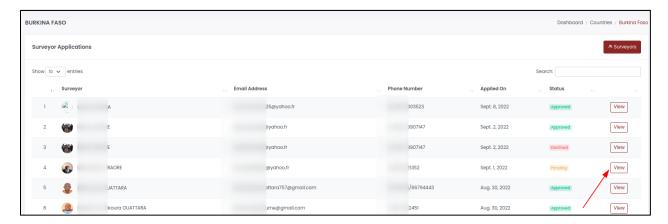


To view, approve or reject an application, click on its "View" button in the table.

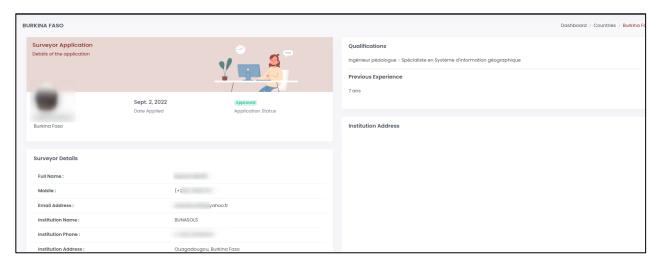
View Surveyor Application Details

On the surveyor's applications table, click on the "View" button of the application to be viewed.





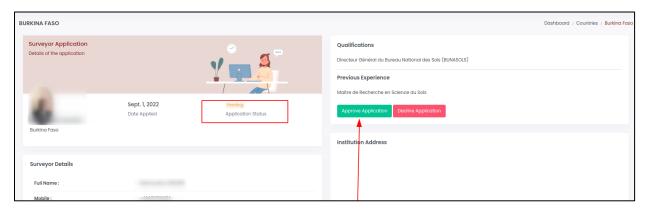
The surveyor application details page will be loaded containing all the application details.



Approve a Surveyor Application

Approval of surveyor applications can only be done by the CCOs and the CSs.

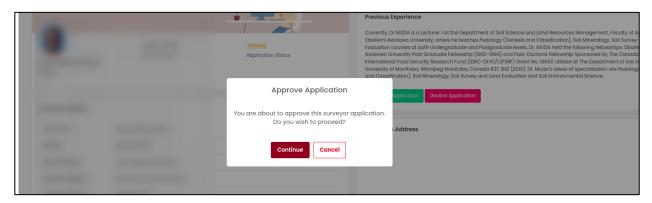
Navigate to the surveyor details page as described in the previous step. If the application is still pending; has not been approved or rejected, the approve application button will be shown in the application details page.





Click on the "Approve Application" button to approve the application and onboard the applicant to the system as a surveyor.

A confirmation dialog will appear on the screen as shown below. Click on "Continue" button to proceed or "Cancel" button to cancel the operation.

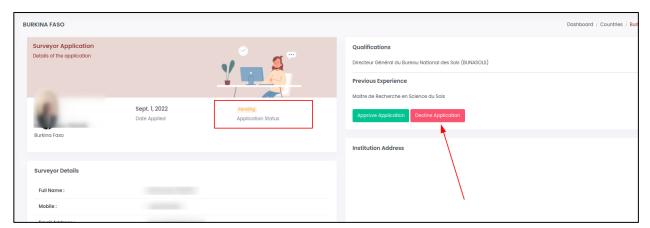


A success message will be shown if the application has been approved successfully and the applicant will receive an application approval email notification. The applicant will also receive an account activation email together with their initial password they can use to access their surveyor's dashboard.

Decline/Reject a Surveyor Application

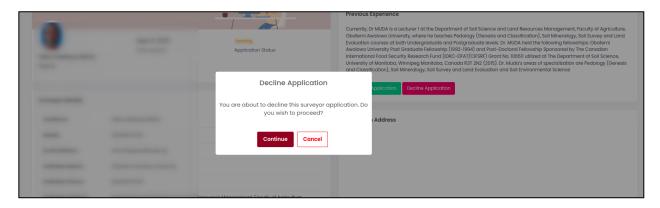
Rejection of surveyor applications can only be done by the CCOs and the CSs.

Navigate to the surveyor details page as described in the previous steps. If the application is still pending; has not been approved or rejected, the decline application button will be shown in the application details page.



Click on the "Decline Application" button to reject the application. A confirmation dialog will appear on the screen as shown below. Click on "Continue" button to proceed or "Cancel" button to cancel the operation.





A success message will be shown if the application has been rejected successfully. The applicant will receive a regret email information them that they application did pass the screening stage.

View Country Surveyors

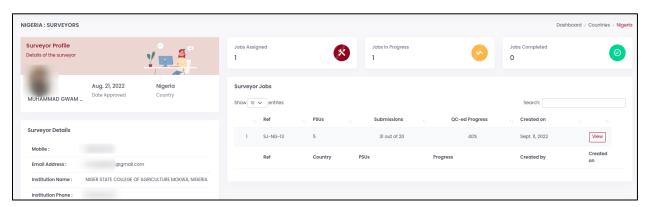
In the country's menu, click in the "Surveyors" menu option. This will load the surveyors' page.



The surveyors table shows country surveyors information such picture, names, email, phone number, account status and a "View Profile" button. To view the surveyor profile with more details, click on the "View Profile" button.

View Surveyor Account/Profile

Navigate to the country's surveyors page as described in the previous steps. Click on the "View Profile" button of the surveyor in the table. The profile will be loaded as shown below.





The surveyor profile shows the surveyor details and a list of jobs they have been allocated.

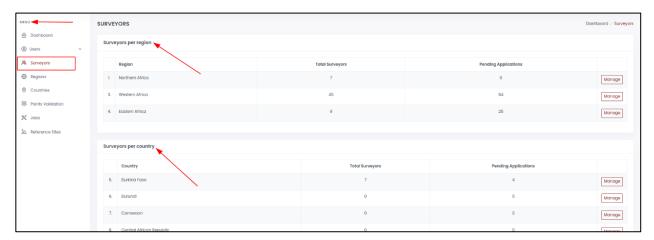
View Region Surveyors Summary

In the region's menu, click in the "Surveyors" menu option. This will load a summary of the surveyors and surveyor applications in the specific region broken down by each country in the region.



View System Surveyors Summary

In the main system menu, click in the "Surveyors" menu option. This will load a summary of the surveyors and surveyor applications in all the regions and countries.



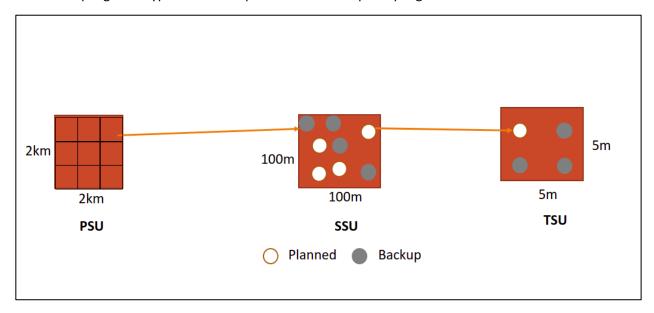


SAMPLING UNITS MANAGEMENT

There are three levels of the sampling units in the SDMT:

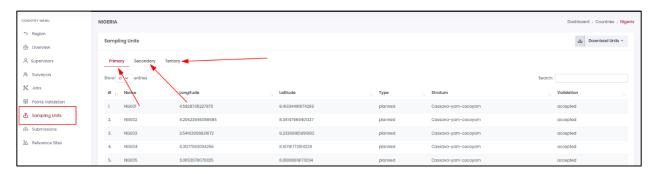
- 1. Primary Sampling Units (PSUs)- 2km x 2km clusters; each containing between 1 and 400 agricultural land pixels
- 2. Secondary Sampling Units (SSUs) 100m x 100m pixels classified as agricultural land. Are children of the PSUs.
- 3. Tertiary Sampling Units (TSUs) $5m \times 5m$ sampling plots and are the basic sampling units. A composite sample is taken from four aliquots that are configured as square grid with a spacing of 2.5 m

All the sampling units types have both planned and backup sampling units.



View Sampling Units

Navigate to the country's main page. Click on the "Sampling Units" menu option on the country's menu. A table with the sampling units will be loaded.



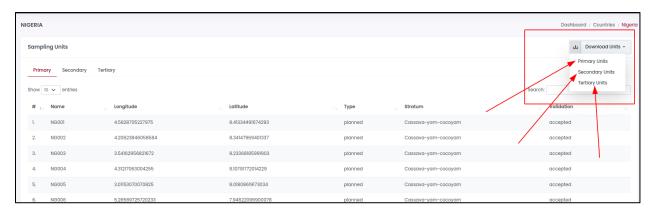
PSUs are loaded by default. Click on the "Secondary" and "Tertiary" tabs to view SSUs and TSUs respectively.



Download Sampling Units

Navigate the country sampling units page as described in the previous steps.

On the top-right corner of the sampling units table, click on the "Download Units" button and choose the type of sampling units that should be downloaded.



An excel file will be downloaded containing the data of the sampling units selected in the dropdown list.

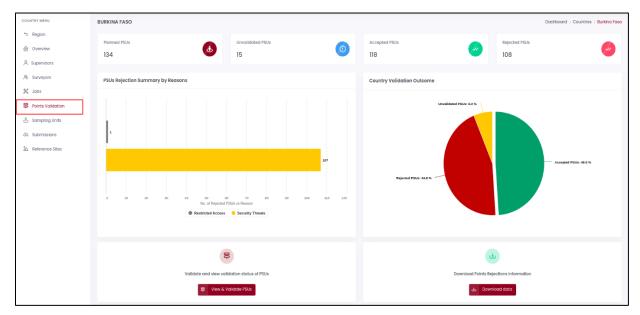
Primary Sampling Unit Validation

Sampling units' validation is the process of checking if the unit is an agricultural land and is viable for soil sample collection. This only done for the PSUs and involves rejecting or accepting the PSUs.

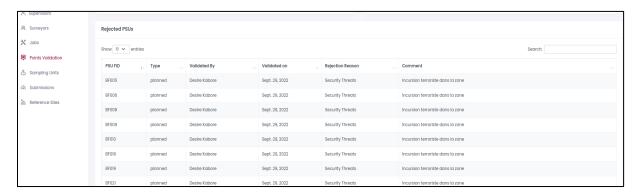
The validation can only be done by the COOs and the CSs.

a) Country PSUs Validation Overview

To navigate to the points validation overview page, click on the "Points Validation" menu option on the country menu. A page with country general PSU validation summaries and graphs will be loaded.



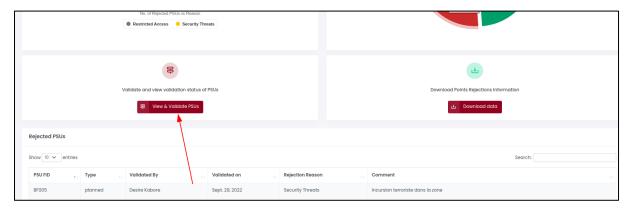




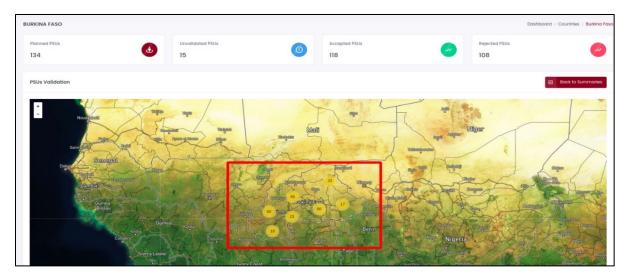
The page shows the country validation outcome pie chart, PSU rejection reasons bar graph, a table of all rejected PSUs, a PSU validation button and download button for PSU rejection data.

b) Getting started with PSU Validation

In the country's points validation overview page, click on the "View and validate PSUs" button to load the validation page.

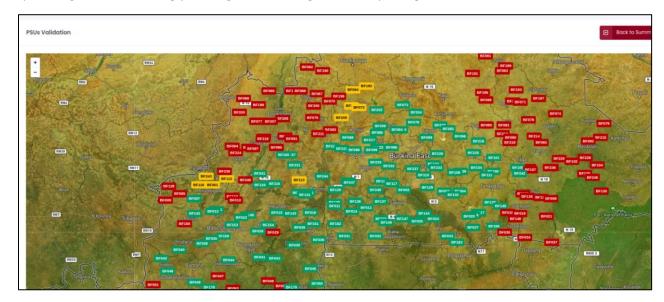


The PSUs validation page with a satellite map will be loaded together with the PSUs clustered in groups to improve on the page responsiveness.





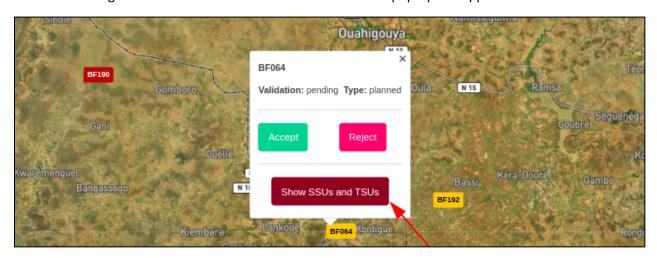
Zoom out on the map to show all the PSUs in the country by clicking on the "+" icon on the map, by spreading the screen using your fingers or clicking on the map using a mouse.



The **red** badges represent **rejected** PSUs; **green** badges represent **accepted** PSUs while **yellow** badges represent **unvalidated** PSUs.

c) View PSU plus its SSUs and TSUs

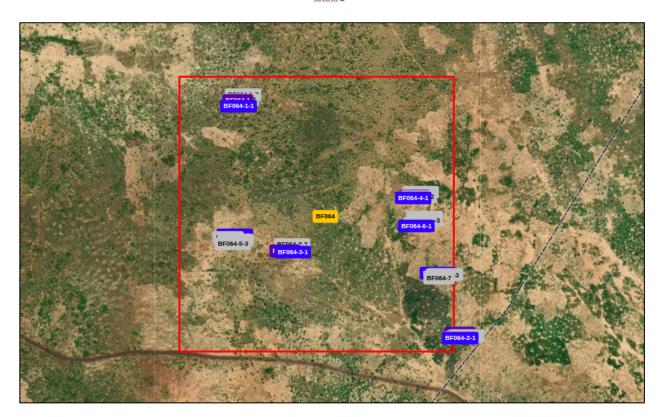
Click on the badge of the PSU to be viewed. A small PSU details pop-up will appear on the screen.



The pop-up has the PSU "Accept" and "Reject" validation buttons and the "Show SSUs and TSUs" button.

To view the SSUs and the TSUs in the PSU, click on the "Show SSUs and TSUs" button. The map will zoom out, load and show all the children sampling units.





Purple badge represents a planned SSU and blue badge represents a planned TSU. All backup SSUs and TSUs are represented using grey badges.

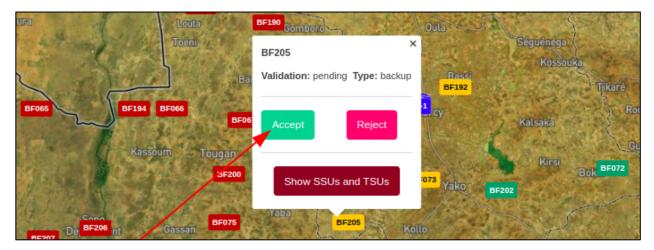
Zoom out further into the individual SSUs and TSUs as shown below.



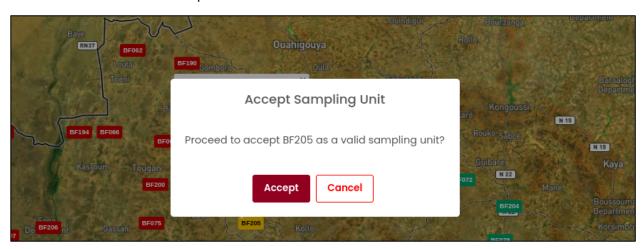


d) Accept a PSU

Click on the badge of the PSU to be accepted and on PSU pop-up that appears on the screen, click on the "Accept" button.



A confirmation dialog will appear on the screen as shown below. Click on "Accept" button to proceed or "Cancel" button to cancel the operation.

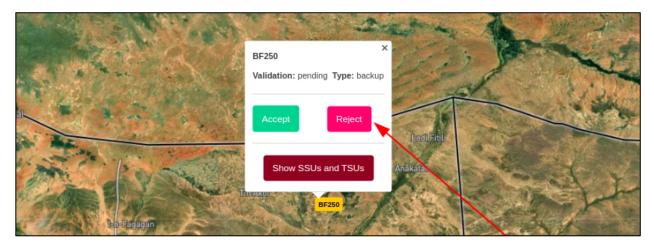


On accepting the PSU, a success message will be shown on the screen and the PSU badge color will automatically change from yellow to green.

e) Reject a PSU

Click on the badge of the PSU to be rejected and on PSU pop-up that appears on the screen, click on the "Reject" button.



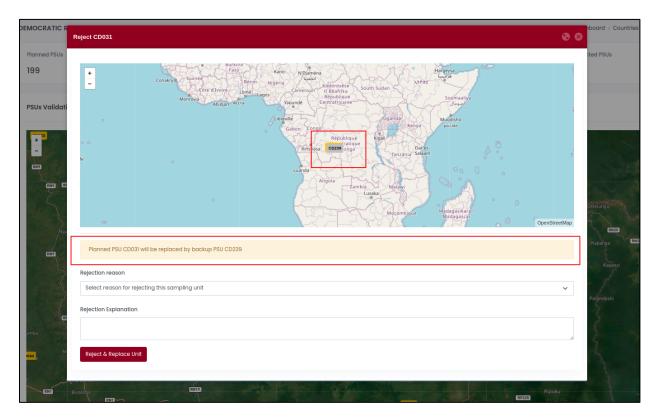


A confirmation dialog will appear on the screen as shown below. Click on "Yes Reject" button to proceed or "Cancel" button to cancel the operation.

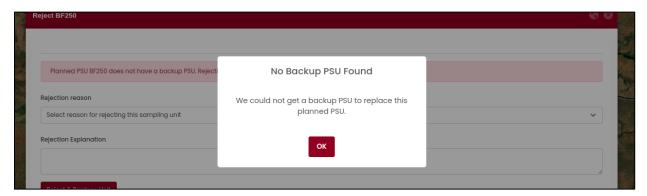


A new PSU rejection window will the loaded and shown to user on clicking "Yes, Reject" button. This pop-up shows the backup PSU that will be used to replace the PSU being rejected.





In the event that all the appropriate and relevant backup PSUs have been depleted, a notification message indicating that no backup PSU was found will appear on the screen. Click on the "Ok" button to proceed.



Select the reason for rejecting the PSU and give an explanation(optional). Click on the "Reject & Replace Unit" button to complete the PSU rejection.

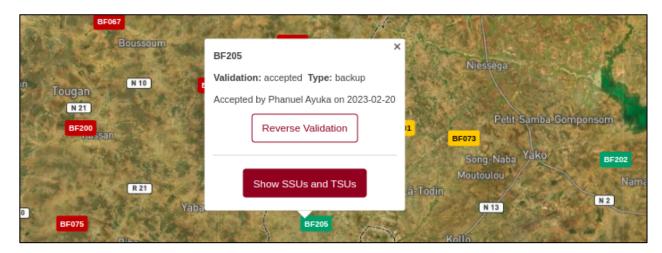
The PSU badge will turn from yellow to red in the map. The replacement PSU, if present will be added to the map for validation as well.

f) Reverse a PSU Validation

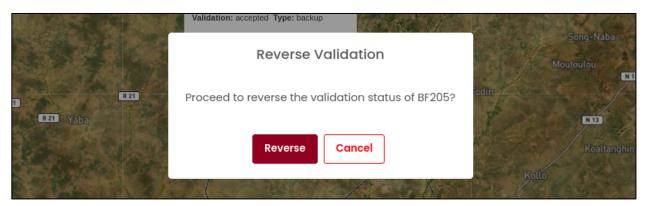
Only accepted or rejected PSUs can have their validation reversed.

Click on the badge of the PSU whose validation is to be reversed. On the PSU pop-up, click on the "Reverse validation" button.

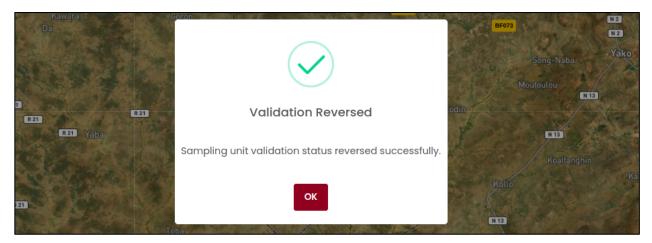




A confirmation dialog will appear on the screen as shown below. Click on "Reverse" button to proceed or "Cancel" button to cancel the operation.

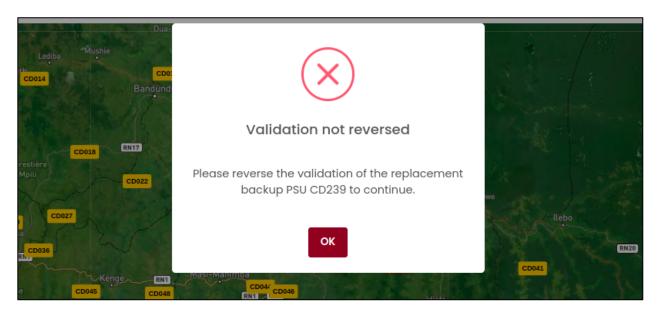


On reversing the PSU validation, a success message will be shown on the screen and the PSU badge color will automatically change from green or red to yellow meaning that it can be validated once more.



If the PSU was previously rejected and its replacement backup PSU has been validated, the user will be prompted to reverse the validation of the replacement PSU before they can reverse the validation of the rejected PSU in question.

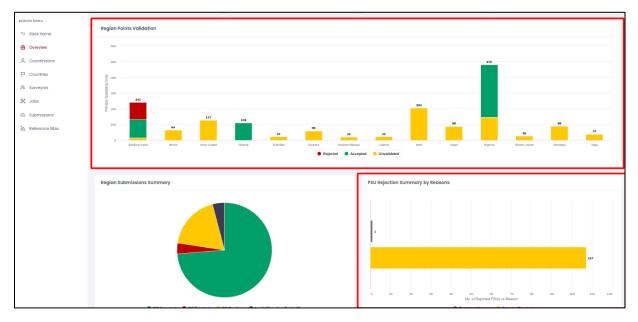




View Region PSU Validation Summary

Regions PSU validation summary and graphs are shown in the region home page.

In the region's menu, click on the "Overview" menu option to load the region home page.



A bar graph of region countries validation summary and bar graph of the PSUs rejection reasons in the region will be displayed.

View System PSU Validation Summary

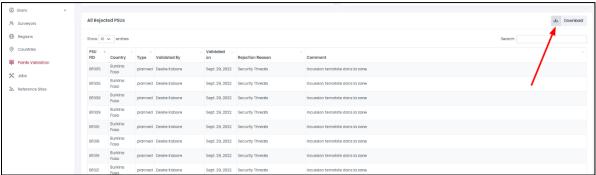
In the main system menu, click in the "Points Validation" menu option. This will load a page with:

- Pie charts of system-wide PSUs validation by region and validation outcome.
- Bar graph of regional validation progress per country.
- Bar graph of PSUs rejections summary by reasons selected by the user.



• A table for all rejected PSUs data and a download button that can be used to download the rejected all rejected PSUs data.







JOBS MANAGEMENT

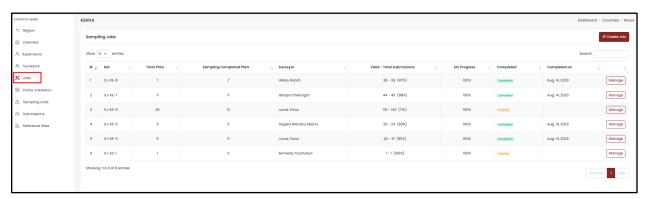
A job is a group of validated PSUs in a country that can be assigned to the surveyor for field visit and data collection. It has estimated start and end dates.

The number of submissions received from the field and the quality control are used to determine the percentage progress and completeness of the job.

Country Jobs Overview

To navigate to the country jobs page, on the country menu, click on the "Jobs" menu option.

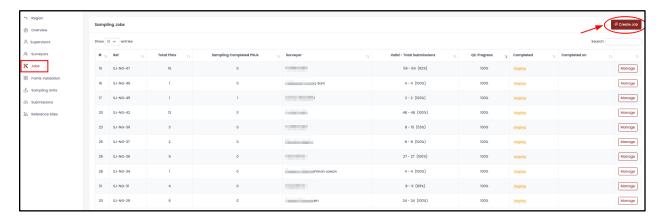
A page with all country jobs will be loaded indicating the job's reference number, number of PSUs in the job, sampling completed PSUs, the names of the assigned surveyor, valid & total submissions received, job quality control percentage, if the job has been marked as completed or not and the completion date.



Creating a Job

A new job can only be created by the CSs & CCOs.

Navigate to the country jobs page and click on the "Create Job" button on the top-right corner of the jobs table.



The sampling job form page will be loaded.

Fill in the "New Job Form" with the job start and expected end date and click on the "Proceed" button.





On successful creation of the job, the user will be redirected the new job details page with a success message "Job created successfully".

To cancel the creation of a new job, click on the "Cancel" button and the user will be redirected to the jobs page.

Manage/view Job Details

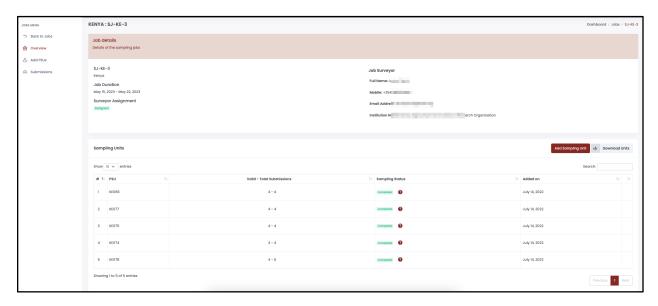
Navigate to the country sampling jobs page as described in the previous steps.

Click on the "Manage" button for the job whose details is to be viewed/managed.



The user will be redirected to the job details page as shown below.





The job details page shows details of the surveyor allocated or the form to allocate a surveyor, job expected start and end dates, the job sampling units, job closure and completion form and delete job button.

Users can also navigate to the job details from the numerous summary sampling jobs tables found in the various pages in the system depending on the user level.

View Job PSUs

Navigate to the country sampling job's page as described in the previous steps.

All the Job PSUs will be listed on the details page in the "Sampling Units" table with the PSU Identifier, valid and total submissions received for the PSU, sampling completeness status (completed or ongoing) and the date the PSU was added to the job.



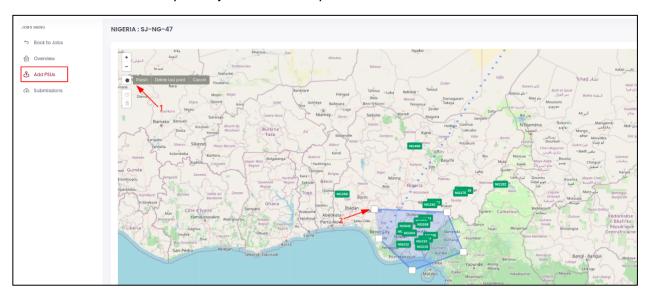
Add PSUs to a Job

Adding PSUs to a job can only be done by CSs & the CCOs. PSUs cannot be added to a job that



Navigate to the job details page and click on the "Add PSUs" left menu option or "Add Sampling Unit" button at the top of the job sampling units table.

A new page with map as shown below will be loaded. The map has all validated and accepted PSUs that have not been added to any other job in the country.



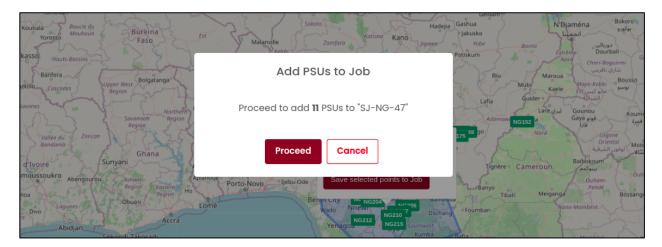
Click on the polygon icon on the map. Draw a polygon around all PSUs that you would like to add to the job by dragging the line around all the PSUs. Make sure you complete the polygon.

Once the polygon diagram is completed, a pop-up will automatically appear on the screen indicating the number of PSUs that have selected with "Save selected points to Job" button as shown below.



To proceed, click on the "Save selected points to Job" button. To cancel, click on the X icon on the popup. On clicking on the "Save selected points to Job" button, you will be shown a confirmation pop-up.





Click on the "Proceed" button to add the PSUs to the job or "Cancel" button to cancel the operation. On adding the PSUs to the job successfully, a success message will be shown and the map will be reloaded to show the most current state of available PSUs.

Close Job PSU (Sampling Completed)

A job PSU is closed when it marked by the CSs or the CCOs as sampling completed. This means that all the submissions expected to be received for the job PSU has been received. For a PSU to be marked as closed, all the submissions must have undergone the quality control process.

Navigate to the country sampling job's detailed page as described in the previous steps in the PSUs table in the "Sampling Units" section, click on the "three dots" button for the PSU to be closed as shown in the figure below marked as "1".



Click on the "Sampling Completed" menu option and a pop-up as shown below will be shown to prompting the user to give any comment (optional) before closing the PSU.





Fill in the comment if any and click on the "Save" button to close the job PSU. A success message will be displayed on successfully closing the job PSU. Click on "Cancel" button to cancel the operation.

If a submission is received later on for a job that has been closed, it will be re-opened automatically by the system and the CSs should quality control the new submission and finally close the PSU once again.

Deleting PSUs from a Job

Removal of PSUs from a job can only be done by CSs & the CCOs.

The PSU to be removed from the job should not have received any soil sampling submission from the surveyor and it should not have been marked as sampling completed.

In the sampling units table in the job details page, click on the "round grey button with 3 dots" (marked 1) for the PSU that should be removed from the job. This button is only visible if the PSU has not been marked as sampling completed.



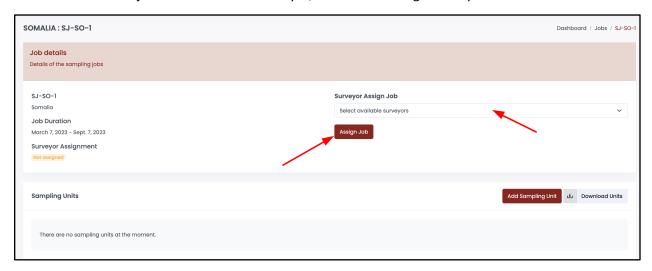
Click on the "Remove" option (marked 2) in the menu list appearing just below the clicked button. Click on the "Proceed" button in the confirmation dialog that will be shown to delete the PSU from the job.



Assigning Job to a Surveyor

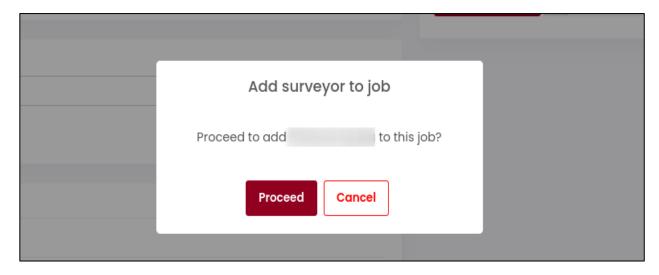
Adding a surveyor to a job can only be done by CSs & the CCOs. A surveyor can only be added to a job only if the job has at least one PSU.

Navigate to the job details page. If the job already has a surveyor assigned, the details of the surveyor will be shown. If the job does not have a surveyor, a form for adding a surveyor will be shown as below.



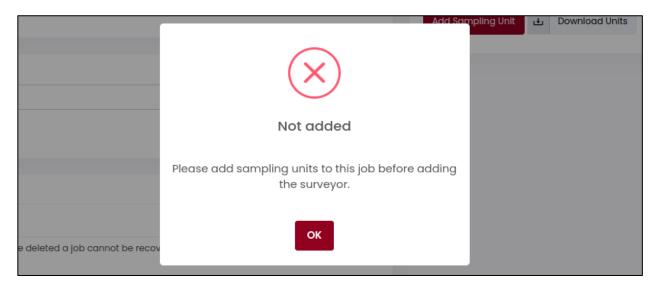
Select the available surveyors in the form. Only approved and onboarded surveyors in the country are available for selection.

Click on the "Assign Job" button to add the surveyor to the job. Click on the "Proceed" button in the confirmation pop-up that will appear in the screen or "Cancel" to cancel the operation.



If the job does not have any PSUs, an error message as shown below will be shown on the screen.





On successfully adding the surveyor to the job, a success message will be shown and the job details page will be updated with the surveyor details. The surveyor will receive an email notification on the job allocation with an excel file containing coordinates of the TSUs in the job PSUs.

Close a Job

Closing and marking a job as sampling completed can only be done by CSs and thew CCOs.

All the PSUs in the job must be marked as sampling completed and all ODK submissions in the job fully quality controlled. The CSs need to close all jobs that have been completed for efficient system monitoring and reporting.

Navigate to the job details page, scroll to the "Manage Job" section. Provide a comment in the form field (optional) and click on the "Close Job" button.



A confirmation dialog will be shown. Click on "Proceed" button to close the job or "Cancel" button to cancel the operation.



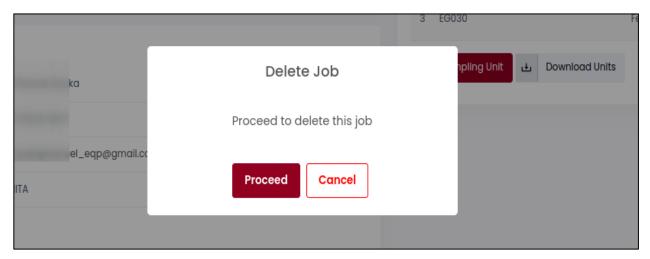
Delete a Job

Deleting a job can only be done by CSs & the CCOs. A job can only be deleted if the surveyor assigned to it has not submitted any survey submission data for its respective PSUs.

Navigate to the job details page, scroll to the "Manage Job" section, click on the "Delete Job" button to delete the job.



A confirmation dialog will appear on the screen as shown below. Click on "Proceed" button to delete the job or "Cancel" button to cancel the operation.



On successfully deleting the job, a success message will be shown and the user will be redirected to the country all jobs overview page.

View Region Jobs Summary

Regions jobs summary and graphs are shown in the region jobs page. In the region's menu, click on the "Jobs" menu option to load the region jobs page. The Region jobs page shows the most recent jobs created in the region and bar graphs showing started, not started and completed jobs for each country in the region as shown below.

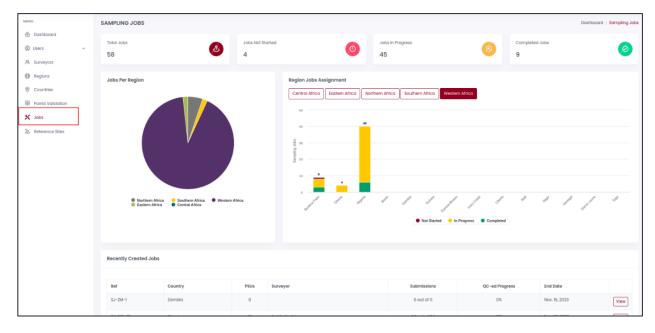




View System Jobs Summary

In the main system menu, click in the "Jobs" menu option. This will load the page with the following information and summaries:

- Pie charts of system-wide jobs and their progress status by region.
- Bar graph of regional jobs summary per country.
- A table with the most recent jobs created in the system.





SOIL SAMPLING ODK SUBMISSIONS

Submissions are the data sent to the SDMT from the field by the surveyors about using the developed field survey ODK form.

View & Download Country Submissions

To view the country submissions, on the country menu, click on the "Submissions" menu option.

A page with country submissions will be loaded. All the data collected by the surveyor is shown in the table including the quality control status, job, TSU and PSU of the submissions.

Scroll down in the table to view more available submissions and scroll to the right to view all the data submitted for each submission.



Only 100 submissions are displayed at a time in the table above. Click on the "Next" and "Previous" icons provided on the top-right corner of the table to view more submissions in the country.

The table has two filters that can be used to list only specific submissions; the quality control status of the submissions and the names of the surveyors who submitted the data.

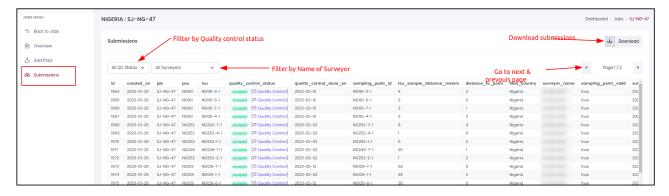
Click on the "Download" button on the top-right corner of the table to download all the submissions data in an excel file.

View & Download Job Submissions

To view the job submissions, on the job menu, click on the "Submissions" menu option. A page with the submissions will be loaded. All the data collected by the surveyor is shown in the table including the quality control status, job, TSU and PSU of the submissions.

Scroll down in the table to view more available submissions and scroll to the right to view all the data submitted for each submission.





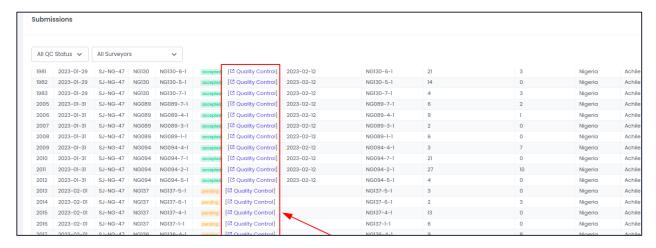
Only 100 submissions are displayed at a time in the table above. Click on the "Next" and "Previous" icons provided on the top-right corner of the table to view more submissions in the job. The table has two filters that can be used to list only specific submissions; the quality control status of the submissions and the name of the surveyors who submitted the data.

Click on the "Download" button on the top-right corner of the table to download all the job submissions data in a excel file.

View Specific Submission Details

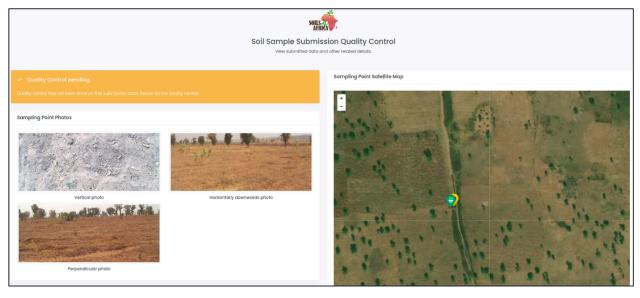
The submission details page has more information on the submission including the photographs taken in the field and a map showing the planned sampling point and the actual point where the sample was taken.

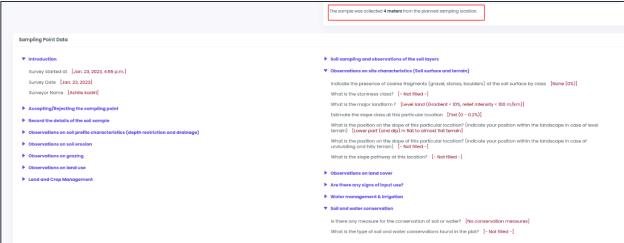
To view a specific submission detail, navigate to the country or job submissions page.



Click in the "Quality Control" link for the submission that you would like to view. The submission details page will be opened in a new different browser window.







The submission data is grouped into different sections based on the ODK form sections. Click on the section headings to open and collapse the sections and view or hide the data for each section. Click on the small images shown on the page to open and view the image in a larger dimension.

All fields that were not filled by the surveyor will be indicated as [--not filled --].





The satellite map in the submission details page shows two location markers; green marker is the actual location where the sample was collected and the yellow marker shows the designated sampling point.





Just below the map, the system indicates the distance (system calculated) between actual sampling point and the designated sampling point. The distance is flagged and marked in red if it is more than 10 meters.

Quality control

1) Editing/Correcting submissions

Submissions can only be edited and corrected by the CCOs and the CSs.

Editing submissions are useful when there is need to make corrections to the data that has been received from the field. Submissions can only be edited before they are accepted or rejected during the quality control.

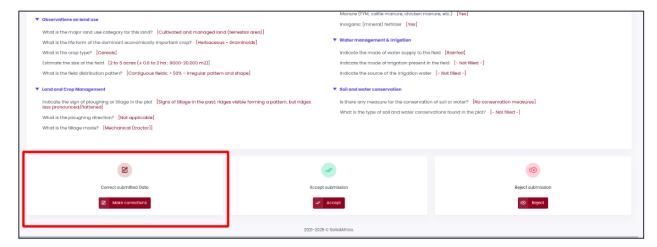
All details of the submission can be edited except the coordinates of the soil sampling location, the survey date and time and the validity of the sampling point as filled by the surveyor.

From the country and job submissions list, submissions that have been edited are indicated as *corrected* with a grey badge in the quality control column in the table.



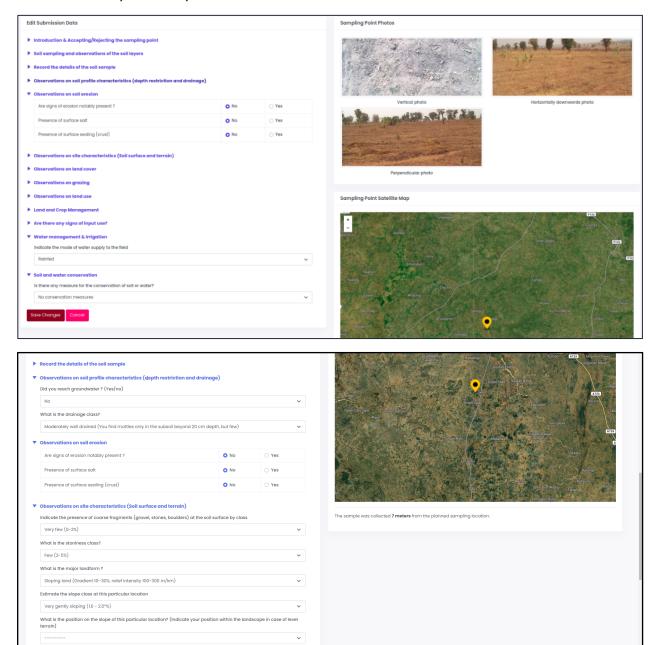
To make corrections to a submission, click on the quality control link in the submissions table. This will open the submission details page in another browser window.

At the bottom of the submission details page, click on the "Make Corrections" button. This button is only visible if the submission has not been accepted or rejected during the quality control.





A submission edit page will be loaded with a form containing all the filled information and empty fields for data that was not filled. All the questions in the correction form are similar to the questions in the ODK form used by the surveyors.



The page also shows the images taken in the field and the satellite map showing the actual sampling location and the designated sampling location.

After making changes to the submission data, click on the "Save Changes" button at the bottom of the page to save the changes or click on the "Cancel" button to cancel the operation.

Once the changes have been saved successfully, the user will be redirected to the submission details page with a success message indicating that the changes have been saved successfully.



A new notification message will also be added to the submission just above the images indicating that the submission has been edited.

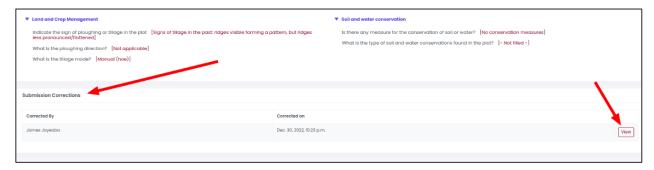


2) View Submission Corrections

Navigate to the submission details page.

If the submission has been edited, a notification message "This submission was edited/corrected during the quality control." will be shown at the top of the page. The notification message will not appear if no corrections have been made on the submission.

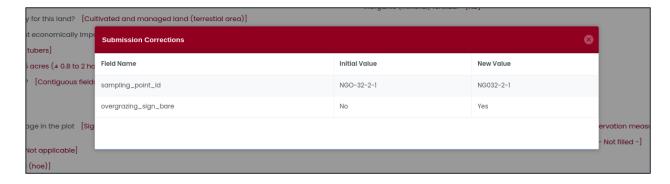
Click on the "View" link next to the corrections notification message and the page will automatically scroll to the bottom or manually scroll to the bottom of the page to see a correction logs.



The table shows the names of the user who made the corrections, the date and time and a "View" button for the correction log.

Click on the "View" button for the correction log to see the details that were corrected/edited by the user.





3) Accept Submission

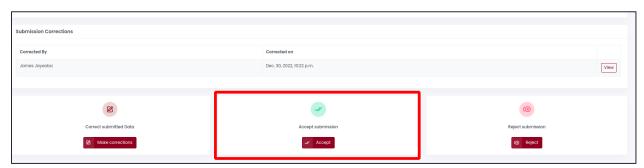
A submission will only be considered for data analysis after it has been QC-accepted in the system. Submissions can only be accepted by the CCOs and the CSs. Navigate to the submission details page to accept a submission.

A submission can only be accepted if its quality control status is pending as shown in the submission details page as shown below.



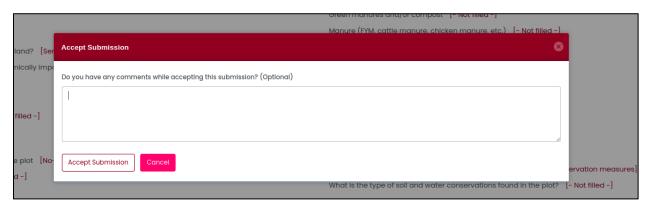
Check the submission data provided, the images and the satellite imagery map to ensure that the data submitted is accurate and can be included in the final data analysis.

Once everything checks out, scroll to the bottom of the submission details page and click on the "Accept Submission" button.

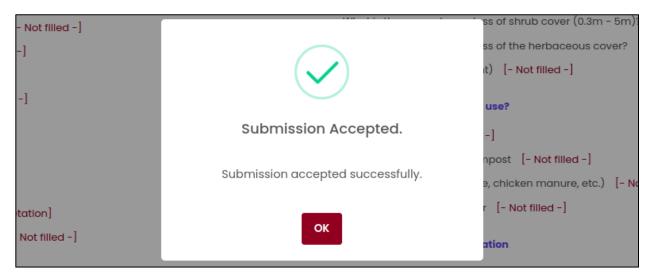




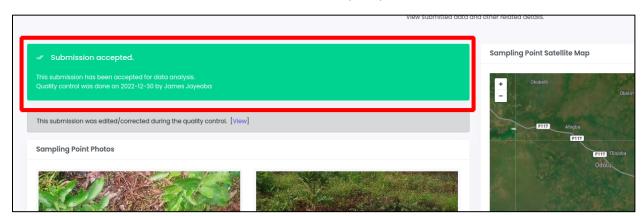
A pop-up will be shown to the user where they can give a comment before finally accepting the submission. The comment is optional.



Click on the "Accept Submission" button in the pop-up to finalize the operation or "Cancel" button to cancel the operation. If the submission was accepted successfully, a success message pop-up will be shown as below.



The quality control status of the submission will change from yellow (pending) to green (accepted) with additional details on the names of the user who did the quality control and the date.





4) Reject Submission

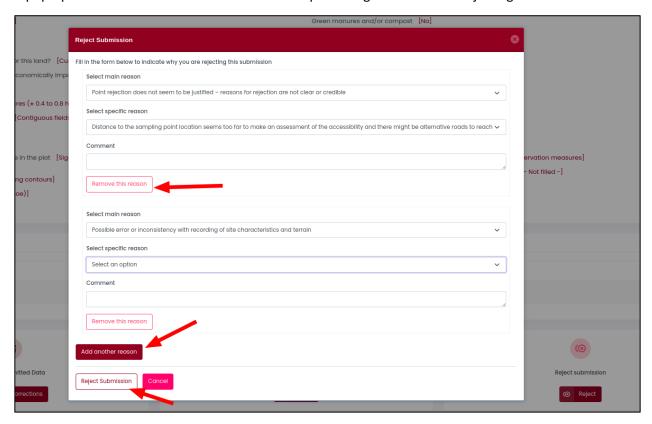
A rejected submission will not be considered for data analysis and the surveyor should submit a fresh field submission. A submission can only be rejected if its quality control status is pending. Submissions can only be rejected by the CCOs and the CSs.

To reject a submission, navigate to its details page.

After reviewing the data and there is need for the submission to be rejected, scroll to the bottom of the page and click on the "Reject" button.



A pop-up will be shown where the user will be required to give reasons for rejecting the submission.

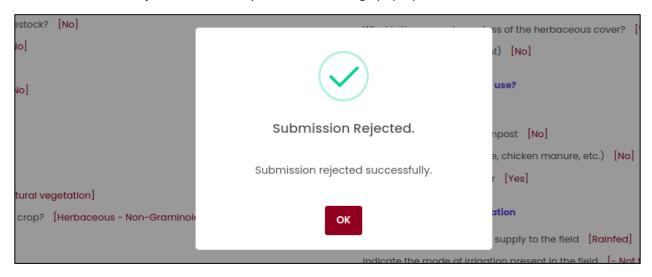


For each reason entry, select the main reason and the specific reason. Type in the free-text comments if any; this is optional.

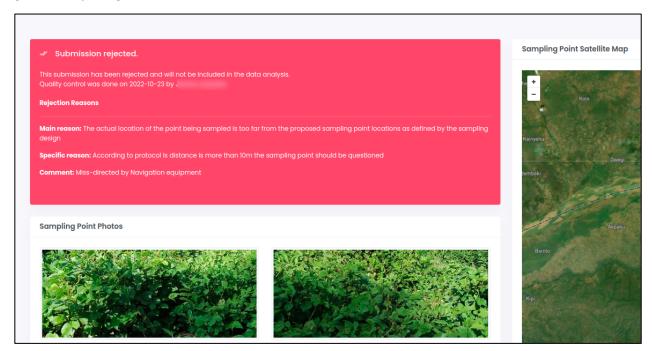


The user can give multiple reasons for rejecting the submission. Click on the "Add another reason" to give another set of main and specific reasons. Click on the "Remove reason" button to remove any reason entry before saving the rejection.

After giving reasons, click on the "Reject Submission" button to finally save the submission rejection. If the submission was rejected successfully, a success message pop-up will be shown as below.



The quality control status of the submission will change from yellow (pending) to red (rejected) with additional details of the names of the user who did the quality control, the date and a list of reasons given for rejecting the submission.



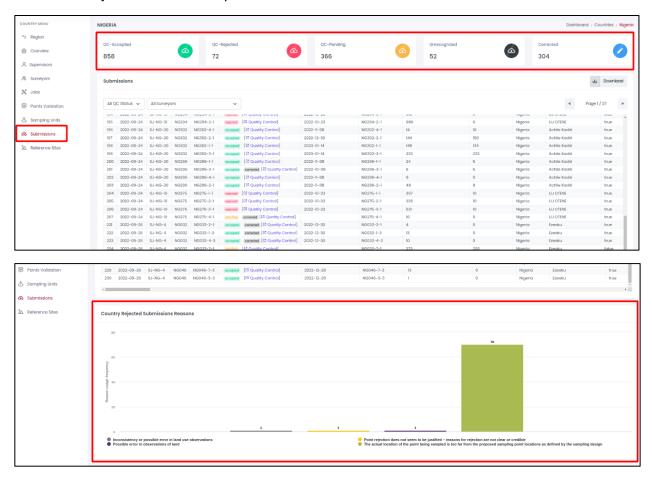


View Country Submissions Summary

Country's submissions summary and graphs are shown in the same page as the country submissions.

To view the country submissions summary, click on the "Submissions" menu option in the country menu.

Apart from the country's submissions table, the page also shows a quick count of all submissions in the country depending on their quality control status and a bar graph of all the reasons given during submissions rejection in the country.

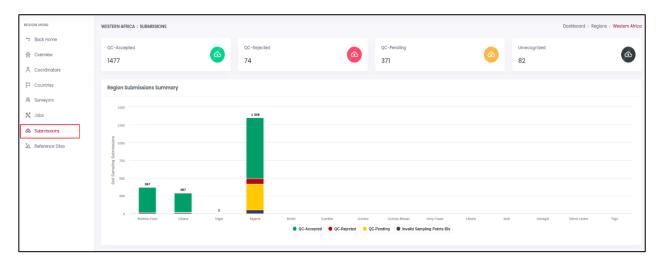


View Region Submissions Summary

Region's submissions summary and graphs are shown in the region submissions page.

In the region's menu, click on the "Submissions" menu option to load the region submissions page.



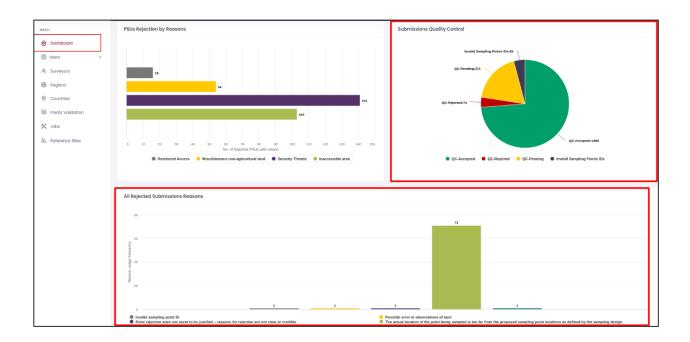


The Region submissions page shows a quick count of all submissions in the region depending on their quality control status and a bar graph of submissions for each country in the region depending on their quality control status.

View System Submissions Summary

In the main system menu, click in the "Dashboard" menu option. This will load the page with the following information and summaries:

- Pie chart of system-wide submissions quality control process progress and outcome.
- Bar graph of all the reasons given during submissions rejection in the system.





REFERENCE SITES MANAGEMENT

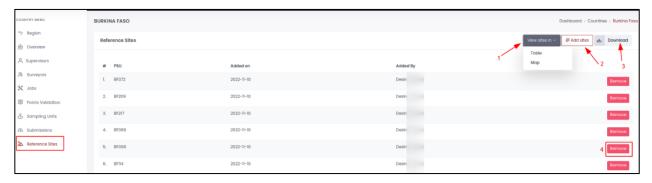
Reference sites are specific PSUs that have been selected for soil profiling and minimalistic soil sampling.

The PSUs must have been validated and accepted.

View & Download Country Reference Sites

To view a country reference sites, on the country menu, click on the "Reference sites" menu option.

A page with country reference sites will be loaded in a table format by default indicating the PSU Identifier, the date it was added and the names of the user who added it as a reference site.

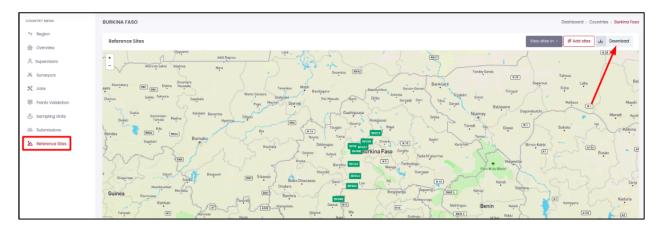


To view the reference sites in a map, click on the "View Sites In" button at the top of the table and select "map" from the drop-down list. The reference sites will now be shown in a map.

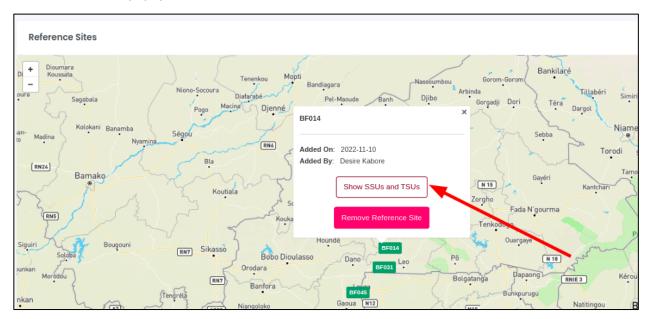


To download country reference sites in an excel format, click on the "Download" button at the top of the table or map.





To view the reference site in detail, on the map view, click on the reference site badge. This will show the site details in a popup and a "Show SSUs and TSUs" button.



Click on the "Show SSUs and TSUs" button to display the reference site SSUs and TSUs.

Add Reference Site to Country

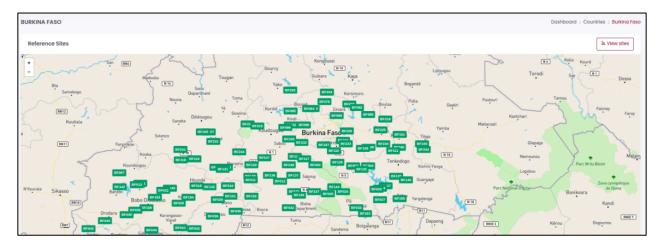
PSUs can be added as reference site by CSs and CCOs only.

In the country reference sites page, click on the "Add site" button on the top right corner of the page.

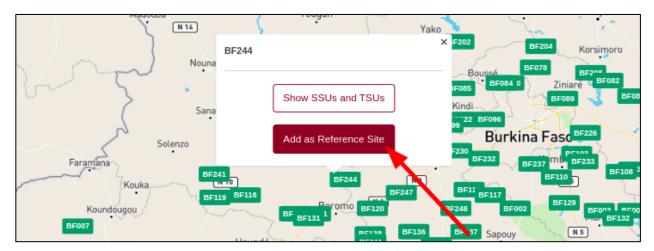




A page with a map and available and validated PSUs will be loaded as shown below. PSUs that are already added as reference sites will not be shown in the map.

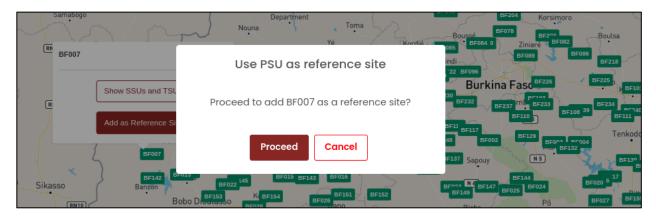


Click on the badge of the PSU to be added as a reference site. This will show the PSU details in a popup, a "Show SSUs and TSUs" and "Add as Reference Site" buttons.



Click on the "Add as Reference Site" button to add the PSU as reference site.

A confirmation dialog will appear on the screen as shown below. Click on "Proceed" button to add the PSU or "Cancel" button to cancel the operation.





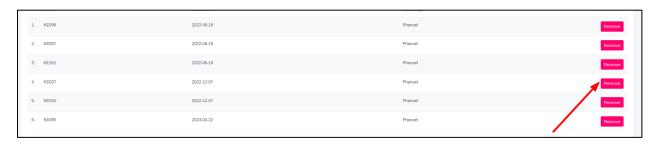
On successfully adding the PSU as a reference site, a success message is shown on the screen.

Delete a Reference Site

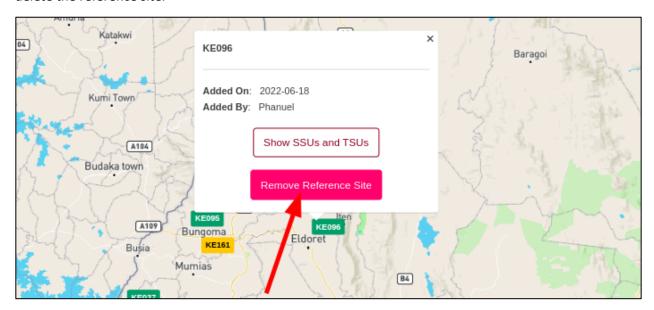
PSUs can be removed as reference site by CSs and CCOs only.

To remove a reference site, navigate to the country reference sites page.

If the reference sites are shown in a table, click on the "Remove" button to delete the reference site.

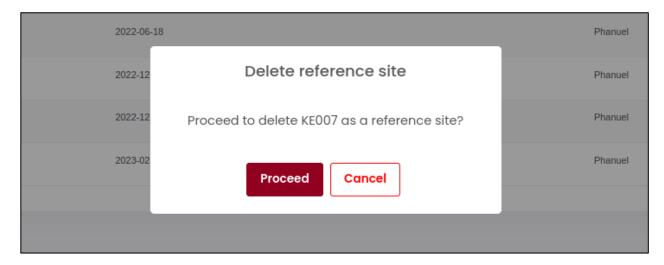


If the reference sites are shown in a map, click on the reference site badge. This will show the site details in a pop-up and a "Remove reference Site" button. Click on the "Remove reference Site" button to delete the reference site.



A confirmation dialog will appear on the screen as shown below. Click on "Proceed" button to remove the reference site or "Cancel" button to cancel the operation.



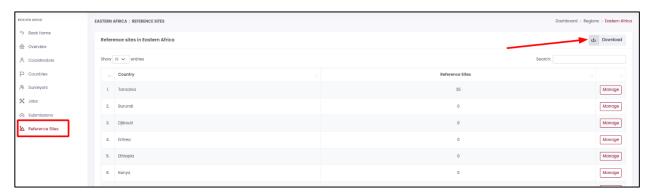


On successfully deleting the reference site, a success message is shown on the screen and the site will be removed from the table or map.

View Region Reference Sites Summary

Regions reference sites summary are shown in the region reference sites page.

In the region's menu, click on the "Reference Sites" menu option to load reference sites summary which shows the number of references per country in the region.



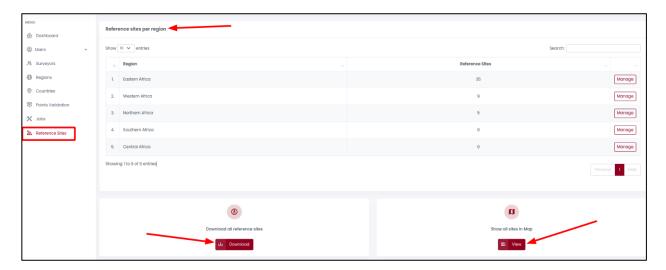
To download all the references sites in an excel format, click on the "Download" button on top-right corner of the page.

View System reference Summary

In the main system menu, click on the "Reference Sites" menu option. This will load the page with the following information and summaries:

- Reference sites per region for all the regions.
- Reference sites per country for all the countries.







To download all the reference sites in the system in excel format, click on the "Download" button on the references page.

To view all the reference sites in the system in a map, click on the "View sites in a map" button on the reference page.



SURVEYORS' DASHBOARD & PORTAL

How to access the system

Surveyors are automatically redirected to this dashboard on login.

Follow the link below using any internet browser to access the dashboard.

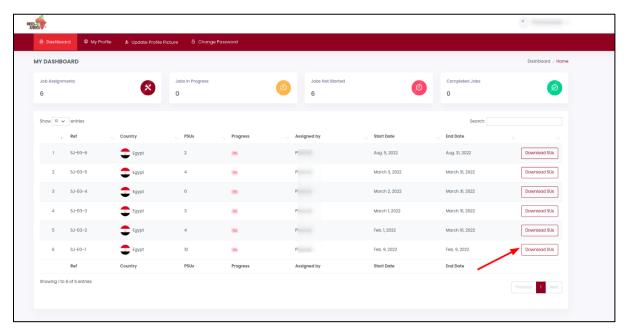
https://sdmt.soils4africa-h2020.eu/surveyor/

The dashboard is only accessible to the surveyors.

Dashboard Overview

The dashboard allows the surveyors to view and download sampling units for the jobs they have been assigned.

The table of jobs shows the job reference, the country, number of PSUs in the job, the sampling progress, names of the user who assigned the surveyor the job, the estimated job start and end dates.



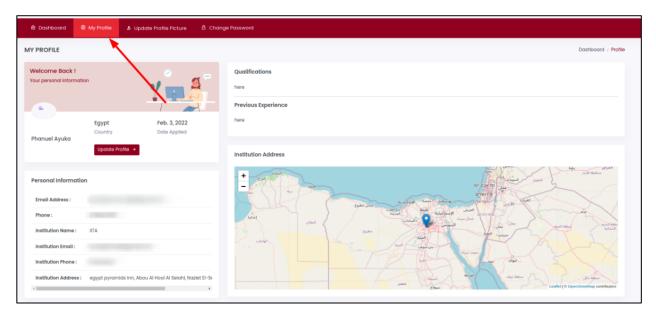
The surveyor can click on the "Download SUs" button to download the PSUs with all its TSUs in an excel format.

Profile Management

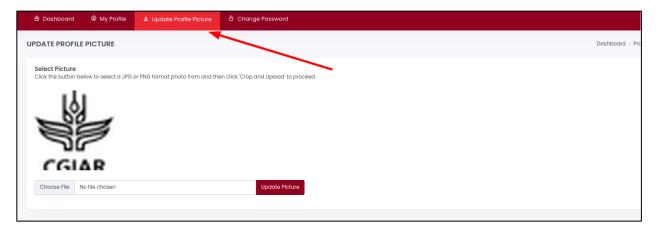
The surveyor can use the dashboard to view their account and manage their details.

Click on the "My Profile" tab to view user personal details filled during the surveyor application.





Click on the "Update Profile Picture" tab to update the profile picture in the profile of the user.



To change the surveyor account password, click on the "Change Password" tab to set a set password.

