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# MOBILE APPLICATION TO SECURE TENURE PROJECT (MAST – BURKINA FASO)

User Manual for the Web Application: Data Management  
Infrastructure

April 2016

This document was produced for review by the United States Agency for International Development. It was prepared by Cloudburst Consulting Group, Inc. for the Evaluation, Research, and Communication (ERC) Task Order under the Strengthening Tenure and Resource Rights (STARR) IQC.

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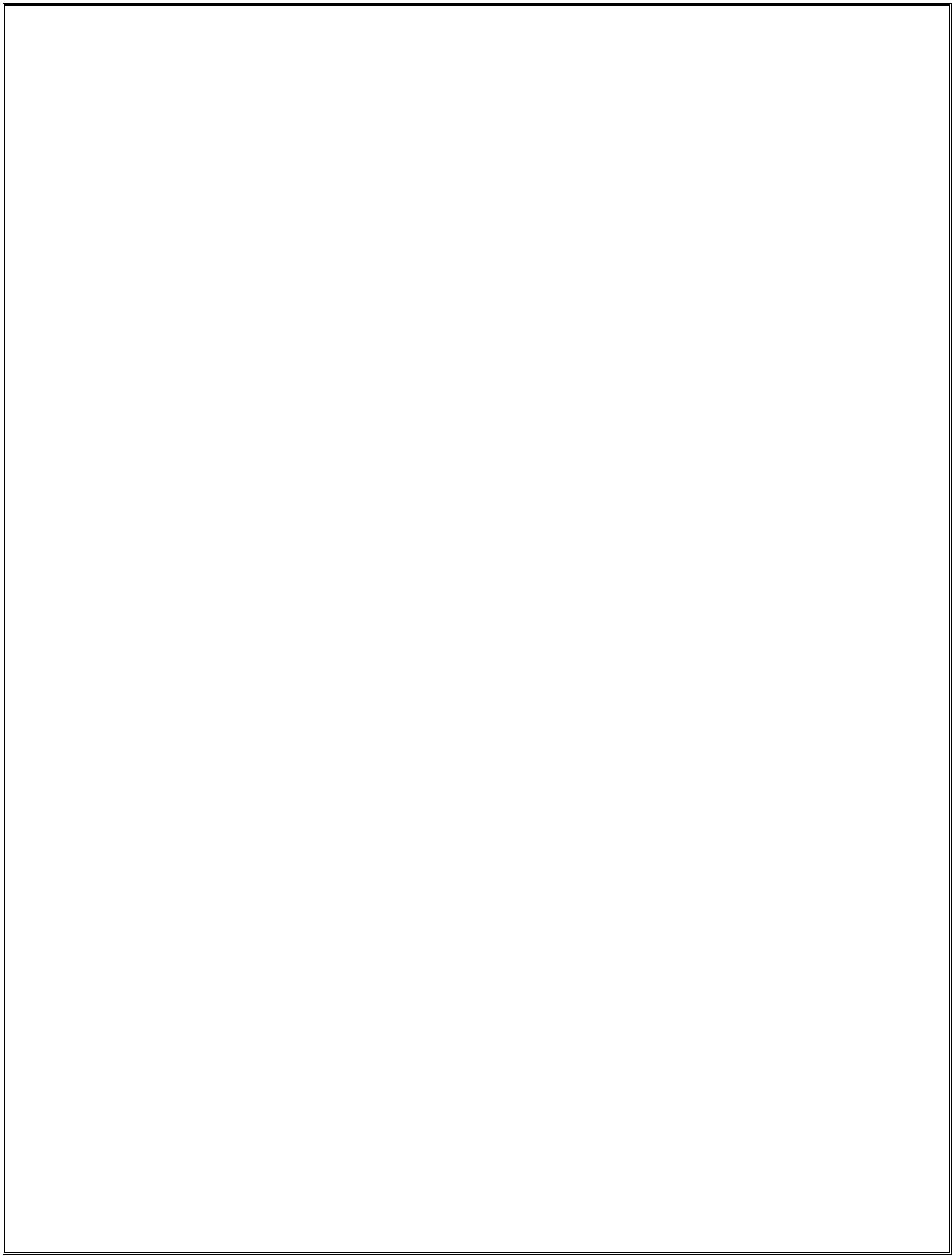
# Mobile Application to Secure Tenure Project (MAST-Burkina Faso)

User Manual for the Web Application: Data Management  
Infrastructure

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## **DISCLAIMER**

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.



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## 1. DOCUMENT OVERVIEW

This document intends to give the guidelines to MAST Web application users (Administrator and Project Manager).

## 2. ABOUT THE MAST WEB APPLICATION

The key objective of MAST is to provide a framework for Capturing Land rights information using a participatory approach. This framework provides a suite of applications to support collection and management of land rights information with following key components:

**Mobile Data Capture Application** – Mobile data capture application is an Android based Mobile application to capture land rights information (spatial, alphanumeric and multimedia) on mobile devices in field.

Mobile application will be provided to conduct data collection work without being connected to a central cloud based server in offline mode. Data will be collected and stored on users' handheld device and once the user is within the influence region of the internet, where data could be synced, the information will be packaged and sent back to the server.

**Land Rights Data management Infrastructure application** – Data collected on mobile devices will be transferred to a cloud based land Rights Data Management Infrastructure application which will provide tools to ingest, manage and store data of land rights information. It will also provide reporting components so that required Land Rights reports can be generated.

This document provides detail of Mobile component of MAST application.

## 3. GETTING STARTED

To initiate the MAST web application, user opens a browser and enters application URL. As the Clickon Enter button, the login screen of application appears in the browser window.



Figure 1 Home Page

Login window has two fields 'User Name' and 'Password' with 'Login' button. User is an existing user, one can enter his/her 'User Name' and 'Password' and clicks on 'Login' button. User will be logged in into the application and can view the application according to his/her rights.

Role	Rights
Admin	Administration Tool, Mobile Configuration Tool, Data Management
Project Manager	Administration Tool, Mobile Configuration Tool, Data Management
CFV	No access
SFR	Data Management
DPI	Data Management
Public User	Map viewer

Login Page facilitates user to login into the application, Other than this, Login page also provides following facilitates.

## 4. LOGIN

This functionality will allow authorized users to Login into the application. Depending upon the role, application will provide access to the application. Following are the available functionalities depending upon the Role.

### Steps:

1. User provides valid User Name and Password

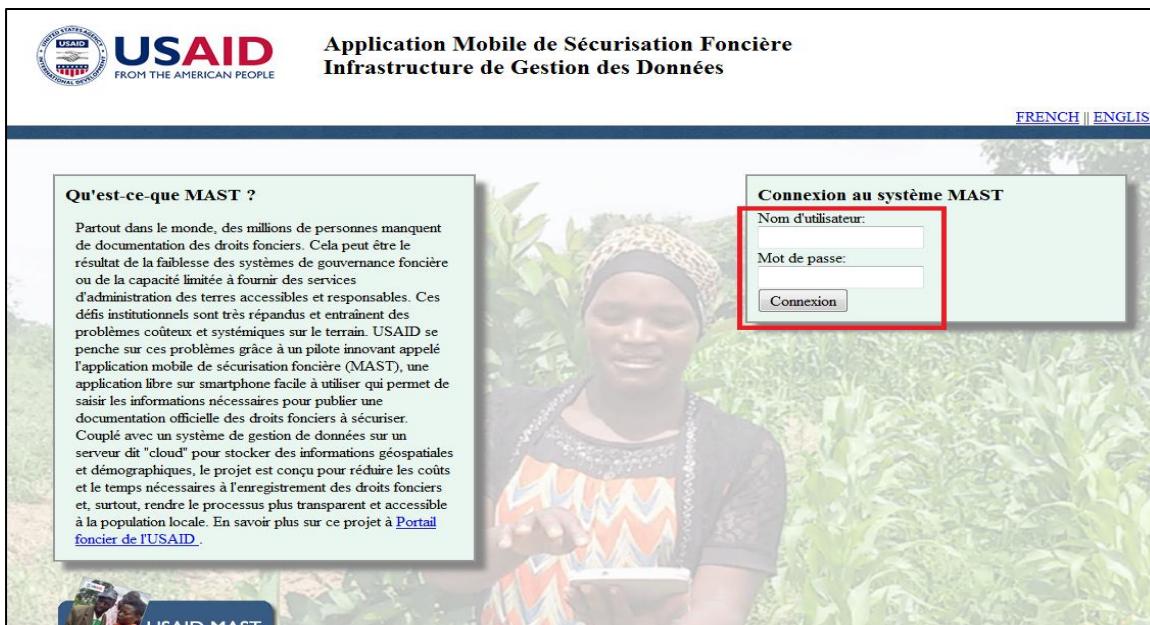
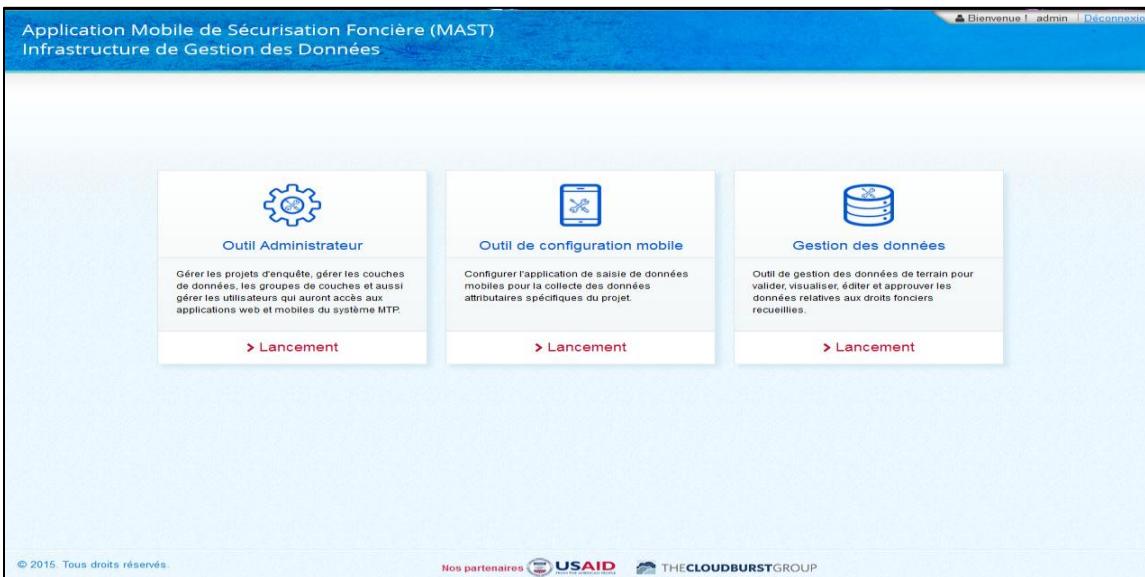


Figure 2 Login Screen

2. Click on 'Login' button
3. Application will open up homepage of application.



**Figure 3 User Login**

#### 4. Following Links are available :

- **Administration Tool** - "Admin Tool" is to manage Master data of Land Rights System. It will be accessed by the System Administrator to manage survey projects, manage data layers, layer groups and also to manage users who will be accessing mobile and web applications of MTP System.
- **Mobile Configuration Tool** - This module will provide the functionality to configure the project attributes that will be collected using the mobile data capture application in the field. Whenever a new survey project is created in the system, Project manager/Admin user will configure the attributes which will be utilized in the mobile data capture application to collect land rights information in the field for that specific project.
- **Data Management Tool** - This functionality will allow the user to select the working Project for which land data management work is to be done. This is the first step in the land records management tool and thereafter all the data accessible in the land data management tool will be for the selected and authorized project.

## 5. ADMINISTRATION TOOL

This tool facilitates user to create and manage users who will be accessing the system. It will also provide facility to add/configure spatial data layers in the application which will be loaded into the Geo server and then further creation of layer groups.

### Steps:

1. Login into the system with role as 'Administrator'.
2. Click on 'Launch' link available in 'Administration Tool' section.



**Figure 4 Click Administration**

- User will be navigated to 'Administration Tools' page. Following functionalities are provided by Administration Tool

- User
- Data Layers
- Master Attribute
- Layer Groups
- Survey Projects

Nom	Projet défaut	Email	Rôle	Rapporteur à		
admin	Burkina_Faso_Pilot	admin@rmsi.com	Administrateur système			
ctv_test	Burkina_Faso_Pilot	ctv@rmsi.com	Agent CFV	user_PM		
ouay1KF	Burkina_Faso_Pilot	ouay1KF@onf-bf.org	Agent CFV	admin		
ouay1OH	Burkina_Faso_Pilot	ouay1OH@onf-bf.org	Agent CFV	admin		
ouay1YN	Burkina_Faso_Pilot	ouay1YN@onf-bf.org	Agent CFV	admin		
ouay2BS	Burkina_Faso_Pilot	ouay2BS@onf-bf.org	Agent CFV	admin		
ouay2NL	Burkina_Faso_Pilot	ouay2NL@onf-bf.org	Agent CFV	admin		
ouay2OH	Burkina_Faso_Pilot	ouay2OH@onf-bf.org	Agent CFV	admin		
ouay3SN	Burkina_Faso_Pilot	ouay3SN@onf-bf.org	Agent CFV	admin		
ouay3KS	Burkina_Faso_Pilot	ouay3KS@onf-bf.org	Agent CFV	admin		

**Figure 5 Admin Tool**

## 5.1.USER MANAGEMENT

MTP Administration tool provides 'User management' functionality to manage users who will be accessing web and mobile applications of MTP System.

It provides following set of functionalities for creation and management of users of the System.

Mobile Application to Secure Tenure Project (MAST)

- Add User
- Edit User
- Delete User

### 5.1.1. ADD USER

This functionality facilitate administrator user to Create New User of the system.

#### Steps:

1. Login into the system with role as 'Administrator'.
2. Click on 'Launch' link available in 'Administration Tool' section.



3. By default, 'Users' option will be selected and Details of existing users will be displayed in grid along with associated 'Edit' and 'Delete' options.
4. On right top, 'New' button | Nouveau will be available.

Nom	Projet défaut	Email	Rôle	Rapporteur à
admin	Burkina_Faso_Pilot	admin@rmsi.com	Administrateur système	
dfv_test	Burkina_Faso_Pilot	dfv@rmsi.com	Agent CFV	user_PM
ouay1KF	Burkina_Faso_Pilot	ouay1KF@onf-bf.org	Agent CFV	admin
ouay1OH	Burkina_Faso_Pilot	ouay1OH@onf-bf.org	Agent CFV	admin
ouay1YN	Burkina_Faso_Pilot	ouay1YN@onf-bf.org	Agent CFV	admin
ouay2BS	Burkina_Faso_Pilot	ouay2BS@onf-bf.org	Agent CFV	admin
ouay2NL	Burkina_Faso_Pilot	ouay2NL@onf-bf.org	Agent CFV	admin
ouay2OH	Burkina_Faso_Pilot	ouay2OH@onf-bf.org	Agent CFV	admin
ouay3ISN	Burkina_Faso_Pilot	ouay3ISN@onf-bf.org	Agent CFV	admin
ouay3KS	Burkina_Faso_Pilot	ouay3KS@onf-bf.org	Agent CFV	admin

5. Click on New button. 'General' section will be displayed with following options

- Name
- Password
- Default Project
- Password Expires
- Role
- Email
- Confirm Password
- Active
- Reporting to
- Active

Bienvenue ! admin | Déconnexion Configuration mobile Gestion des données

Utilisateurs

Général

Nom d'utilisateur: \_\_\_\_\_ Nom: \_\_\_\_\_

Mot de passe: \_\_\_\_\_ Confirmer le mot de passe: \_\_\_\_\_

Email: \_\_\_\_\_ Projet défaut: \_\_\_\_\_ Merci de sélectionner \_\_\_\_\_

Le mot de passe va expirer: \_\_\_\_\_ Rapporter à: \_\_\_\_\_ Merci de sélectionner \_\_\_\_\_

Rôle: \_\_\_\_\_ Merci de sélectionner \_\_\_\_\_ Actif: \_\_\_\_\_ Non \_\_\_\_\_

Retour Save

**Figure 6 Add User**

6. Provide valid details and click on 'Save' button.

7. On successful creation of new user, Application will display a confirmation message and user will navigate to User list.

Bienvenue ! admin | Déconnexion Configuration mobile Gestion des données

Utilisateurs

Rechercher	Effacer	Nouveau				
Nom	Projet défaut	Email	Rôle	Rapporteur à		
admin	Burkina_Faso_Pilot	admin@rmsi.com	Administrateur système			
admin123	Burkina_Faso_Pilot		Agent CFV	user_TI2		
cfv_test	Burkina_Faso_Pilot		Agent CFV	user_PM		
ouay1KF	Burkina_Faso_Pilot		Agent CFV	admin		
ouay1OH	Burkina_Faso_Pilot		Agent CFV	admin		
ouay1YN	Burkina_Faso_Pilot	ouay1YN@onf-bf.org	Agent CFV	admin		
ouay2BS	Burkina_Faso_Pilot	ouay2BS@onf-bf.org	Agent CFV	admin		
ouay2NL	Burkina_Faso_Pilot	ouay2NL@onf-bf.org	Agent CFV	admin		
ouay2OH	Burkina_Faso_Pilot	ouay2OH@onf-bf.org	Agent CFV	admin		
ouay3ISN	Burkina_Faso_Pilot	ouay3ISN@onf-bt.org	Agent CFV	admin		

1/3 10

**Figure 7 New User successfully Added**

User Management						
Rechercher	Effacer	Actions				
Nom	Projet défaut	Email	Rôle	Rapporter à		
ouay1KF	Burkina_Faso_Pilot	ouay1KF@onf-bf.org	Agent CFV	admin		
1/1						

Figure 8 Search User Name

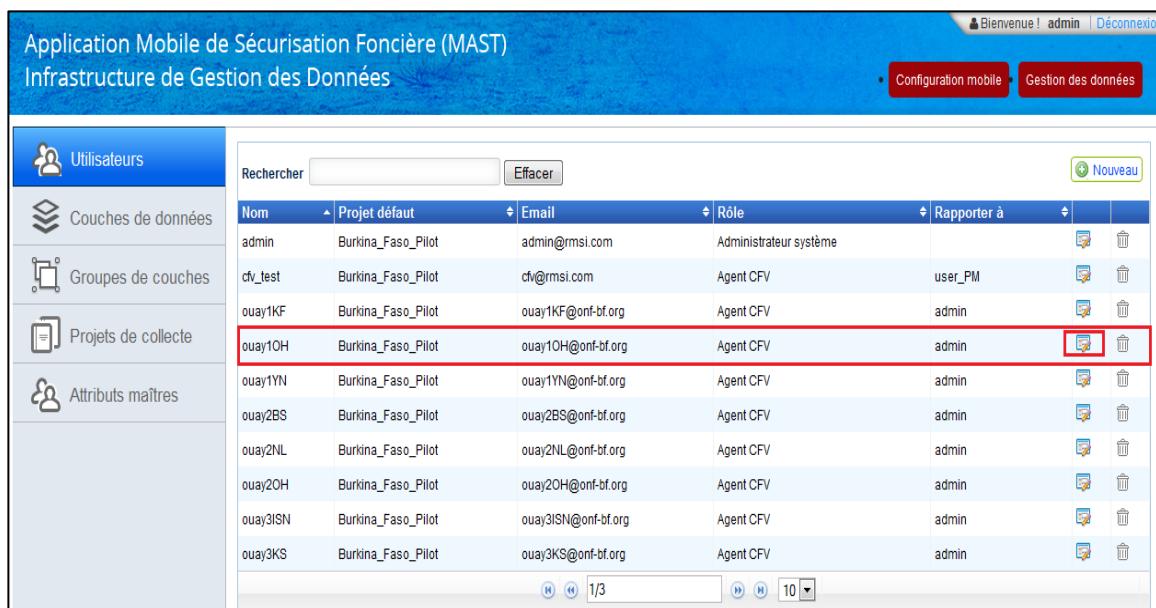
8. Enter user name in Search input box. Recently created user's details will be available in user grid. New user will be able to access MAST web or Mobile application depending upon rights.

### 5.1.2. EDIT USER

This functionality facilitate administrator user to edit existing user's details.

#### Steps:

1. Login into the system with role as 'Administrator' and click on 'Launch' link available in 'Administration Tool' section.
2. default, 'Users' option will be selected and Details of existing users will be displayed in grid along with associated 'Edit' and 'Delete' options.



User Management						
Infrastructure de Gestion des Données						
Utilisateurs						
Rechercher					Effacer	
Nom	Projet défaut	Email	Rôle	Rapporter à		
admin	Burkina_Faso_Pilot	admin@rarsi.com	Administrateur système			
cfv_test	Burkina_Faso_Pilot	cfv@rarsi.com	Agent CFV	user_PM		
ouay1KF	Burkina_Faso_Pilot	ouay1KF@onf-bf.org	Agent CFV	admin		
ouay1OH	Burkina_Faso_Pilot	ouay1OH@onf-bf.org	Agent CFV	admin		
ouay1YN	Burkina_Faso_Pilot	ouay1YN@onf-bf.org	Agent CFV	admin		
ouay2BS	Burkina_Faso_Pilot	ouay2BS@onf-bf.org	Agent CFV	admin		
ouay2NL	Burkina_Faso_Pilot	ouay2NL@onf-bf.org	Agent CFV	admin		
ouay2OH	Burkina_Faso_Pilot	ouay2OH@onf-bf.org	Agent CFV	admin		
ouay3SN	Burkina_Faso_Pilot	ouay3SN@onf-bf.org	Agent CFV	admin		
ouay3KS	Burkina_Faso_Pilot	ouay3KS@onf-bf.org	Agent CFV	admin		
1/3						

Figure 9 Edit User

1. Click on 'Edit' option available with record, which is to be edited. 'General' section will be displayed along with details of corresponding user in edit mode.
2. Edit required details of user like – 'Email', 'Password', 'Default Project', 'Active', 'Password Expires', 'Reporting To' and 'Role'.

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de Gestion des Données

Général

Nom d'utilisateur: cfv\_test      Nom: cfv\_test  
Mot de passe: .....      Confirmer le mot de passe: .....  
Email: cfv@rnsi.com      Projet défaut: Burkina\_Faso\_Pilot  
Le mot de passe va expirer: 2017-07-15      Rapporter à: user\_PM  
Rôle: Agent CFV      Actif: Oui

**Enregister**

Figure 10 Edit User Details

- Click on 'Save' button. Application will save edited details and will display an acknowledgement message.

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de Gestion des Données

Utilisateurs

Rechercher	Effacer	Nouveau			
Nom	Projet défaut	Email	Rôle	Rapporteur à	
admin	Burkina_Faso_Pilot	admin@rnsi.com	Administrateur système		
admin123	Burkina_Faso_Pilot		Agent CFV	user_TI2	
cfv_test	Burkina_Faso_Pilot		Agent CFV	user_PM	
ouay1KF	Burkina_Faso_Pilot		Agent CFV	admin	
ouay1OH	Burkina_Faso_Pilot		Agent CFV	admin	
ouay1YN	Burkina_Faso_Pilot	ouay1YN@onf-bf.org	Agent CFV	admin	
ouay2BS	Burkina_Faso_Pilot	ouay2BS@onf-bf.org	Agent CFV	admin	
ouay2NL	Burkina_Faso_Pilot	ouay2NL@onf-bf.org	Agent CFV	admin	
ouay2OH	Burkina_Faso_Pilot	ouay2OH@onf-bf.org	Agent CFV	admin	
ouay3SN	Burkina_Faso_Pilot	ouay3SN@onf-bf.org	Agent CFV	admin	

OK

Figure 11 Edit User Details Successfully

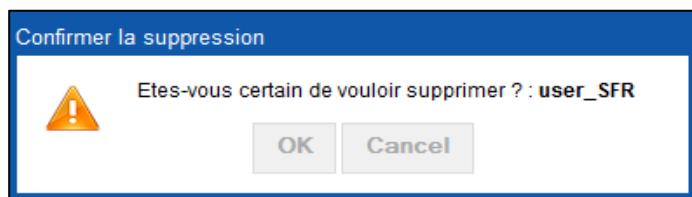
### 5.1.3. DELETE USER

'Delete User' functionality facilitates administrator user to Delete User from the system.

#### Steps:

- Login into the system with role as 'Administrator' and click on 'Launch' link available in 'Administration Tool' section.

- Click on 'Delete' option available with record, which is to be edited. Application will display a confirmation message.



**Figure 12 Delete Record**

- Click on 'OK' button, Corresponding user will be deleted and application will display an acknowledgement message.

Nom	Projet défaut	Email	Rôle	Rapporter à
admin	Burkina_Faso_Pilot	admin@rmsi.com	Administrateur système	
cfv_test	Burkina_Faso_Pilot	cfv@rmsi.com	Agent CFV	user_PM
ouay1KF	Burkina_Faso_Pilot	ouay1KF@onf-bf.org	Agent CFV	admin
ouay1OH	Burkina_Faso_Pilot	ouay1OH@onf-bf.org	Agent CFV	admin
ouay1YN	Burkina_Faso_Pilot	ouay1YN@onf-bf.org	Agent CFV	admin
ouay2BS	Burkina_Faso_Pilot	Alerte	Agent CFV	admin
ouay2NL	Burkina_Faso_Pilot		Agent CFV	admin
ouay2OH	Burkina_Faso_Pilot		Agent CFV	admin
ouay3SN	Burkina_Faso_Pilot	ouay3SN@onf-bf.org	Agent CFV	admin
ouay3KS	Burkina_Faso_Pilot	ouay3KS@onf-bf.org	Agent CFV	admin

**Figure 13 Delete Successfully**

**Note: User which is to be deleted is reporting manager of some user, Application will not delete that user and an appropriate message will be displayed.**

Nom	Projet défaut	Email	Rôle	Rapporter à
admin	Burkina_Faso_Pilot	admin@rmsi.com	Administrateur système	
cfv_test	Burkina_Faso_Pilot	cfv@rmsi.com	Agent CFV	user_PM
ouay1KF	Burkina_Faso_Pilot	ouay1KF@onf-bf.org	Agent CFV	admin
ouay1OH	Burkina_Faso_Pilot	ouay1OH@onf-bf.org	Agent CFV	admin
ouay1YN	Burkina_Faso_Pilot	ouay1YN@onf-bf.org	Agent CFV	admin
ouay2BS	Burkina_Faso_Pilot	Alerte	Agent CFV	admin
ouay2NL	Burkina_Faso_Pilot		Agent CFV	admin
ouay2OH	Burkina_Faso_Pilot		Agent CFV	admin
ouay3SN	Burkina_Faso_Pilot	ouay3SN@onf-bf.org	Agent CFV	admin
ouay3KS	Burkina_Faso_Pilot	ouay3KS@onf-bf.org	Agent CFV	admin

## 5.2.DATA LAYERS

This functionality facilitates administrator user to Add New Layer in the application or edit details of existing layers of the System.

It provides following set of functionalities for creation and management of layer

- Add New Layer
- Edit Layer
- Delete Layer

### 5.2.1. ADD NEW LAYER

This functionality facilitates administrator user to add new layer in the application.

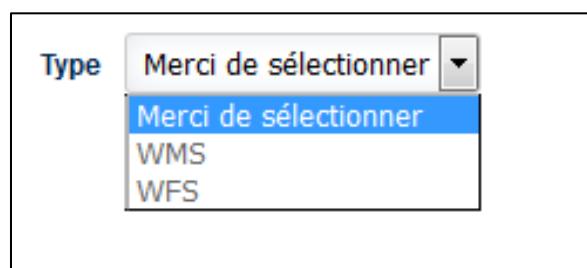
#### Steps:

1. Login into the system with role as 'Administrator' and click on 'Launch' link available in 'Administration Tool' section.
2. Click on 'Data Layer' section available in left. Details of available layers will be displayed in grid along with associated 'Edit' and 'Delete' options.
3. On right top, 'New' button will be available.

Alias	Nom	Afficher le nom	Type de calque	Unité	Projection	
APFR_Parcel	BF_PilotParcel_Ouayalgui	APFR_Parcel	WMS	dd	EPSG:4326	
Baselimage	BF_Pilotpyramids	Baselimage	WMS	dd	EPSG:4326	
CommuneBoundary	BF_PilotHAB_CommuneBoundary	CommuneBoundary	WMS	dd	EPSG:4326	
Rivers	BF_PilotHYD_Rivers	Rivers	WMS	dd	EPSG:4326	
Roads	BF_PilotHAB_Roads	Roads	WMS	dd	EPSG:4326	
spatial_unit	BF_Pilotspatial_unit	spatial_unit	WMS	m	EPSG:4326	
Villages	BF_PilotHAB_Villages	Villages	WMS	dd	EPSG:4326	

Figure 14 Add New Layer

4. Click on New button, 'Type' dropdown will be displayed with following option
  - WMS
  - WFS



5. Select required type in corresponding dropdown.
6. 'General' and 'Layer Fields' accordion will become available.

The screenshot shows the MAST application's data management interface. On the left, a sidebar lists 'Utilisateurs', 'Couches de données' (which is selected and highlighted in blue), 'Groupes de couches', 'Projets de collecte', and 'Attributs maîtres'. The main panel has a 'Type' dropdown set to 'WMS'. Below it, an 'URL' input field contains placeholder text 'e.g. http://<server:port>/<wfsserver>/wms?'. A 'Connexion' button is to the right of the URL field. The interface is in French, with tabs for 'Configuration mobile' and 'Gestion des données' at the top right.

**Figure 15 Layer Field**

7. Enter server URL in 'URL' input box, click on Connect button.
8. Once connection with the specified URL is established, following input options for new layer details will be displayed in 'General' accordion.

- Layer Name
- Alias
- Format
- Queryable
- Selectable
- Unit
- Min Scale
- Num Zoom Levels
- Layer Visibility
- Is Base Layer
- Geom Type
- Display Name
- Max Extent
- Projection
- Editable
- Exportable
- Min Extent
- Max Scale
- Buffer
- Display In Layer manager
- Display Outside Max Extent
- Tiled

9. 'Layer Name' dropdown will be populated with data available on specified server.
10. Select required layer in 'Layer Name' Dropdown.
11. Max Extent, Min Extent and Projection will be populated in corresponding input options.
12. Provide all other required inputs.

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de Gestion des Données

Bienvenue ! admin Déconnexion Configuration mobile Gestion des données

Utilisateurs Type WMS Retour Enregistrer

Couches de données

Général

Alias		Etendue max	
Formater	Merci de sélectionner	Projection	
Requête possible	Non	Modifiable	Non
Sélectionnable	Non	Exportable	Non
Unité	m	Etendue min	
Echelle min		Echelle max	
Niveau de zoom		Buffer	0

Champ couche

Figure 16 Add New Layer

13. Click on 'Save' button.
14. Application will save new layer and an acknowledgement message will be displayed.
15. Newly created layer will become available in Layer list.

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de Gestion des Données

Bienvenue ! admin Déconnexion Configuration mobile Gestion des données

Utilisateurs

Couches de données

Rechercher Effacer Nouveau

Alias	Nom	Afficher le nom	Type de calque	Unité	Projection
123	tasmania	111	WMS	m	EPSG:4326
APFR_Parcel	BF_PilotParcel_Ouayalgui	APFR_Parcel	WMS	dd	EPSG:4326
BaselImage	BF_Pilotpyramids	BaselImage	WMS	dd	EPSG:4326
CommuneBoundary	BF_PilotHAB_CommuneBoudryBoundary	CommuneBoundary	WMS	dd	EPSG:4326
Rivers	BF_PilotHAB_Alerte		WMS	dd	EPSG:4326
Roads	BF_PilotHAB_Alerte		WMS	dd	EPSG:4326
spatial_unit	BF_Pilotspatialunit		WMS	m	EPSG:4326
Villages	BF_PilotHAB_Villages		WMS	dd	EPSG:4326

Figure 17 Save Layer Successfully

## 5.2.2. EDIT LAYER

'Edit Layer' functionality facilitates administrator user to edit the details of any existing layer.

### Steps:

1. Login into the system with role as 'Administrator' and click on 'Launch' link available in 'Administration Tool' section.
2. Click on 'Data Layer' section available in left. Details of available layers will be displayed in grid along with associated 'Edit' and 'Delete' options.

Application Mobile de Sécurisation Foncière (MAST) Infrastructure de Gestion des Données							
		Rechercher	Effacer	Configuration mobile Gestion des données			
Alias	Nom	Afficher le nom	Type de calque	Unité	Projection		
123	tasmania	111	WMS	m	EPSG:4326		
APFR_Parcel	BF_PilotParcel_Ouayalgui	APFR_Parcel	WMS	dd	EPSG:4326		
Baseimage	BF_Pilotpyramids	Baseimage	WMS	dd	EPSG:4326		
CommuneBoundary	BF_PilotHAB_CommuneBoudryBoundary	CommuneBoundary	WMS	dd	EPSG:4326		
Rivers	BF_PilotHYD_Rivers	Rivers	WMS	dd	EPSG:4326		
Roads	BF_PilotHAB_Roads	Roads	WMS	dd	EPSG:4326		
spatial_unit	BF_Pilotspatial_unit	spatial_unit	WMS	m	EPSG:4326		
Villages	BF_PilotHAB_Villages	Villages	WMS	dd	EPSG:4326		

Figure 18 Edit Layer

3. Click on 'Edit' option associated with layer record, which is to be edited. 'General' section will be displayed along with details of corresponding layer in edit mode.
4. Edit required details. 'URL', 'Layer Name' and 'Alias' will be non-editable.

Type WMS

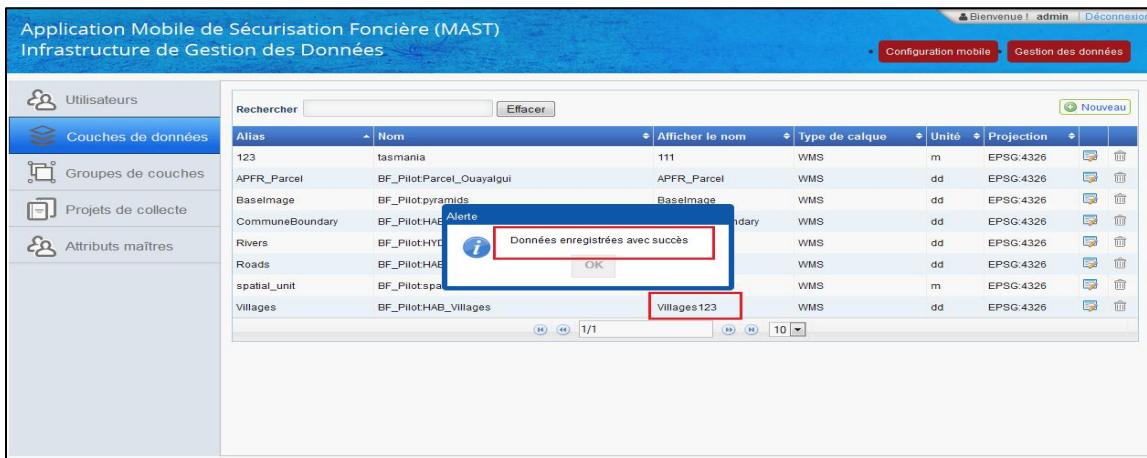
**Général**

URL	<input style="width: 400px; height: 20px; border: 1px solid #ccc;" type="text" value="http://125.16.65.48/geoserver/wms? e.g. http://&lt;serverport&gt;/&lt;wfsserver&gt;/wms?"/>	Afficher le nom	<input style="width: 200px; height: 20px; border: 1px solid #ccc; border: 2px solid red;" type="text" value="Villages123"/>
Alias	<input style="width: 200px; height: 20px; border: 1px solid #ccc;" type="text" value="Villages"/>	Etendue max	<input style="width: 200px; height: 20px; border: 1px solid #ccc;" type="text" value="-0.9176070000076749,11.88990999999999"/>
Formater	<input style="width: 150px; height: 20px; border: 1px solid #ccc;" type="text" value="image/png"/>	Projection	<input style="width: 150px; height: 20px; border: 1px solid #ccc;" type="text" value="EPSG-4326"/>
Requête possible	<input style="width: 100px; height: 20px; border: 1px solid #ccc;" type="text" value="Oui"/>	Modifiable	<input style="width: 100px; height: 20px; border: 1px solid #ccc;" type="text" value="Non"/>
Sélectionnable	<input style="width: 100px; height: 20px; border: 1px solid #ccc;" type="text" value="Non"/>	Exportable	<input style="width: 100px; height: 20px; border: 1px solid #ccc;" type="text" value="Non"/>
Unité	<input style="width: 50px; height: 20px; border: 1px solid #ccc;" type="text" value="dd"/>	Etendue min	<input style="width: 200px; height: 20px; border: 1px solid #ccc;" type="text" value="-0.9176070000076749,11.88990999999999"/>

**Champ couche**

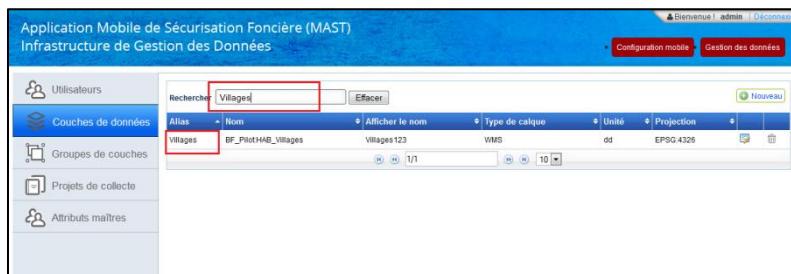
Figure 19 Edit Layer Name

5. Click on 'Save' button. Application will save edited details and will display an acknowledgement message.



**Figure 20 Edit Successfully**

6. Search for the same layer, Updated details will be displayed.

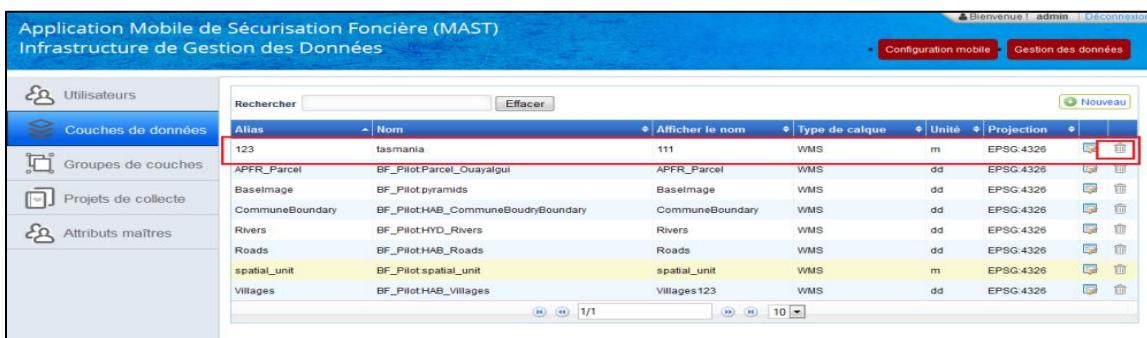


### 5.2.3. DELETE LAYER

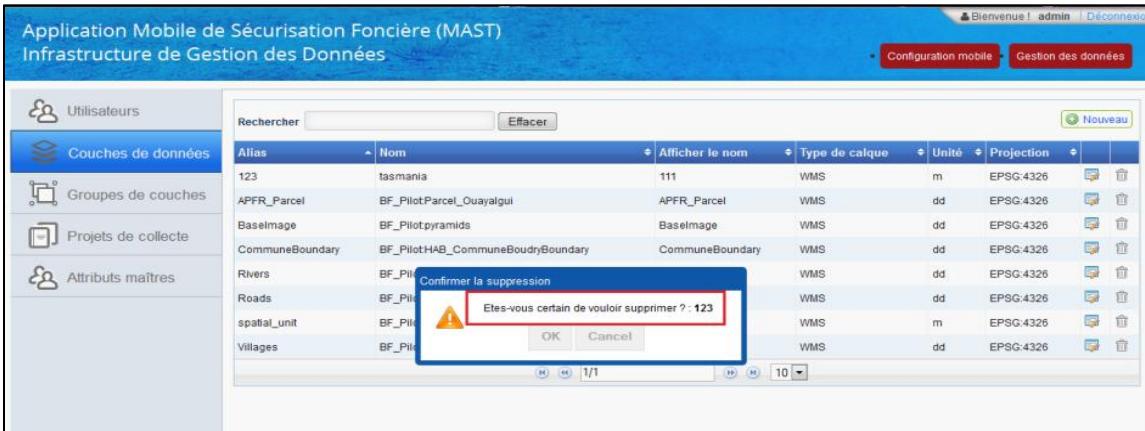
'Delete Layer' functionality facilitates administrator user to delete existing layer from the system.

#### Steps:

1. Login into the system with role as 'Administrator' and click on 'Launch' link available in 'Administration Tool' section.
2. Click on 'Data Layers' section available in left. Details of available layers will be displayed in grid along with associated 'Edit' and 'Delete' options.

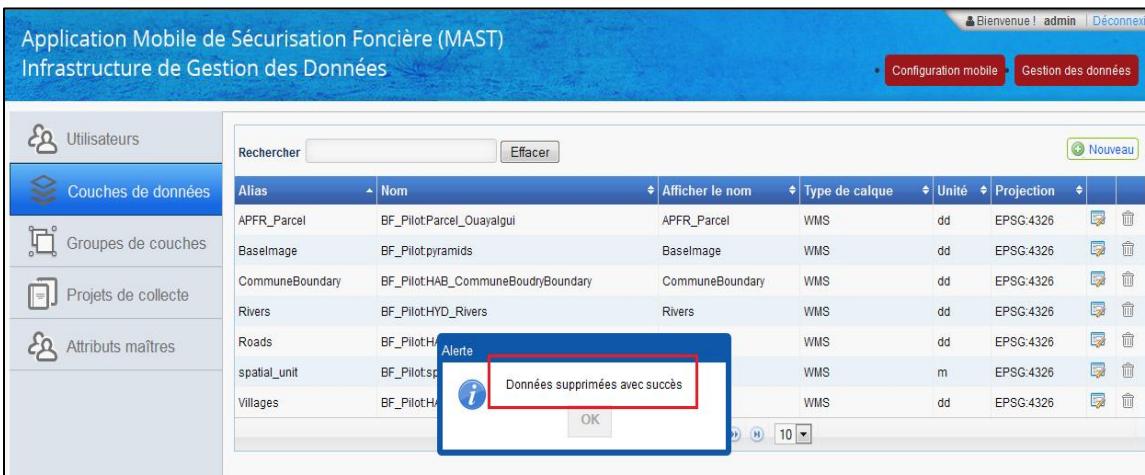


3. Click on 'Delete' option available with layer record, which is to be deleted.
4. Application will display a confirmation message. Click on 'OK' button.



**Figure 21 Delete Layer**

5. Corresponding layer will be deleted and application will display an acknowledgement message.



**Figure 22 Delete Successfully**

### 5.3. LAYER GROUPS

This functionality facilitates administrator user to Manage Data Layers in the application (Edit or Delete) or Search Layers on the basis of their Names or Display Names.

It provides following set of functionalities for creation and management of layer groups

- Add New Layer Group
- Edit Layer Group
- Delete Layer Group

### 5.3.1. ADD NEW LAYER GROUP

This functionality facilitates administrator user to add new layer group in the application.

#### Steps:

1. Click on 'Layer Groups' section available in left. Details of available layer groups will be displayed in grid along with associated 'Edit' and 'Delete' options.
2. On right top, 'New' button  will be available.

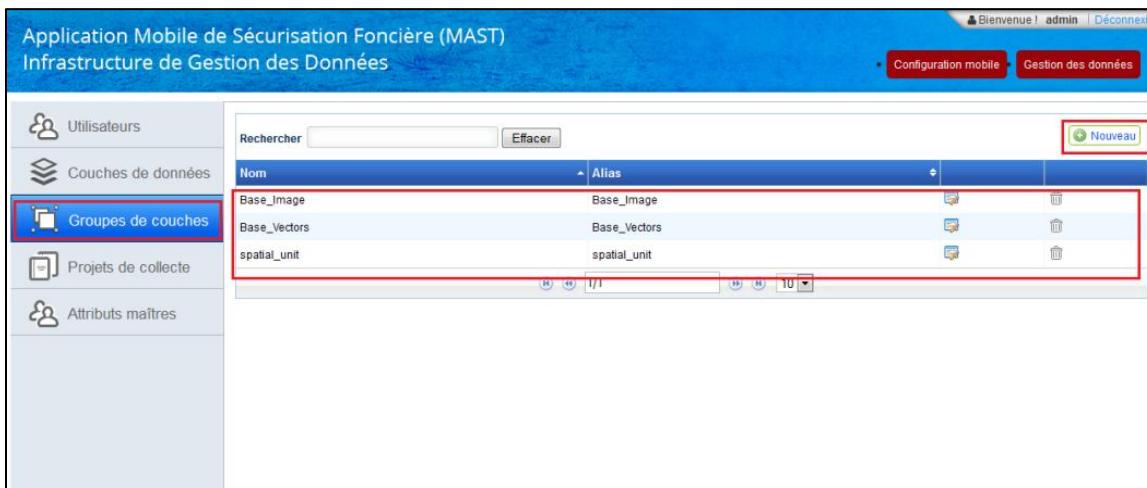


Figure 23 Add New Layer Group

3. Click on 'New' button. 'General' and 'Layers' accordions will be available. Provide inputs for 'Name' and 'Alias' input box available in General accordion.



4. Click on "Layers" accordion. All available layers will be displayed in list box.

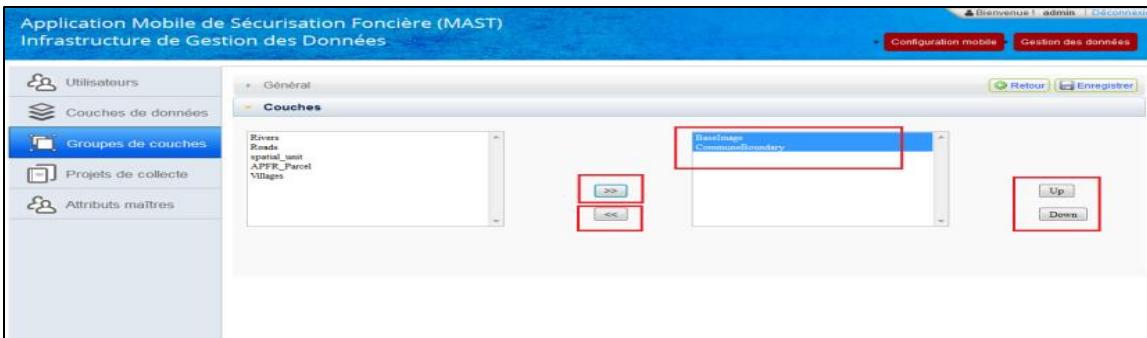


Figure 24 Select layers

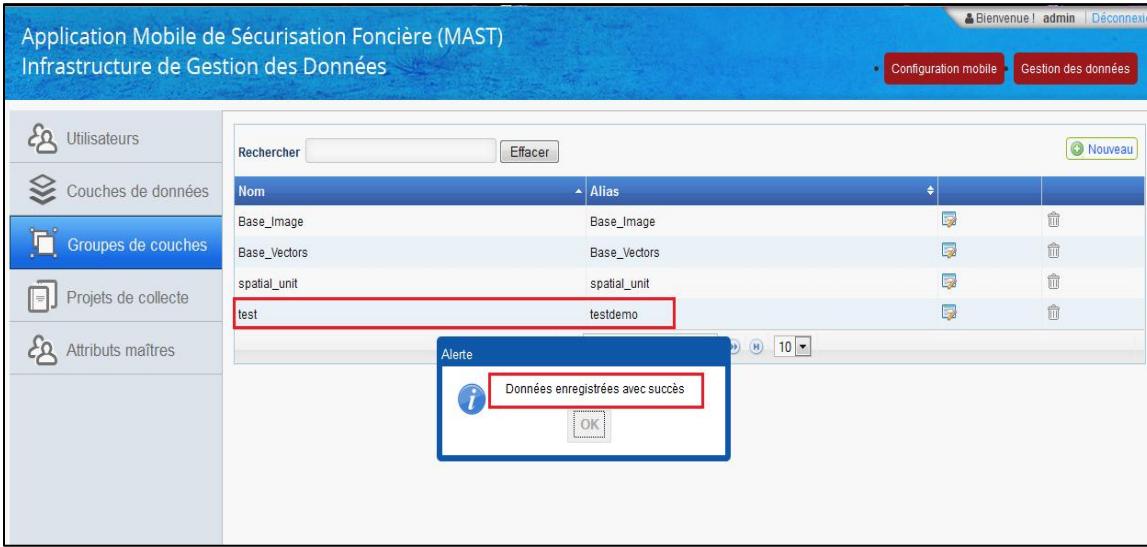
- Select required layers and click on 'Add Layers' button.
- Selected layers will become available in 'Selected Layers' list box.



- Select a layer and click on UP/Down buttons to set the display order.



- Click on 'Save' button. Application will display a acknowledge message. Newly created



layer group will be available in 'Layer Groups' list.

### 5.3.2. EDIT LAYER GROUP

This functionality facilitates administrator user to edit existing layer group in the application. User can add new layer or remove any layer from any layer group.

## Steps:

1. Click on 'Layer Groups' section available in left. Details of available layer groups will be displayed in grid along with associated 'Edit' and 'Delete' options.
2. Click on 'Edit' option associated with layer group record, which is to be edited. 'General'

Nom	Alias	
Base_Image	Base_Image	
Base_Vectors	Base_Vectors	
spatial_unit	spatial_unit	
test	testdemo	

and 'Layers' accordions will be displayed along with details of corresponding layer group in edit mode.

3. Edit required details available in 'General' accordion. 'Name' will be non-editable.

**Général**

Nom	<input type="text" value="test"/>	Alias	<input style="border: 2px solid red;" type="text" value="testdemo123"/>
-----	-----------------------------------	-------	---

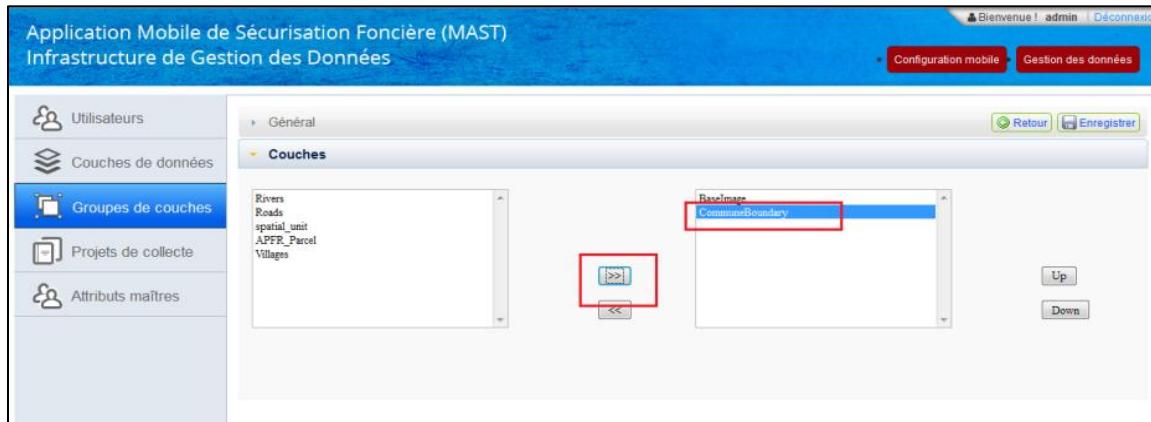
4. Click on 'Layers' accordion, Add/Remove required layers. Select a layer in existing layers

**Couches**

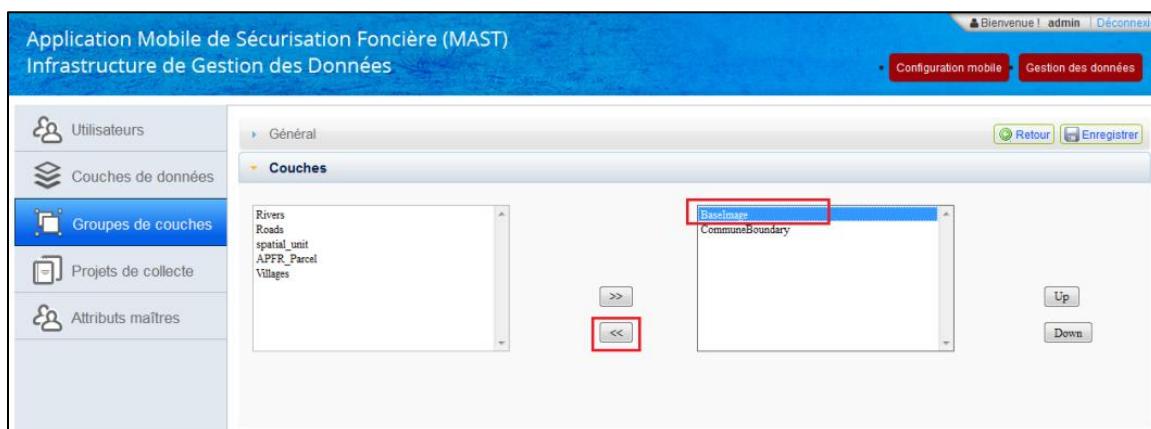
<input checked="" type="checkbox" value="CommuneBoundary"/> CommuneBoundary		<input type="checkbox" value="BaseImage"/> BaseImage	
---	--	--	--

list.

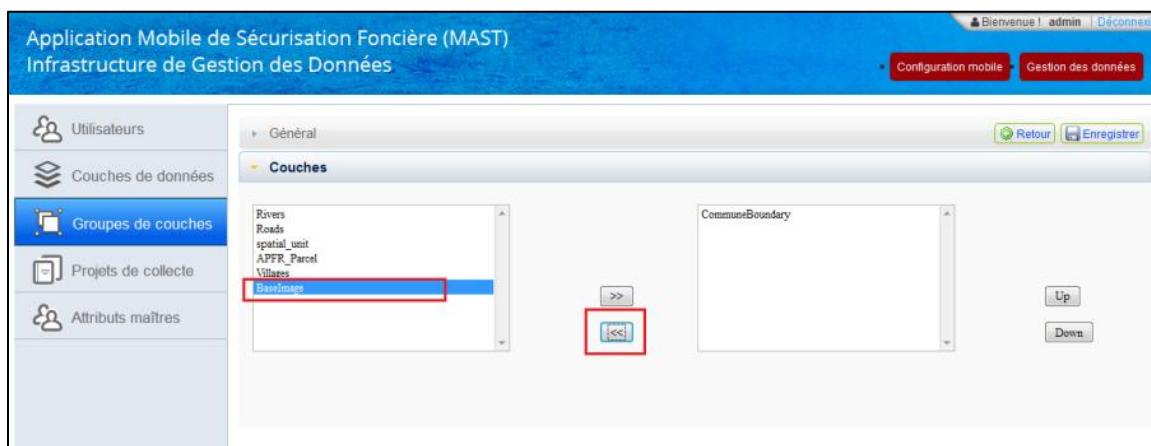
5. Click on 'Add Layer' button. New layer will be added in corresponding layer group.



6. Select a layer in available layers list. Click on 'Remove Layer' button.



7. Selected Layer will be removed from corresponding 'Layer Group'.



- Click on 'Save' button. Application will save edited details and will display an acknowledgement message.

The screenshot shows the 'Gestion des données' (Data Management) section of the MAST application. On the left, a sidebar lists 'Utilisateurs', 'Couches de données', 'Groupes de couches' (highlighted in blue), 'Projets de collecte', and 'Attributs maîtres'. The main area displays a grid of layer group records with columns 'Nom' (Name) and 'Alias'. A record named 'test' with alias 'testdemo123' has its delete icon highlighted with a red box. An alert dialog box in the foreground says 'Données enregistrées avec succès' (Data saved successfully) with an 'OK' button. The top right corner shows 'Bienvenue ! admin' and 'Déconnexion'.

### 5.3.3. DELETE LAYER GROUP

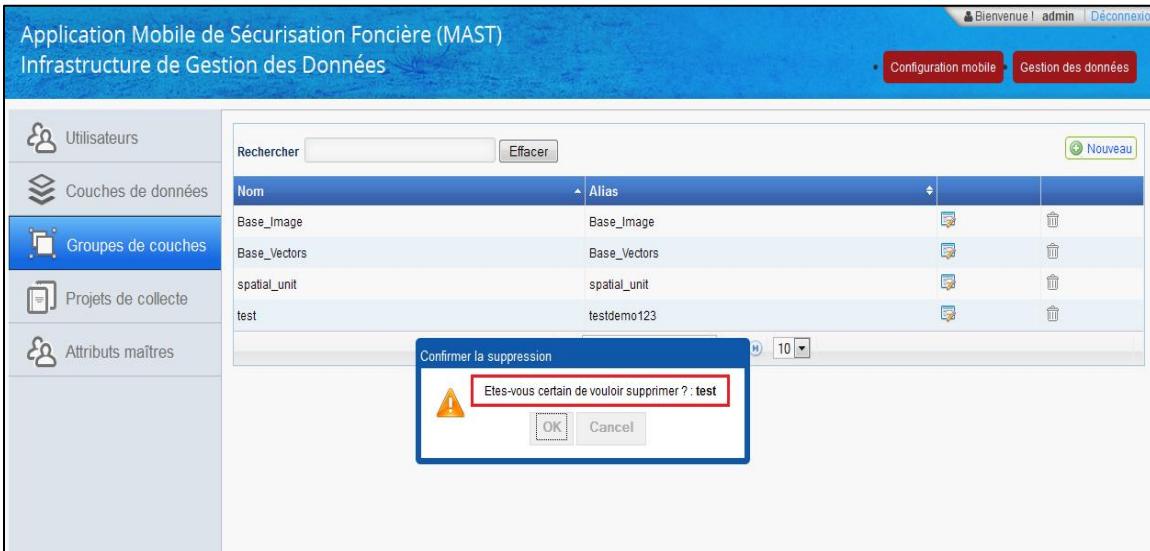
This functionality facilitates administrator user to delete existing layer group from the application.

#### Steps:

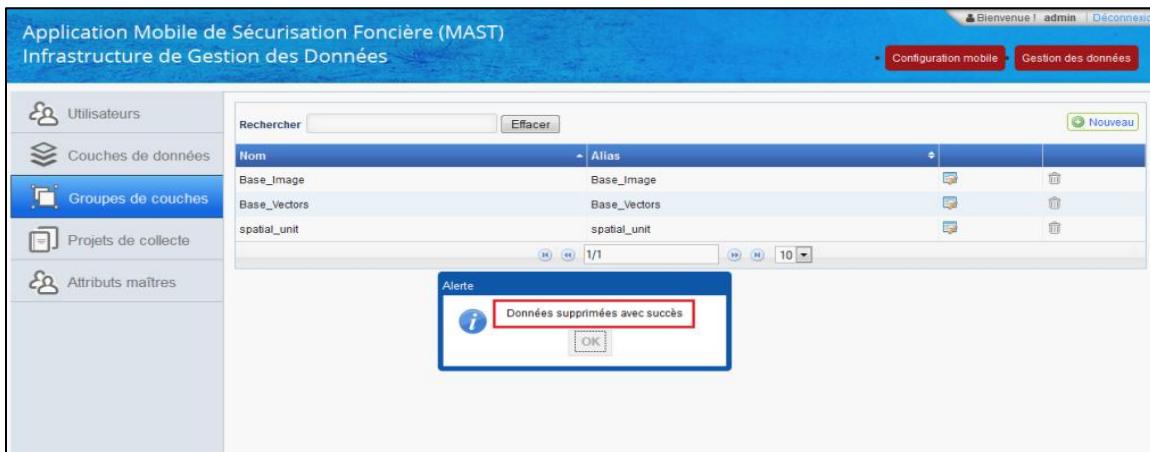
- Click on 'Layer Groups' section available in left. Details of available layer groups will be displayed in grid along with associated 'Edit' and 'Delete' options.
- Click on 'Delete' option associated with layer group record, which is to be deleted.

The screenshot shows the 'Gestion des données' section of the MAST application. The 'Groupes de couches' section is selected in the sidebar. The main grid shows a record for 'test' with alias 'testdemo123', where the delete icon is highlighted with a red box. The top right corner shows 'Bienvenue ! admin' and 'Déconnexion'.

3. Application will display a confirmation message. Click on 'OK' button.



4. Selected 'Layer Group' will be deleted.  
 5. Application will display an acknowledgement message.



## 5.4.SURVEY PROJECTS

'Survey Projects' functionality facilitates administrator user to define survey projects in the System. Survey project functionality will provide the facility to manage all the details of a particular data collection project.

Following information sets are defined in a survey project.

- General Information of survey project – including country and region details of project
- Users who will have access to the project in mobile application as well as for Data management application

- Data Layers and layer groups which will be accessed and viewable in the project in mobile and web application

'Survey Projects' functionality provides following set of functionalities for creation and management of survey projects.

- Add Survey Project
- Edit Survey Project
- Delete Survey Project

#### **5.4.1. ADD SURVEY PROJECT**

This facilitates administrator user to create new survey projects in the System.

**Steps:**

1. Login into the system with role as 'Administrator' and click on 'Launch' link available in 'Administration Tool' section.
2. Click on 'Survey Projects' section available in left. Details of available survey projects will be displayed in grid along with associated 'Edit' and 'Delete' options. On right top, 'New' button will be available.
3. Click on 'New' button. Following accordions will be displayed
  - General
  - Layer Group
  - Project Configuration
  - Assign User

The screenshot shows the 'Add Survey Project' interface. The main title is 'Application Mobile de Sécurisation Foncière (MAST) Infrastructure de Gestion des Données'. The left sidebar has icons for Utilisateurs, Couches de données, Groupes de couches, Projets de collecte (which is selected and highlighted with a red box), and Attributs maîtres. The main panel is titled 'Général' and contains the following fields:

- Nom: [Input field]
- Description: [Input field]
- Projection: [Input field]
- Afficher la projection: [Input field]
- Etendue max: [Input field]
- Etendue min: [Input field]
- Niveaux de zoom: 18
- Format de sortie: Please Select
- Unité: Merci de sélectionner
- Couche Active: Merci de sélectionner
- Couche de vue d'ensemble: Merci de sélectionner
- Cosmétique: [Checkboxes]

At the bottom, there are three accordions:

- Groupes de couches
- Configuration du projet
- Attribuer un utilisateur

Two buttons at the top right are highlighted with red boxes: 'Retour' and 'Enregistrer'.

**Figure 25 Add Survey Project**

4. By default, 'General' accordion will be expended showing following input options

- Name input box
- Projection input box
- Max Extent input box
- Zoom Levels input box
- Output Format dropdown
- Cosmetic check box
- Active Layer dropdown
- Description input box
- Display Projection input box
- Min Extent input box
- Restricted Extent input box
- Unit dropdown
- Overview Layer dropdown

5. Provide valid inputs for all input options. 'Active Layer' and 'Overview Layer' drop downs will be empty. Values in these drop downs will be populated depending upon layers selected in 'Layer Groups' accordion.

6. Click on 'Layer Groups' accordion.
7. Select option in drop down, Depending upon selected value, Base layers will be populated in 'Base Layers' drop down.
8. All existing layer groups will be available in 'Layer Groups' list along with check and sorting option.
9. Select layer groups and base layers which are to be configured for project.

10. Click on 'General' accordion, Select 'Active Layer' and 'Overview Layer' in corresponding dropdowns.

The screenshot shows the 'Général' configuration screen. On the left, there's a sidebar with icons for Utilisateurs, Couches de données, Groupes de couches, Projets de collecte (which is selected), and Attributs maîtres. The main area has fields for Nom (test), Projection (11), Etendue max (11), Niveaux de zoom (18), Format de sortie (image/png), Description (test), Attacher la projection (11), Etendue min (11), Etendue restreinte (11), and Unité (m). Below these are sections for 'Cosmétique' and 'Couche Active'. The 'Couche Active' dropdown is open, showing 'Merci de sélectionner' at the top and 'M.terre de sélectionner spatial\_unit' highlighted with a red box. To the right, there's a 'Couche de vue d'ensemble' section with a dropdown set to 'Merci de sélectionner'.

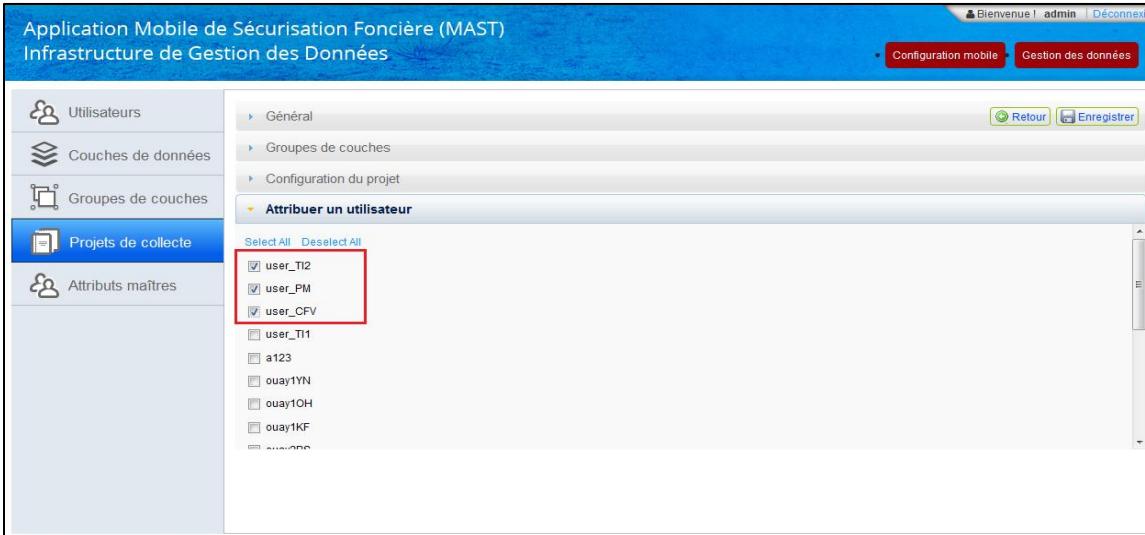
11. Click on 'Project Configuration' accordion. following input options will be available

- Country
- province
- Mayor name
- Region
- commune

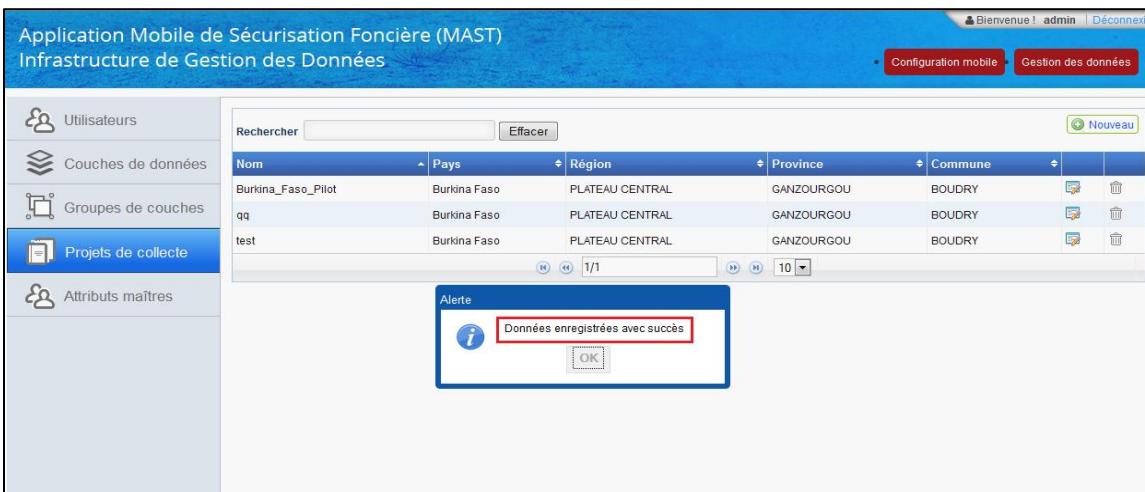
12. Select country, values for 'District', 'Region' and 'Village' will be populated. Select required values.

The screenshot shows the 'Configuration du projet' screen. The sidebar is identical to the previous one. The main area has sections for 'Général', 'Groupes de couches', and 'Configuration du projet' (which is selected). Under 'Configuration du projet', there are three dropdowns labeled 'Pays', 'Province', and 'Région', all showing 'Merci de sélectionner'. Below them is a text input field for 'Nom du maire'. A red box highlights the entire row containing these three dropdowns and the 'Nom du maire' field.

13. Click on 'Assign Users' accordion. All existing users will be displayed in user list along with a check box. Check the check box associated with users, whom projects is to be assigned.



14. Click on 'Save' button. Application will display an acknowledgement message.



15. New project will be created and will be available in project list.

#### 5.4.2. EDIT SURVEY PROJECT

'Edit Survey Project' functionality facilitates administrator user to edit the details of any existing project.

##### Steps:

1. Login into the system with role as 'Administrator' and click on 'Launch' link available in 'Administration Tool' section.
2. Click on 'Survey Projects' section available in left. Details of available survey projects will be displayed in grid along with associated 'Edit' and 'Delete' options.

3.Click on 'Edit' option associated with project detail, which is to be edited. Project details will be available in edit mode, by default; 'General' accordion will be expended. Edit details as required. 'Project Name' will be non-editable.

Bienvenue ! admin Déconnexion Configuration mobile Gestion des données

Général

Nom	test	Description	test
Projection		Afficher la projection	
Etendue max	11	Etendue min	11
Niveaux de zoom	18	Etendue restreinte	11
Format de sortie	image.png	Unité	m
Cosmétique			
Couche Active	spatial_unit	Couche de vue d'ensemble	spatial_unit
> Groupes de couches > Configuration du projet > Attribuer un utilisateur			

4.Click on 'Layer Groups' accordion and edit required changes like adding new layer, changing sorting or removing layer.

Bienvenue ! admin Déconnexion Configuration mobile Gestion des données

Groupes de couches

spatial_unit	↑ ↓
Base_Vectors	↑ ↓
Base_Image	↑ ↓

Google_Satellite	↑ ↓
Google_Streets	↑ ↓
Google_Hybrid	↑ ↓
Google_Physical	↑ ↓

Configuration du projet Attribuer un utilisateur

5.Click on 'Project Configuration' accordion and edit required changes.

**Application Mobile de Sécurisation Foncière (MAST)**  
Infrastructure de Gestion des Données

Bienvenue ! admin Déconnexion Configuration mobile Gestion des données

Utilisateurs Couches de données Groupes de couches Projets de collecte Attributs maîtres

Général Retour Enregistrer

Groupes de couches

Configuration du projet

Pays : Burkina Faso Région : PLATEAU CENTRAL

Province : GANZOURGOU Commune : BOUDRY

Nom du maire : test123

Attribuer un utilisateur

6. Click on 'Assign Users' accordion and add or remove users for the project.

**Application Mobile de Sécurisation Foncière (MAST)**  
Infrastructure de Gestion des Données

Bienvenue ! admin Déconnexion Configuration mobile Gestion des données

Utilisateurs Couches de données Groupes de couches Projets de collecte Attributs maîtres

Général Retour Enregistrer

Groupes de couches

Configuration du projet

Attribuer un utilisateur

Select All DésSELECT ALL

user\_T12  
 user\_PM  
 user\_CFV

user\_T11  
 a123  
 ouay1YN  
 ouay1OH  
 ouay1KF  
 ouay1NO

7. Click on 'Save' button. Application will save edited details and will display an acknowledgement message.

**Application Mobile de Sécurisation Foncière (MAST)**  
Infrastructure de Gestion des Données

Bienvenue ! admin Déconnexion Configuration mobile Gestion des données

Utilisateurs Couches de données Groupes de couches Projets de collecte Attributs maîtres

Rechercher Effacer Nouveau

Nom	Pays	Région	Province	Commune
Burkina_Faso_Pilot	Burkina Faso	PLATEAU CENTRAL	GANZOURGOU	BOUDRY
qq	Burkina Faso	PLATEAU CENTRAL	GANZOURGOU	BOUDRY
test	Burkina Faso	PLATEAU CENTRAL	GANZOURGOU	BOUDRY

1/1 10

Alerte

Données enregistrées avec succès

OK

#### 5.4.3. DELETE SURVEY PROJECT

'Delete Survey Project' functionality facilitates administrator user to delete any existing project.

##### Steps:

1. Click on 'Survey Projects' section available in left. Details of available projects will be displayed in grid along with associated 'Edit' and 'Delete' options.

The screenshot shows a survey management application interface. On the left, there is a sidebar with icons for Users, Data Layers, Layer Groups, Survey Projects (which is selected and highlighted in blue), and Master Attribute. The main area displays a grid of survey project details. The columns are Name, Country, Region, Province, Commune, and actions (Edit and Delete). Two rows are visible: 'Burkina\_Faso\_Pilot' and 'test123'. The row for 'test123' is highlighted with a red box.

2. Click on 'Delete' option associated with project detail, which is to be deleted.
3. Application will display a confirmation message.

The screenshot shows the same survey management application interface as the previous one. The 'Survey Projects' section is still selected in the sidebar. The grid shows the same two project entries. A confirmation dialog box titled 'Confirmer la suppression' (Confirm deletion) is overlaid on the grid. It contains the message 'Etes-vous certain de vouloir supprimer ? : test123' (Are you sure you want to delete ? : test123) and two buttons: 'OK' and 'Cancel'. This dialog box is highlighted with a red box.

4. Click on 'OK' button. Selected 'Survey Project' will be deleted. Application will display an acknowledgement message.

The screenshot shows the survey management application after the deletion of the 'test123' project. Only the 'Burkina\_Faso\_Pilot' entry remains in the grid. An acknowledgement dialog box titled 'Alerte' (Alert) is overlaid on the grid. It contains the message 'Données supprimées avec succès' (Data deleted successfully) and a single 'OK' button. This dialog box is highlighted with a red box.

## 5.5.MASTER ATTRIBUTE

'Master Attribute' functionality facilitate administrator user to manage attributes which are to be used for configuration of a project to be accessed by MAST mobile application. This functionality enables admin user to add/edit or delete custom attribute in following categories.

- General
- Multimedia
- Tenure
- Non Natural Person
- Natural Person
- Custom
- General (Properties)
- Administrator

Catégorie	Tout	Rechercher	Effacer	Nouveau
Alias				
Address	adresse	address	Série	50
Address	adresse	Address	Série	200
Administrator	Msimamizi	administrator	Série	100
Age	Umrî	age	Numéro	50
Application Type	Application Type	Application Type	Dropdown	200
Citizenship	Uraia	citizenship	Dropdown	100
Comments	Maoni	comments	Série	100
Comments	Maoni	comments	Série	100
Date of Birth	Date de naissance	Date Birth	Date	200
Date of Mandate	Date of Mandate	Date of Mandate	Date	200

Following are the functionalities that are available with this.

- View attributes category wise
- Add Attributes
- Edit Attributes
- Delete Attributes

Edit and Delete options will be associated with attributes other then default one.

### 5.5.1. VIEW ATTRIBUTES CATEGORY WISE

This facilitates admin user to view attributes of any selected category.

#### Steps:

- 1.Login into the system with role as 'Administrator' and click on 'Launch' link available in 'Administration Tool' section.
- 2.Click on 'Master Attribute' section available in left. Details of available attributes (default and custom) will be displayed in grid. Custom attributes will be available with associated 'Edit' and 'Delete' options. In Left top, 'New' button will be available.
- 3.'Category' drop down and 'Search' option will be available that facilitate user to view attributes of selected categories only and search a particular attribute.

4. Select any category in 'Category' drop down. Corresponding attributes will be displayed in grid.

The screenshot shows the 'Attributs maîtres' section of the MAST application. A red box highlights the 'Catégorie' dropdown menu which is set to 'Général'. The main area displays a grid of attributes with columns: Alias, Alias autre langue, Nom de la parcelle, Type, Taille, Modifier, and Supprimer. The grid contains several rows of attribute definitions, such as 'Number of signatory(s)', 'Parcel Type', and 'Witness 1'. The bottom of the grid shows navigation buttons for page 1/1.

### 5.5.2. ADD ATTRIBUTES

'Add Attribute' functionality facilitate administrator user to add new attribute in specified category.

#### Steps:

1. Click on 'Master Attribute' section available in left. Details of available attributes (default and custom) will be displayed in grid. In Left top, 'New' button will be available.

The screenshot shows the 'Attributs maîtres' section of the MAST application. A red box highlights the 'Nouveau' button located at the top right of the grid header. The grid displays various attribute entries, including 'Address', 'Administrator', 'Age', 'Application Type', 'Citizenship', 'Comments', 'Date of Birth', and 'Date of Mandate'. The bottom of the grid shows navigation buttons for page 1/8.

2. Click on 'New' button. Add Attribute' dialogue will be displayed with following input options

- 'Alias' input box
- 'Alias Other Language' input box
- 'Field Name' input box
- 'Data Type' dropdown
- 'Size' input box
- 'Category' dropdown
- 'Mandatory' check box

3. Provide valid inputs in required input options

4. Click on 'Add' button. Application will display an acknowledgement message.

Attributs maîtres						
Alias	Alias autre langue	Nom de la parcelle	Type	Taille	Modifier	Supprimer
Address	adresse	address	Série	50		
Address	adresse	Address	Série	200		
Administrator	Msimamizi	administrator	Série	100		
Age	Umlri	age	Numéro	50		
Application Type			Dropdown	200		
Citizenship			Dropdown	100		
Comments			Série	100		
Comments			Série	100		
Date of Birth			Date	200		
Date of Mandate			Date	200		

5. Newly added attribute will be available in grid.

Attributs maîtres						
Alias	Alias autre langue	Nom de la parcelle	Type	Taille	Modifier	Supprimer
test	twst	test	Série	11		
test0106	test0106	test0106	Série	50		
testBoolean0306	testBoolean0306	testBoolean0306	Booléen	1		
testDate0306	testDate0306	testDate0306	Date	1		
testNumber0306	testNumber0306	testNumber0306	Numéro	1		
testString0306length5	testString0306length5	testString0306length5	Série	5		

### 5.5.3. EDIT ATTRIBUTES

'Edit Attribute' functionality facilitate administrator user to edit details of custom attribute

#### Steps:

- 1.Click on 'Master Attribute' section available in left. Details of available attributes (default and custom) will be displayed in grid. Custom attributes will be available with associated 'Edit' and 'Delete' options.

Alias	Alias autre langue	Nom de la parcelle	Type	Taille	Modifier	Supprimer
test	twst	test	Série	11		
test0106	test0106	test0106	Série	50		
testBoolean0306	testBoolean0306	testBoolean0306	Booléen	1		
testDate0306	testDate0306	testDate0306	Date	1		
testNumber0306	testNumber0306	testNumber0306	Numéro	1		
testString0306length5	testString0306length5	testString0306length5	Série	5		

- 2.Click on 'Edit' option associated with attribute detail, which is to be edited. A dialogue will be displayed with attribute details in edit mode.

3. Edit the required details and click on 'Update' button. Application will display an acknowledgement message.

Alias	Alias autre langue	Nom de la parcelle	Type	Taille	Modifier	Supprimer
Address	adresse	address	Série	50		
Address	adresse	Address	Série	200		
Administrator	Maitremain	administrator	Série	100		
Age	Umlt	age	Numéro	50		
Application Type			Dropdown	200		
Citizenship			Dropdown	100		
Comments			Série	100		
Date of Birth		Date of Birth	Date	200		
Date of Mandate		Date of Mandate	Date	200		

MOBILE APPLICATION TO SECURE TENURE PROJECT (MAST)

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- Updated details of attribute will be available in grid.

Catégorie	Rechercher	Effacer	Nouveau			
Alias	Alias autre langue	Nom de la parcelle	Type	Taille	Modifier	Supprimer
test0106	test0106	test0106	Série	50		
test123	twst	test	Série	11		
testBoolean0306	testBoolean0306	testBoolean0306	Booléen	1		
testDate0306	testDate0306	testDate0306	Date	1		
testNumber0306	testNumber0306	testNumber0306	Numéro	1		
testString0306length5	testString0306length5	testString0306length5	Série	5		

#### 5.5.4. DELETE ATTRIBUTES

'Delete Attribute' functionality facilitate administrator user to delete any custom attribute

##### Steps:

- Click on 'Master Attribute' section available in left. Details of available attributes (default and custom) will be displayed in grid. Custom attributes will be available with associated 'Edit' and 'Delete' options.

Catégorie	Rechercher	Effacer	Nouveau			
Alias	Alias autre langue	Nom de la parcelle	Type	Taille	Modifier	Supprimer
test0106	test0106	test0106	Série	50		
test123	twst	test	Série	11		
testBoolean0306	testBoolean0306	testBoolean0306	Booléen	1		
testDate0306	testDate0306	testDate0306	Date	1		
testNumber0306	testNumber0306	testNumber0306	Numéro	1		
testString0306length5	testString0306length5	testString0306length5	Série	5		

2. Click on 'Delete' option associated with attribute detail, which is to be deleted. Application will display a confirmation message.

The screenshot shows the 'Attributs maîtres' (Master Attributes) section of the MAST application. A confirmation dialog box is overlaid on the grid, asking 'Etes-vous certain de vouloir supprimer ? : test0106'. The dialog has 'OK' and 'Cancel' buttons. The grid lists various attributes like Alias, Nom de la parcelle, Type, Taille, and Supprimer (Delete) button.

3. Click on 'OK' button, Specified attribute will be deleted and will not be available in grid any more.

The screenshot shows the same 'Attributs maîtres' section after the attribute 'test0106' has been deleted. The grid now lists other attributes such as Address, Address1, Address2, Age, Application Type, Citizenship, Comments, Date of Birth, and Date of Mandate.

**Note: If Administrator user attempts to delete an attribute which is already used in any project, Application will not delete such attribute and will display a relevant message.**

The screenshot shows the 'Master Attribute' section of the MAST application. A modal dialog box displays the message 'Data Can not be deleted..Used by Project' with an information icon and 'OK' button. The grid lists attributes like Alias, Field Name, Type, Size, Edit, and Delete.

## 6. MOBILE CONFIGURATION TOOL

'Mobile configuration tool' facilitates user to configure mobile application according to project requirement. This module provides the functionality to configure the project attributes that will be collected using the mobile data capture application in the field.

Whenever a new survey project is created in the system, Project Manager/Administrator user will configure the attributes which will be utilized in the mobile data capture application to collect land rights information in the field for that specific project.

### Steps:

1. Login into the system with role as 'Administrator/Project Manager'.
2. Click on 'Launch' link available in 'Mobile Configuration Tool' section.



3. User will be navigated to 'Mobile Configuration Tool' page.

Following functionalities will be available with 'Mobile Configuration Tool'.

- Configure Attribute
- Configure Data

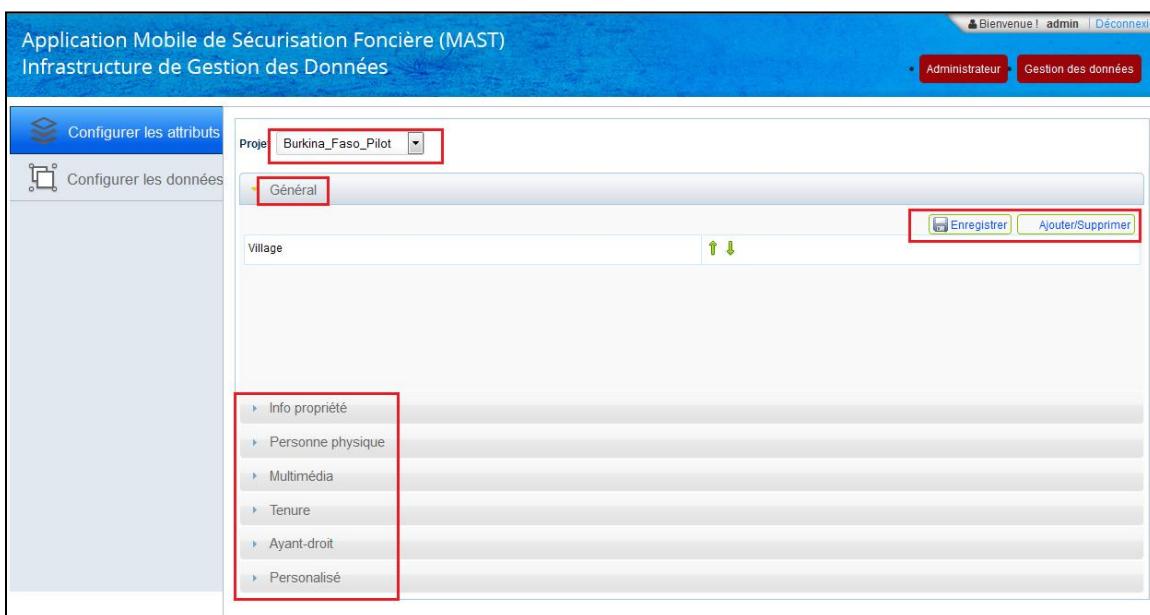
## 6.1.CONFIGURE ATTRIBUTE

This functionality will allow the user to configure project attributes in the project from the master attribute repository.

### Steps:

1. Login into the system with role as 'Administrator / Project Manager'.
2. Click on 'Launch' link available in 'Mobile Configuration Tool' section.
3. By default, 'Configure Attribute' option available in left panel will be selected. Following options will be available in main window
  - 'Project' Drop down
  - 'General' Accordion
  - 'General Property' Accordion
  - 'Natural Person' Accordion
  - 'Multimedia' Accordion
  - 'Tenure' Accordion
  - Person of Interest
  - 'Custom' Accordion

In every accordion, there will be 'Save' and 'Add/Remove' button.



'Configure Attribute' provides following set of functionalities for managing attributes.

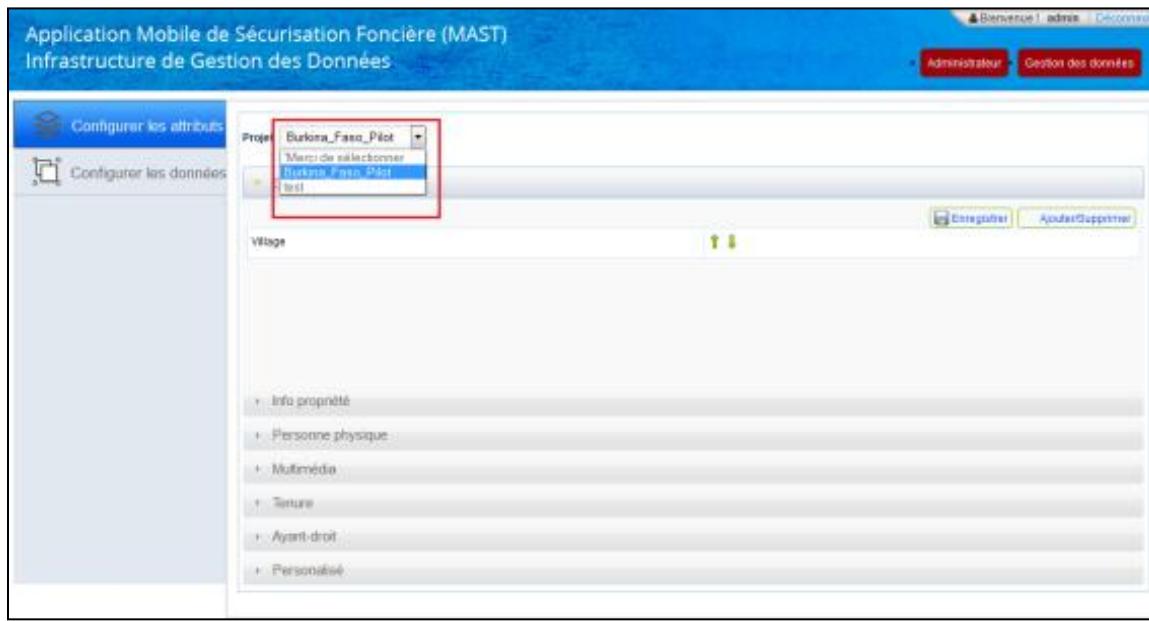
- Add Attributes
- Remove Attributes

### 6.1.1. ADD/REMOVE ATTRIBUTES

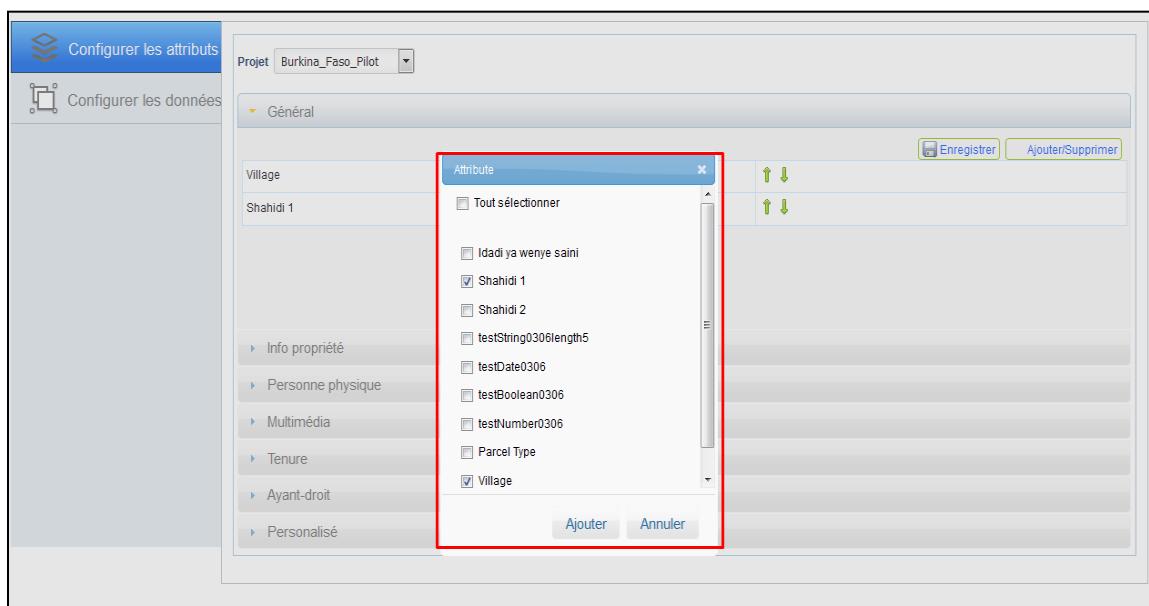
'Add Attributes' functionality facilitate administrator to add/remove attributes in specific category of a selected project.

#### Steps:

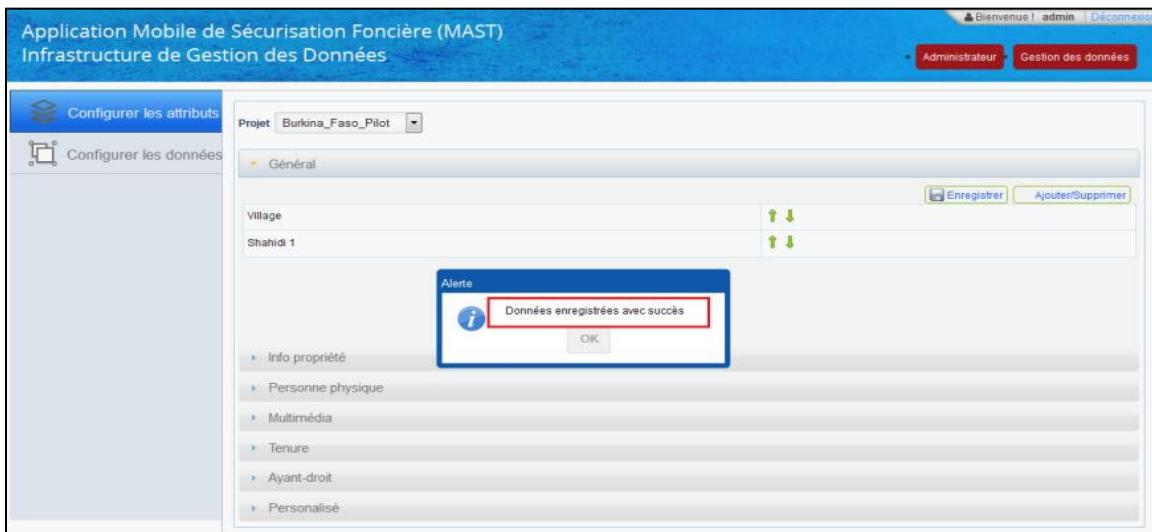
1. Click on 'Project' drop down. Application will display all available projects.



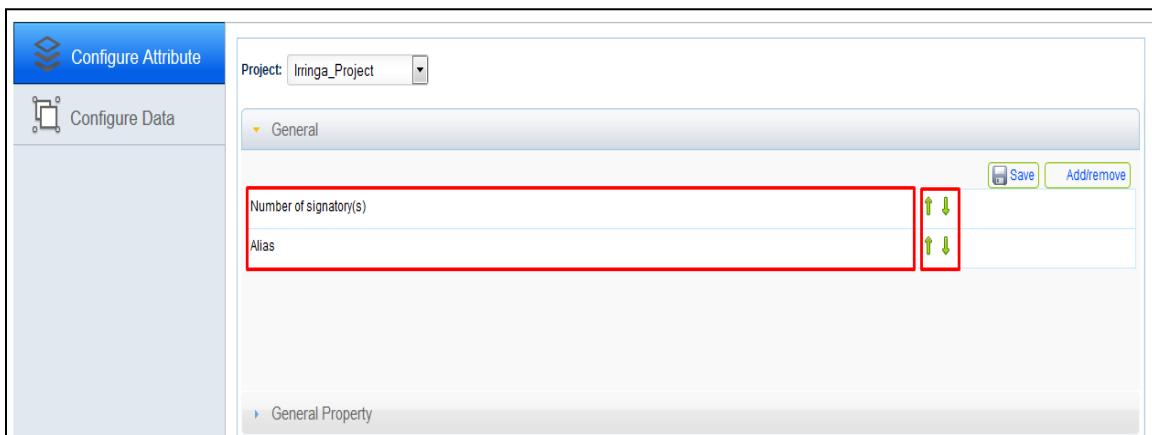
2. Select project in corresponding dropdown, for which attributes are to be configured.
3. Click on 'Add/Remove' button, "Attributes" dialogue box will be display showing all attributes of corresponding category.
4. There will a check box associated with every attribute, Check required attribute.



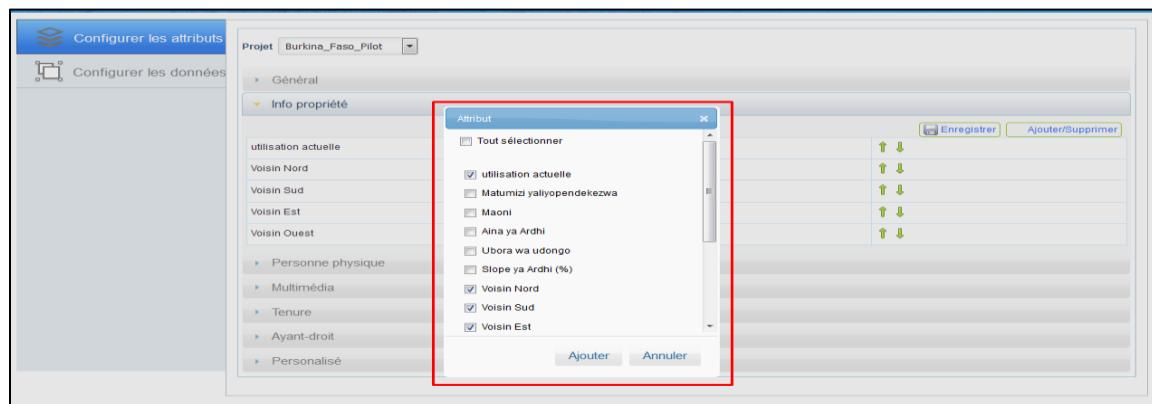
5. Click on 'Add' button. Application will display an acknowledgement message.



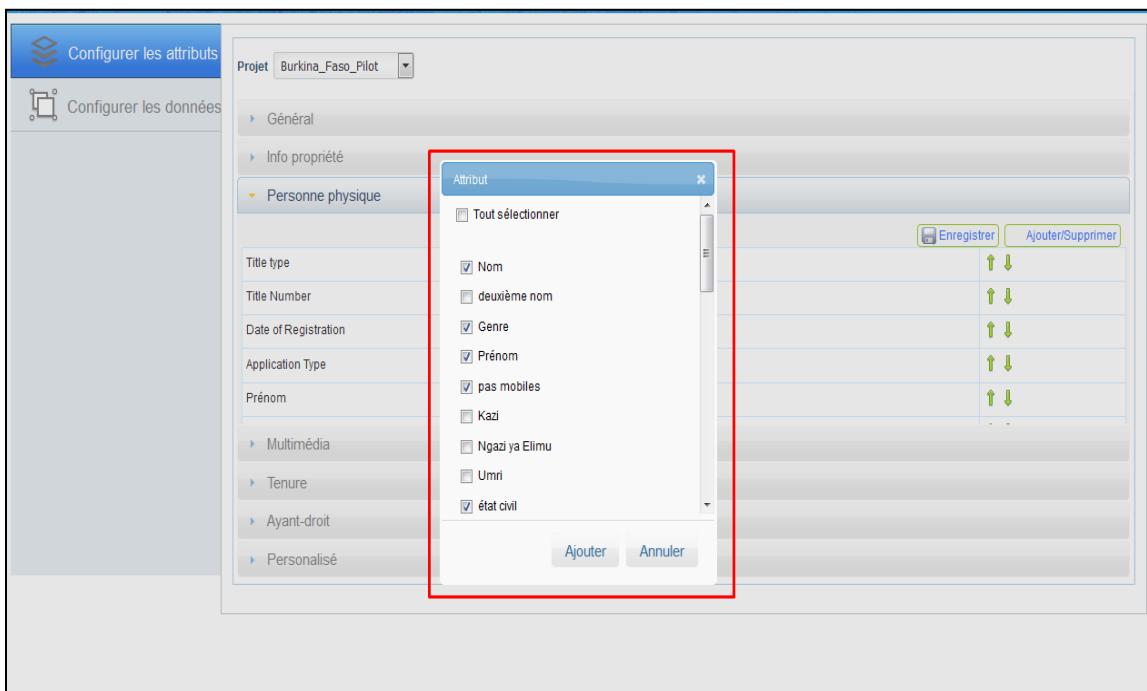
6. Once attributes are saved, user can set the ordering using 'Up' and 'Down' arrows associated with attributes.



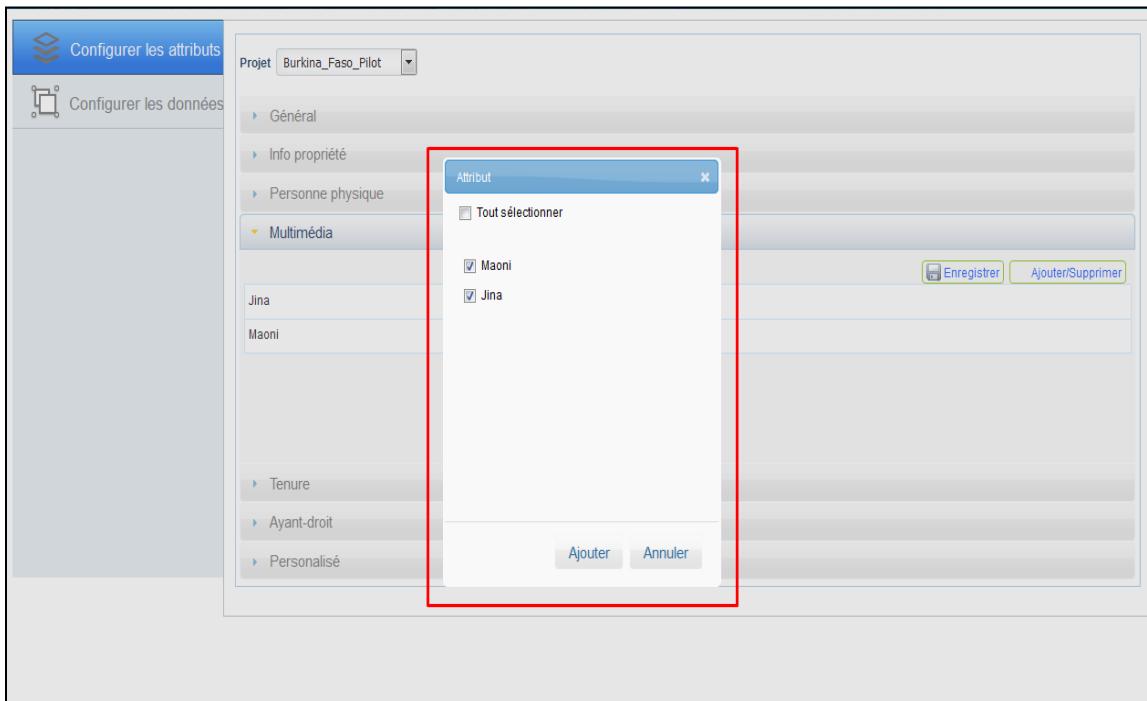
7. Click on 'General Property' accordion and add/Remove required attributes.



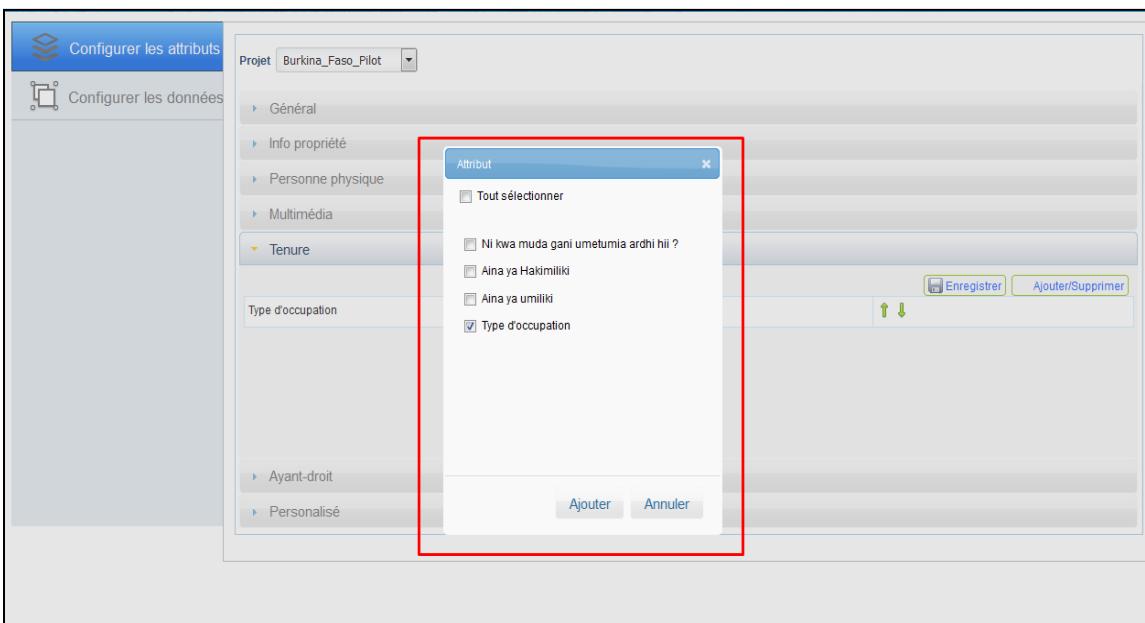
8. Click on 'Natural Person' accordion and add/Remove required attributes.



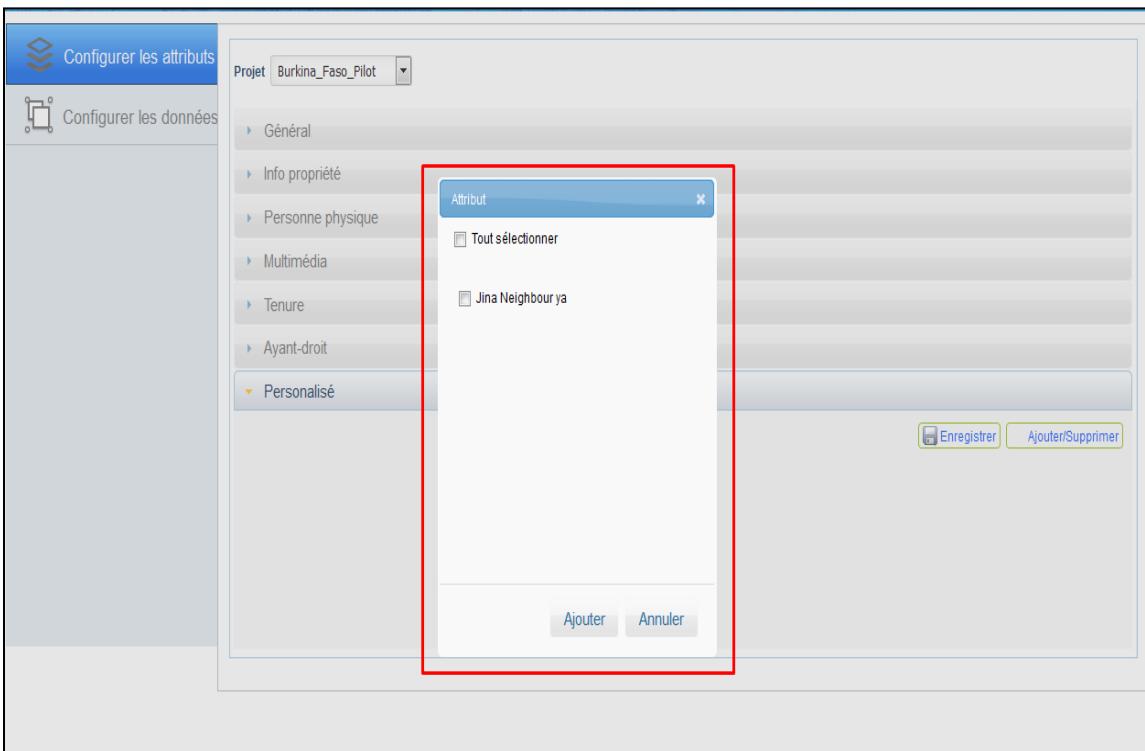
9. Click on 'Multimedia' accordion and add/Remove required attributes.



10. Click on 'Tenure' accordion and add/Remove required attributes.



11. Click on 'Custom' accordion and add/Remove required attributes.



## 7. DATA MANAGEMENT TOOL

Land Rights Data Management Infrastructure web application of MTP Framework provides a 'Land Data management' tool to manage land records collected in the field. This tool provides facility to authorized users to view, edit, review and Approve data of spatial unit along with attributes and multimedia information collected in the field.

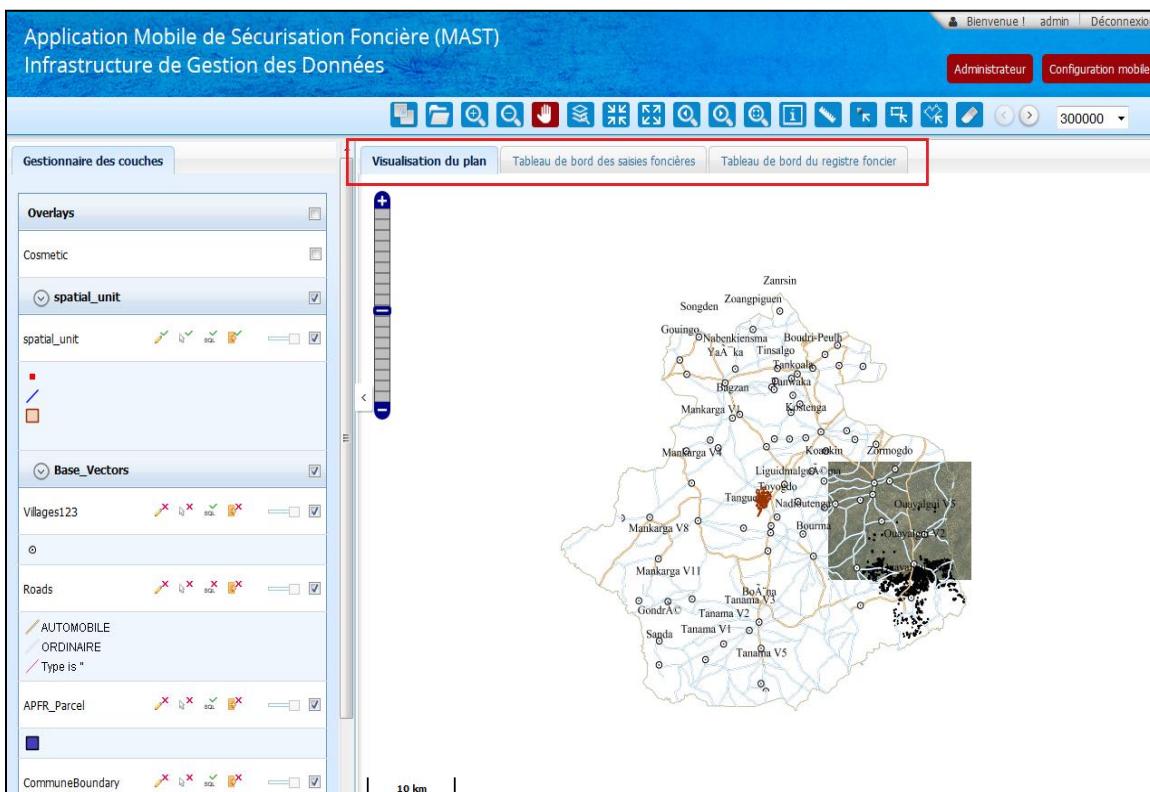
Project manager / Land Administration Officials / SFR Land Official/DPI Land Official can access the land data management tool to view data of allocated project and can further generates Reports on Approved land records.

The key functionalities that are provided in the Land Data Management tool are:

- Map viewer
- Land Records Dashboard
- Land Registry Dashboard

### Steps:

1. Login into the system with role as 'Administrator / Project Manager'. Click on 'Launch' link available in 'Data Management' section.
  - 1.1. Login into the system with role as 'SFR Land Official/DPI Land Official' by default DMI will open.
2. 'Land Management Tools' page will be displayed. By default, 'Map Viewer' will be available.



## 7.1.MAP VIEWER

'Map viewer' is the main screen part shown on the right hand panel of page with 'Map' tab, where user will be able to see the parcels of selected corresponding/assigned project on Map.

This functionality provides the functionality of map viewer in land data management tool. Map Viewer display all the base data layers configured for the project along with the display of spatial data of properties/spatial units collected in the field.

Following functionalities are provided by Administration Tool

- Layer Manager
- Mapping Tools

### 7.1.1. LAYER MANAGER

This functionality provides the listing of layers configured for the selected project. User can display on/off a particular layer from the Layer Manager to view on the map.

Layer control functionality is provided to the users on map view control to control the display of selected layers on map (only project specific layers can be selected for display on/off).

Layer manager is the part of the application where user can see the layers group and associated layers of every layer group. The layer manager allows user to see the access rights on that layer and allows users to change the opacity of layers, hide or make visible the content of layers and layers groups. User can collapse and expand the layers group content on layer manager.

The layer manger's first layers group will be Overlays as default, it contains cosmetic layer (if added to the user's project by administrator).The Overlays layers group and its layers will be hidden on map canvas and boxes will be unmarked when the application initiated. As the application gets initiated, a layer highlighted with some color (in fig.5, layer 'Row Path' highlighted with yellow color) is the active layer. This is by default active layer as it set by administrator. User can make any other layer as active by clicking on that layer in layer manager. Most of the tools work only on active layer.

To hide the layers group's content, click on the icon  in front of layers group name. It will collapse the member layers of that layers group. To expand it again, click on that icon again. Now to off the layers group's content on map canvas, unmark the check box of that layers group and to make it visible mark the check box. Access on a layer can be seen on hovering on the images behind the layer name. It will show the access of user on that layer as Editable, Selectable, Query able and Exportable. If these accesses are not on that layer, these images will have cross mark on them and on hovering mouse on them, it shows access as Not Editable, Not Selectable, Not Query able and Not Exportable.

For a layer, user is allowed to set the layer opacity and he can on/off the layer features on map. To change the visibility of layer on map, move the slider of opacity bar towards left. Moving it to left will decrease the visibility of layer. To hide the layer features, unmark the check box of layer. Below the layer, symbols and description used for the layer can be seen.

User is also allowed to hide/unhide left panel (Layer Manager). For this , there is an arrow mark on the mid of the panel. To hide the left panel, click on the mark . Clicking that icon again will make the left panel visible.

## 7.1.2. MAPPING TOOLS

Application facilitates user with tools to access map and use the map details as well as creating new and edit existing parcels.

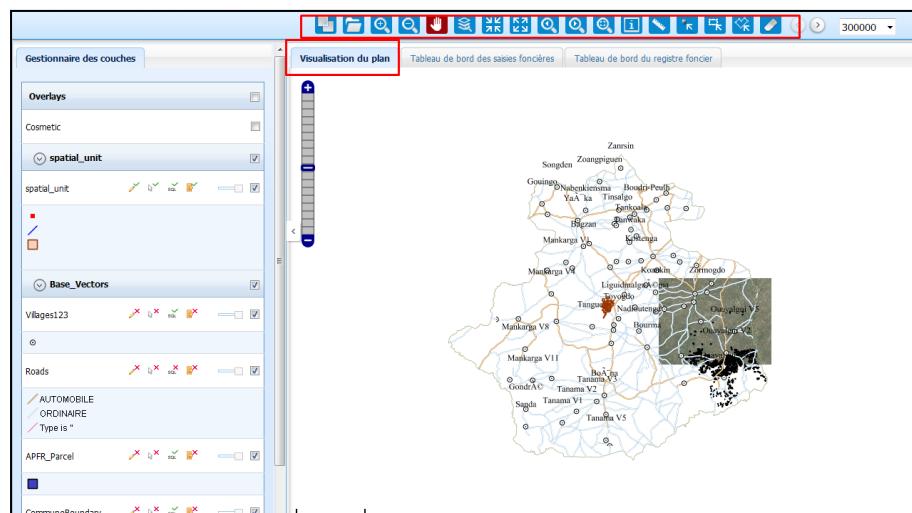
Map viewer has navigation tools like zoom, pan etc. It also has other functionalities like measure, thematic, search, and search by coordinate, attributes query, and editing etc. A tool, which is being used currently, gets highlighted with red color in tool bar.

### Steps:

1. Login into the system with role as '**Administrator / Project Manager**'. Click on 'Launch' link available in 'Data Management' section.
2. 'Land Management Tools' page will be displayed. By default, 'Map Viewer' will be available.

Following are the tools available with map viewer.

- Spatial Validation
- Open Project
- Zoom in
- Zoom out
- Pan
- Zoom to layer
- Fixed Zoom in
- Fixed Zoom out
- Zoom Previous
- Zoom Next
- Full Zoom
- Info
- Measure
- Select
- Select By Rectangle
- Select By Polygon
- Clear
- Search
- Zoom to XY
- Print
- Query Builder
- Bookmark
- Export Data
- Mark up
- Editing



### 7.1.2.1. SPATIAL VALIDATIONS

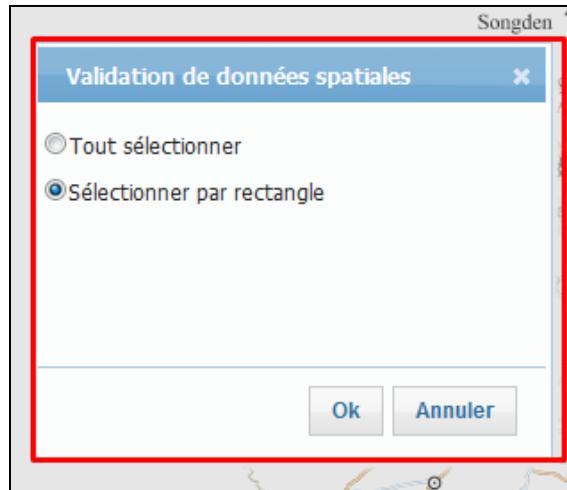
'Spatial Validations' functionality facilitates user to validate parcels on map. If any validation error i.e. Intersecting or invalid geometry, is found in any of the parcel, this tool will help to trace that feature on map. User can specify parcels to be verified by drawing rectangle or based on selected village.

#### Steps:

1. Login into the system with role as 'Administrator / Project Manager'. Click on 'Launch' link available in 'Data Management' section.
2. 'Land Management Tools' page will be displayed. By default, 'Map Viewer' will be available.
3. Click on 'Spatial Validation' available in tool bar.



4. 'Spatial Validation' dialogue box will be displayed with following options.
  - Select All
  - Select By Rectangle

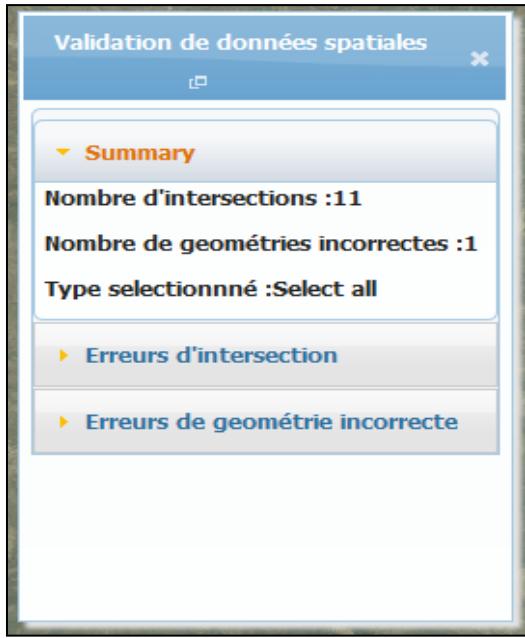


#### Select All:

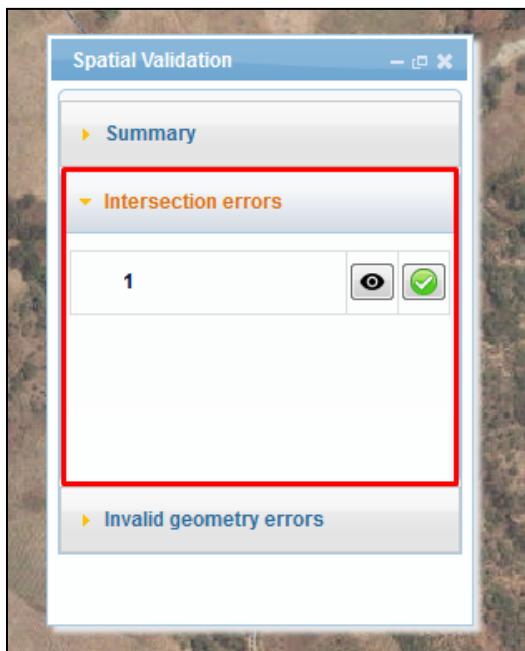
'Select all' option facilitates user to validate all parcels of current active project.

#### Steps:

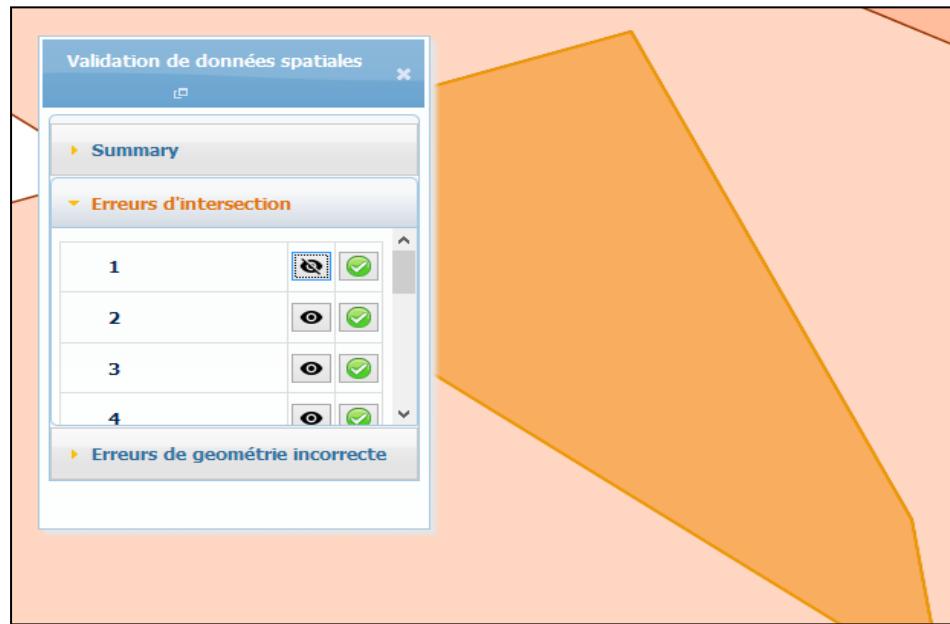
1. Select 'Select all' radio button available in 'Spatial Validation' dialogue box.
2. Click on 'Ok' button.
3. Application will perform spatial validation on all the spatial units belonging to current project.
4. Validation result will be displayed in Summary section.



5. To see the detail of error, click on corresponding accordion. No of errors will be displayed in dropdown.



6. Click on 'Zoom' option, map will be zoomed in on specified erroneous parcel.



**Figure 26 Zoom**

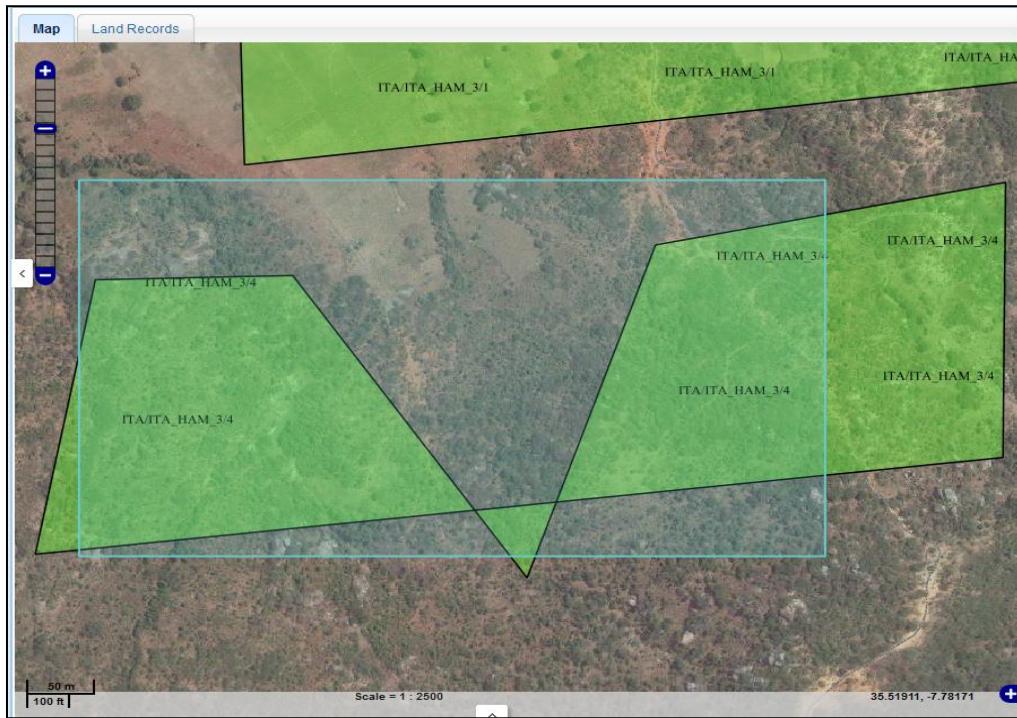


#### Select by rectangle:

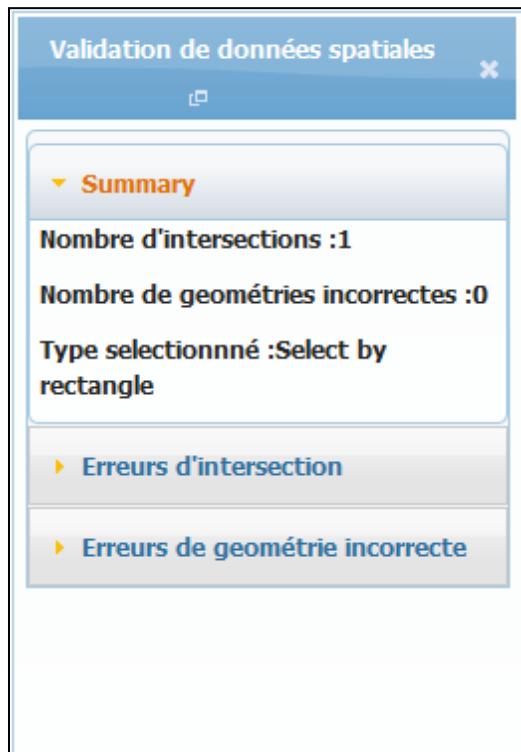
'Select by rectangle' option facilitates user to validate parcels which lies in drawn rectangle.

#### Steps:

1. Select 'Select by rectangle' radio button available in 'Spatial Validation' dialogue box and click on 'Ok' button.
2. Draw a rectangle on map covering parcels which are to be validated.



3. Application will validate parcels covered under rectangle and validation result will be displayed in summary section. Details of errors can be seen by clicking on corresponding accordions.



### 7.1.2.2. OPEN PROJECT

'Open Project' functionality facilitates user to select the working Project for which land data management work is to be done. This is the first step in the land records management tool and thereafter all the data accessible in the land data management tool will be for the selected and authorized project.

#### Steps:

1. Login into the system with role as 'Administrator / Project Manager'. Click on 'Launch' link available in 'Data Management' section.
2. 'Land Management Tools' page will be displayed. By default, 'Map Viewer' will be available.
3. Click on 'Open Project' available in tool bar.



4. 'Projects' tab will be displayed showing list of all projects assigned to login user. There will be an 'Open' link associated with every project.

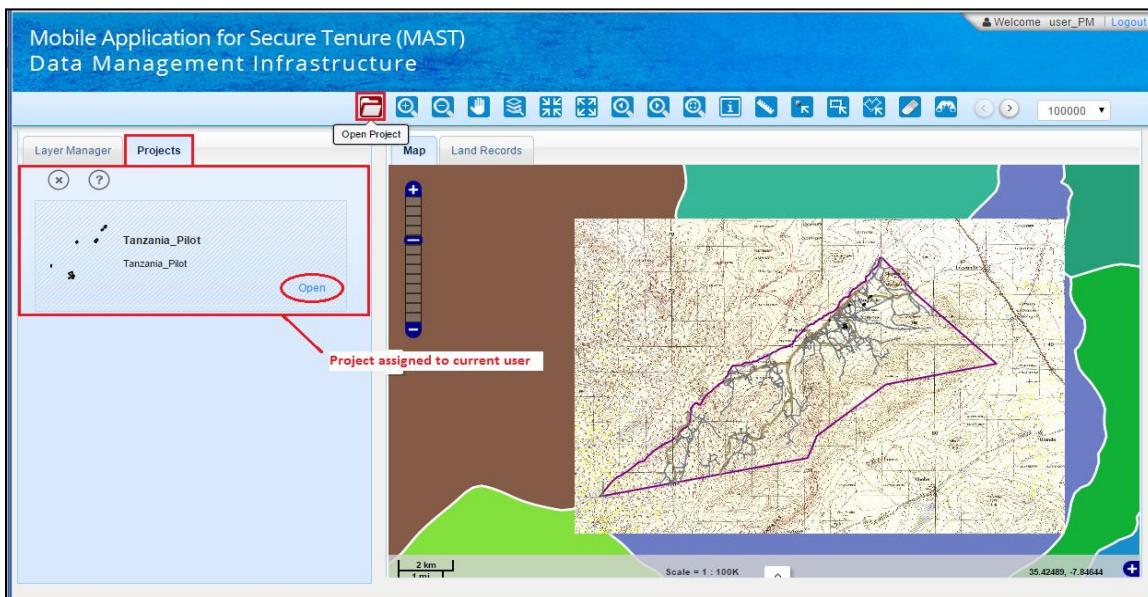


Figure 27 Project Tab

5. Click on 'Open' link.
6. Data like 'layers groups', parcels on land base and 'Land Records' of selected project will be available in 'Map Viewer' and 'Land Records' dashboard.

**Note: If a user switches to another project then he can switch to the default project by clicking on "Default button"**

### 7.1.2.3. ZOOM IN

'Zoom In' tool facilitates users to zoom in a particular area or location.

**Steps:**

1. Click on the 'Zoom In' tool available in tool bar.



2. Click on the map view at that location. Application will zoom in map to that location by a predefined extent.
3. To zoom in to a specific extent, click on the tool and draw a rectangle at required location on the map canvas. Application will zoom in the area to an extent such that the area inside the rectangle will cover the entire map canvas.

#### 7.1.2.4. ZOOM OUT

'Zoom Out' tool facilitates users to zoom out the map view.

**Steps:**

1. Click on 'Zoom Out' tool available in tool bar.



2. Click on map canvas at a required location. Application will zoom out the map vies to fixed extent. The location where user clicked will be at the centre of map canvas.
3. To zoom out to a greater extent click on the 'Zoom Out' tool and draw a rectangle. Application will zoom out the map view to a map extent according to drawn rectangle (smaller rectangle will result in larger zoom out on map view).

#### 7.1.2.5. PAN

'Pan tool' facilitates users to pan the map view.

**Steps:**

1. Click on the 'Pan Tool' available in tool bar.



2. Click on the map. Without releasing the mouse button, move the map in desired direction and release the button at desired location.
3. Application will pan the map in that direction till mouse button release.

#### 7.1.2.6. ZOOM TO LAYER

'Zoom to layer' tool facilitates users to zoom to the extent of a particular layer.

**Steps:**

1. First make that layer active layer then click on the 'Zoom to Layer' tool available in tool bar.



2. Application will zoom in/out the map view to fit the map view to the layer's extent.

#### 7.1.2.7. FIXED ZOOM IN

'Fixed Zoom In' tool facilitates users to zoom in the map to a fixed scale.

**Steps:**

1. Click on the 'Fixed Zoom In' tool available in tool bar.



2. Application will zoom in the map view to a predefined ratio of scale and the slider of zoom bar will move one steps towards '+' sign.

#### 7.1.2.8. FIXED ZOOM OUT

'Fixed Zoom Out' tool facilitates users to zoom out the map with a fixed scale.

**Steps:**

1. Click on 'Fixed Zoom Out' tool available in tool bar.



2. Application will zoom out the map to a fixed ratio of scale and the zoom bar's slider will move one step towards the '-' sign.

#### 7.1.2.9. ZOOM PREVIOUS

'Zoom previous' tool facilitates user to go to the previous zoom level of map. This tool can be used only User has worked on more than a static map view for a browser session.

**Steps:**

1. Click on the 'Zoom Previous' tool available in tool bar.



- Application will zoom to the previous view of the current view.

#### **7.1.2.10. ZOOM NEXT**

'Zoom Next' tool facilitates users to go to the next extent of map. This tool can be used only if the 'Zoom Previous' tool is already used.

**Steps:**

- Click on the 'Zoom Next' tool available in tool bar.



- Application will zoom to the next view of current view which user has visited earlier.

#### **7.1.2.11. FULL ZOOM**

'Full Zoom' tool facilitates users to zoom to full extent of current project.

**Steps:**

- Click on 'Full Zoom' tool available in tool bar.



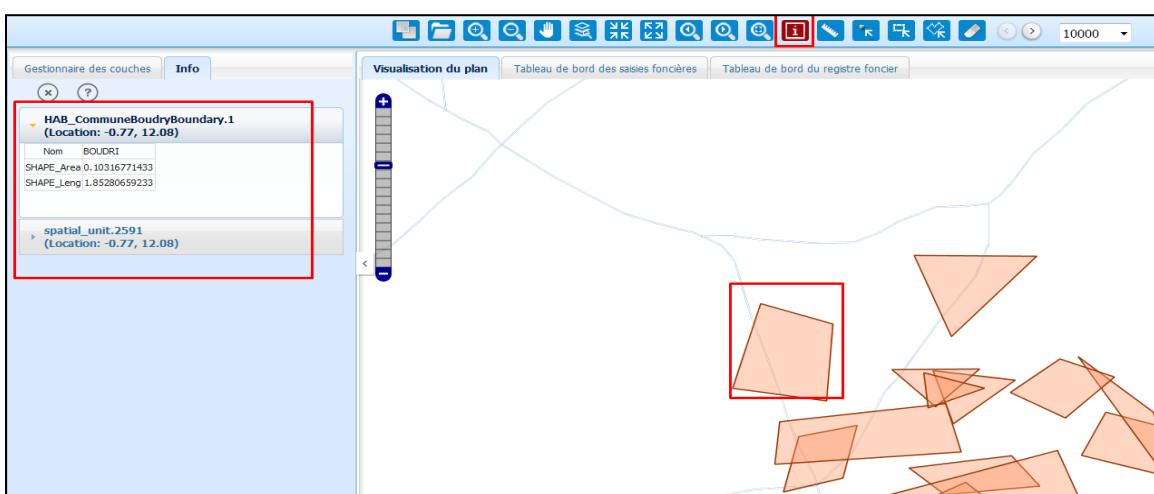
- Application will zoom in/out the map according to current extent, to take map to project's extent.

#### **7.1.2.12. MAP INFO**

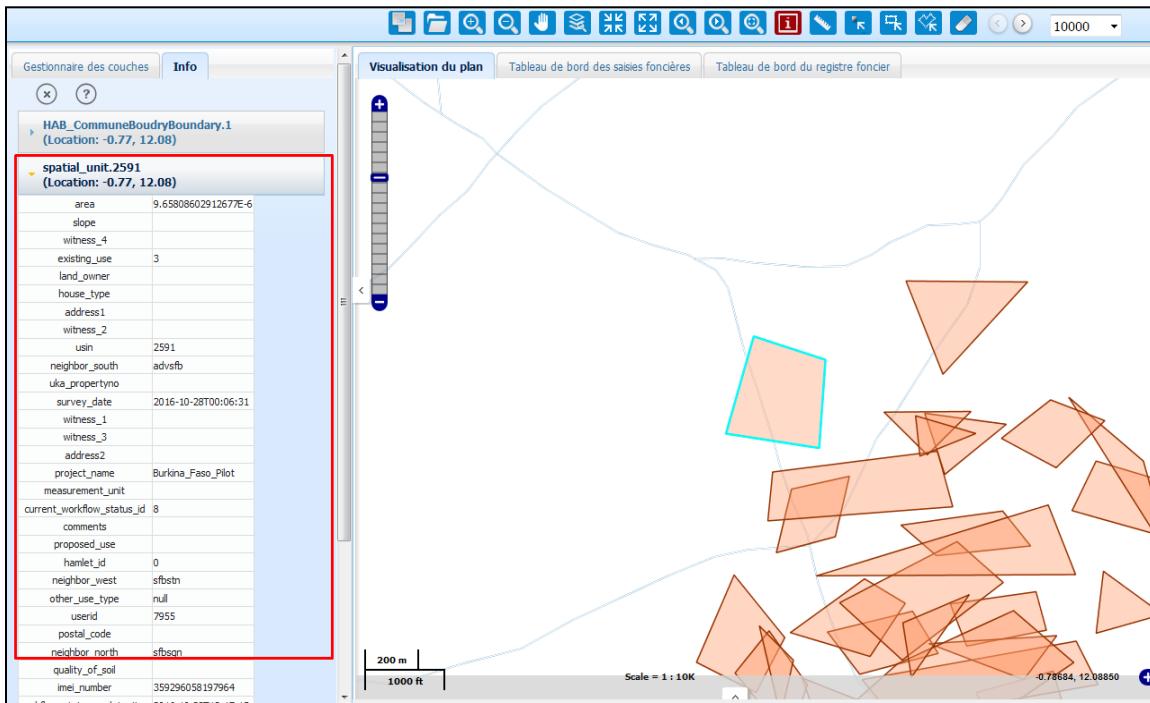
'Info' tool facilitates users to see the attributes of a parcel by clicking on it.

**Steps:**

- Zoom to a parcel available on map.



2. Click on 'Info' tool available in tool bar. Info tool will be enabled.
3. Now click on a desired feature.
4. Application opens a new tab 'Info' in left panel and attribute details of specified parcel will be displayed in 'Info' tab.



### 7.1.2.13. MEASURE

'Measure' tool facilitates user to measure a desired length or area. On click of 'Measure' tool available in tool bar. Application will show 'Measure' tab on left panel. That will provide different tools to measure length or area on map.

These tools are listed below

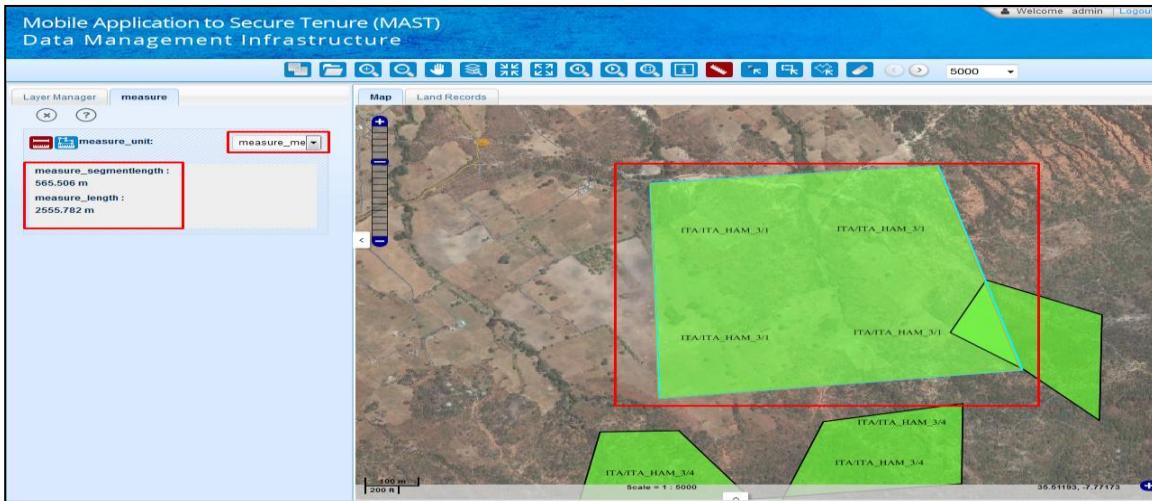
- Length
- Area

#### Steps:

1. Click on 'Length' tool (if area tool clicked earlier) and select required unit from drop down list available in 'Measure' tab on left panel.
2. Click on 'Length' tool. By default, 'Length' tool will be selected.

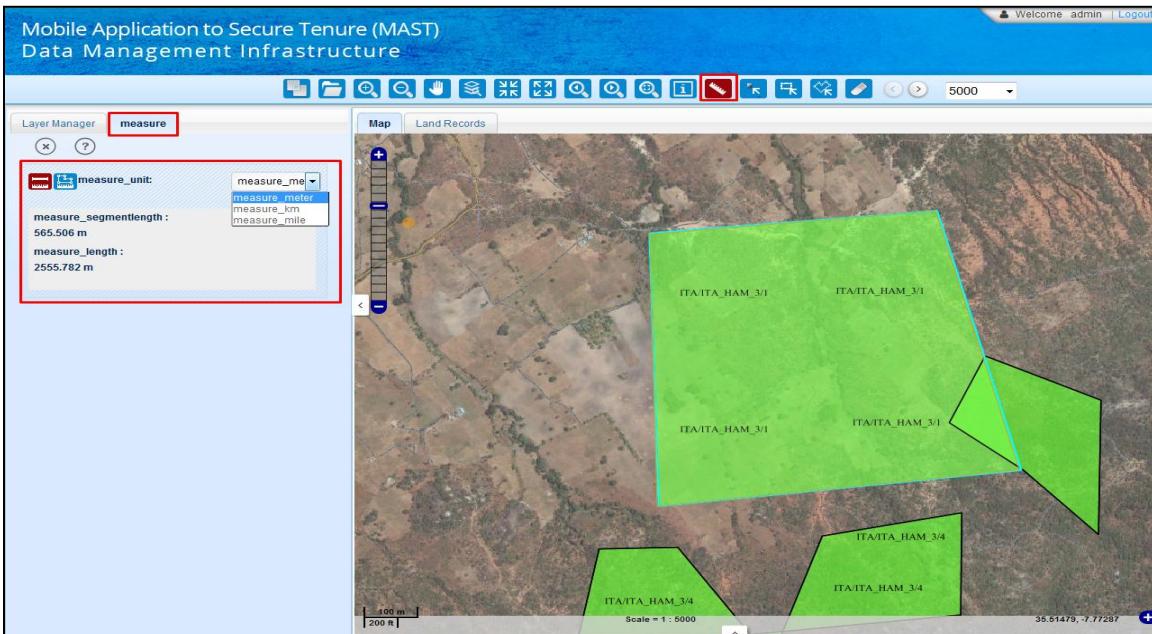


3. Draw a line as required for measuring the length (double click to complete the line).
4. User can create more than one segment in a line to measure a length of line with multiple nodes.



5. As user draws first segment the segment length and length will be same but on drawing second segment, application will show the current segment's length as 'Segment Length' and total length of the line will be shown as 'Length'.

To measure area, Click on 'Area' tool. Click on at least three locations on map. Application will display area covering all specified point on map. Area will be displayed in selected area unit.



#### 7.1.2.14. SELECT

'Select' tool facilitates user to select single feature of active layer.

**Steps:**

Zoom map to such scale that the layer's features should be visible.

1. Click on 'Select Feature' tool available in tool bar.



2. Click on the parcel to be selected. The parcel gets highlighted on map canvas and attributes of selected parcel will be shown in the result panel.

#### 7.1.2.15. SELECT BY RECTANGLE

'Select by Rectangle' tool facilitates user to select multiple parcels by drawing a rectangle on map.

**Steps:**

1. To select parcels of a layer, make that layer active by clicking on that layer in layer manager.
2. Draw a rectangle on required location to select the parcels.
3. To draw a rectangle, click on map and without leaving the mouse button drag and release the button to complete the rectangle.
4. On completion of rectangle, results panel pops-up and show the details of the parcels selected (intersected with the drawn rectangle).
5. Now user can use the tools available on result panel on selected parcels.
6. To clear the selection, click on clear tool.
7. If no parcel lies within the drawn rectangle, application will show a pop-up message "No Records Found". Click 'Ok' on this message.

#### 7.1.2.16. SELECT BY POLYGON

'Select by Polygon' tool works similar as 'Select by Rectangle' tool but in this, instead of rectangle user has to draw a polygon on map canvas to select a parcels.

**Steps:**

1. Click on 'Select by Polygon' tool available in tool bar.



2. Draw a polygon on desired location in map.
3. To draw a polygon, click on map and add nodes to create polygon.
4. Double click to complete the polygon.
5. As user creates the polygon, application pops-up the result panel with the selected parcels details in tabular format.
6. To unselect the parcels, click on clear.

### 7.1.2.17. CLEAR

'Clear' tool facilitates users to clear the selection of parcels on map. It also allows user to clear color thematic and to clear results from the result panel also.

## **Steps:**

1. Click on the 'Clear' tool available in tool bar.



2. Application will clear all the records from result panel and if features are highlighted due to selection, application will clear them too. If some color thematic is used for features it also clears the color thematic too.

## 7.1.2.18. SEARCH

'Search' tool facilitates users to search parcels based on their attribute values within whole map or in defined extent boundary. It provides options to search parcels under a specific boundary and also this tool facilitates user to search parcels with attributes having similar value.

## **Steps:**

1. Click on search tool available in tool bar.



2. 'Search' tab will be displayed in left panel along with input options like Search, Layer and Fields and 'Search' button. 'Extent Boundary' and 'Type Options' sections will be available.

Gestionnaire des couches

**Rechercher**

(x) (?)

**Rechercher**

**Couche**

Please Select

**Champs**

Please Select

> Extent Boundary

> Type Options

Exact       Similar

**Search**

3. Enter the value in 'Search' input box.
4. Select the layer from 'Layer' drop-down, corresponding values will be populated in 'Fields' drop down.
5. Select field value from corresponding drop-down.
6. In the drop-down list there is an option available as 'All'. User selects 'All' for the fields then application will search for the results in all the fields of selected layer.
7. User does not select any of the options from 'Extent Boundary' and 'Type Options' and clicks on 'Search' button. Application will search the result in entire layer with 'Exact' option as default.
8. If entered value matches with attribute values, application will pop-up the result panel with the searched parcels' attributes.
9. Now For the same search user can specify type option as 'Similar' (Note: Similar option does not work for numeric values)
10. If type option is chosen as 'Similar', application will show all the results which are similar to the entered value.

Users can also search features within a defined boundary.

1. Click on 'Search' tool and specify the attribute value in Search text box.
2. Select Layer and field in corresponding drop downs.
3. Click on 'Extent Boundary' link. Two tools Polygon and Rectangle will be shown to user.
4. Click on Polygon tool draw a polygon on the map canvas.
5. Click on the type options link and specify type as 'Exact' or 'Similar'.
6. Click on 'Search' button. If entered value matches with some of the features' attribute value of specified layer and field inside the drawn polygon, application will pop-up the result panel with the details of these features.
7. If the entered value does not match with any features attribute of the specified layer and field, application shows a pop-up message of no record found. Click 'Ok' to exit from the message.
8. Similarly user can search features inside an extent boundary by drawing a rectangle on map canvas using 'Rectangle' tool.

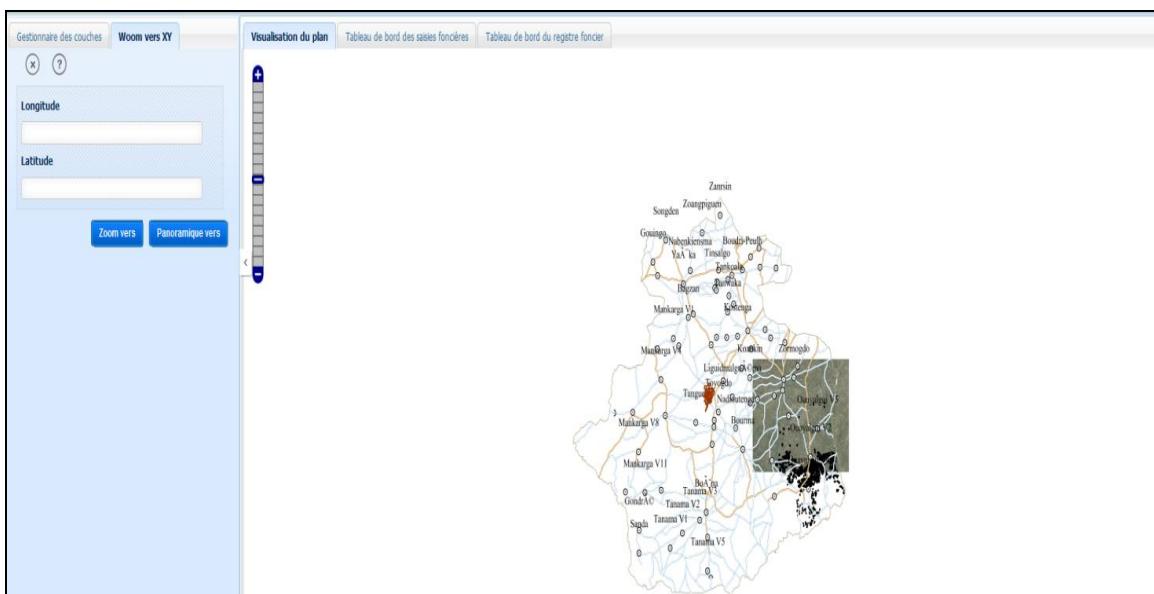
#### **7.1.2.19. ZOOM TO XY**

'Zoom to XY' tool facilitates users to zoom to a location of known coordinates on the map canvas. This tool also facilitates user to pan the map to specified coordinates.

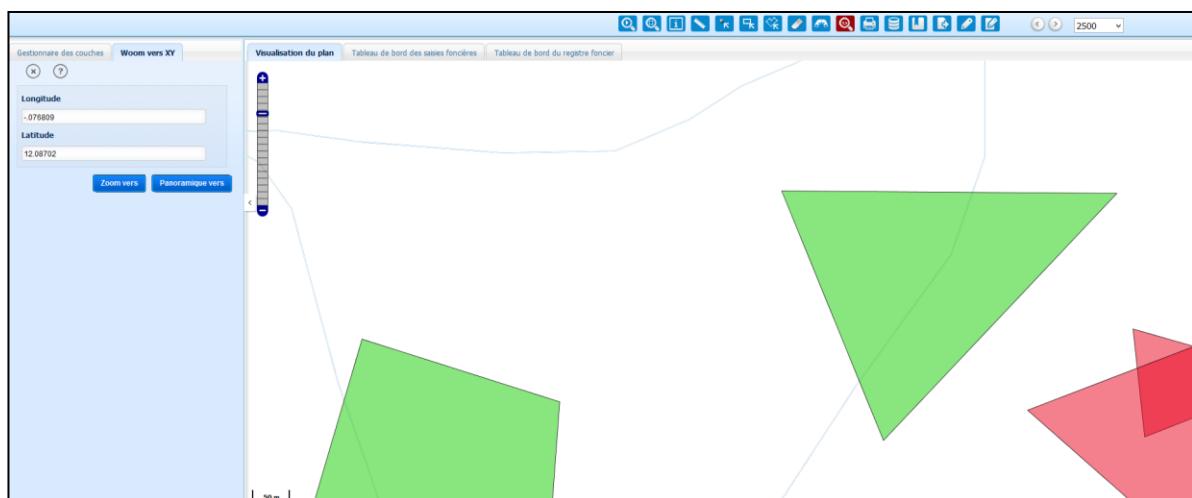
1. Click on the 'Zoom to XY' tool available in tool bar.



2. Application will open a new tab on left panel as 'Zoom to XY'. The tab contains two input boxes: 'Easting' and 'Northing' and two buttons: 'Zoom To' and 'Pan To'.
3. Enter corresponding 'Easting' and 'Northing' coordinates in input boxes.
4. Click on 'Zoom to' button.



5. Map extent will be changed and application will zoom in the map to the specified location pointed by entered coordinates. A marker will be placed on map showing the location of entered coordinates.



6. Instead of click on 'Zoom To' button, User click on 'Pan to' button.
7. Map extent will remain same and application will pan the map to the specified location pointed by entered coordinates. A marker will be placed on map showing the location of entered coordinates.

#### **7.1.2.20. QUERY BUILDER**

'Query Builder' tool facilitates user to query parcels according to the attributes values, for this purpose application allows many operators to be used. User can make selection through the query builder and search other layer's details around the selected features by using the relate option of query builder.

##### **Steps:**

Click on the 'Query Builder' tool available in tool bar.



Application opens a new tab 'Query' in left panel. This tab consists of two buttons: 'Help' and 'Close' in upper right corner, below of them one drop down list box 'Select Layer' is there. Then it has three drop-down list boxes: 'Fields', 'Operators' and 'Values'. Below to Values list box 'See More' link is there. The Values list box can have a list of 100 values at a time so to add more values to it one has to click on the see more link. It adds hundred more values for the selected attributes on every click on that link until the attribute all attribute values are added. A drop down box 'Load Query' is there. This list box consists of the list queries saved by the user earlier. And user can select a query from the list. Then the query tab has a text box 'Where Clause' in which user can see the query and the selected fields, operators and field's values will be updated here automatically while selecting from respective list above. Above this text box a link 'Clear' is there to clear all the selected details from the where clause text box and from the fields, operators and values list boxes. Below to where clause text box a link 'Save Query' is there to save a query of user for future use. As Clickon this link it expands with two text boxes: 'Query Name' and 'Query Description'. At the bottom, query tab has two buttons: 'Save Query' and 'Run Query'. 'Save Query' button is used with the 'Save Query' link to save the query details. And 'Run Query' button is used to run the query which is shown in where clause. Refer the figure below.

**(Note: 'Not' operator should be used before the field name (for example: NOT objected=10, it will select the result which has not object as 10))**

#### **7.1.2.21. RUN QUERY**

'Run Query' facilitates user to run a correctly build query.



To simply run a query:

1. Select layer from the drop- down list on which query is desired.
2. Select field from 'Fields' list box
3. Select operator from 'Operators' list box.
4. Selected 'Fields' and 'Operator' will be populated in 'Where Clause' text area.
5. Write the field value in 'Where Clause' text area.
6. User can create a query in which more than one field and more than an operator is used.
7. User can see the whole query in the 'Where Clause' text box.
8. If the query is all correct then click on the 'Run Query' button.
9. Application will pops-up the result panel with the queried features' details on it.
10. Now user can clear the where clause text box by clicking on clear link.

OBJECTID	Nom	Statut	Clcommune	Clprovince	Clcrepon	EPoste	Ecole	EQuartierne	EPolice	Edouane	EControle	EHealth	EQuarantair	EOAm
361033	Bagzan	VILLAGE_ADMINI	0	0	0	0	0	0	0	0	0	0	0	0

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### 7.1.2.22. SAVE QUERY

'Save Query' facilitates user to save query which is going to be used frequently or may be used in future.

#### Steps:

1. Select layer, fields, and operator and Write the field value in 'Where Clause' text area.  
Click on 'Save Query' link.
2. Enter the query name in 'Query Name' text box and enter the description of query in 'Description' text box.

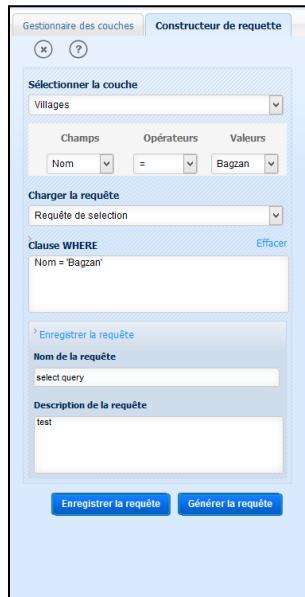


Figure 28 Save Query

3. Click on 'Save Query' button. Application will shows a pop-up message on successfully saving the query to the server.



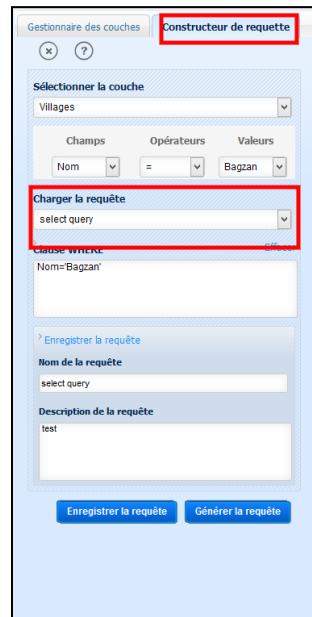
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### 7.1.2.23. LOAD QUERY

'Load Query' facilitates user to run a saved query.

1. Select the layer for which query is saved.
2. Query belonging to selected layer will be populated in 'Load Query' drop down.



3. Select the saved query from the drop-down list from 'Load Query' list box, application will show the query in where clause.
4. Click on 'Run Query' button. The results will be shown in results panel.

OBJECTID	Nom	Statut	CLcommune	CLprovince	CLregion	EPoste	Ecole	Eendarme	EPolice	Eosiane	Econtrole	Ehoital	Equantair	EOAn
361833	Bagzan	VILLAGE_ADMIN	0	0	0	0	0	0	0	0	0	0	0	0

#### 7.1.2.24. BOOKMARK

'Bookmarks tool' facilitates users to save a particular area of interest of map canvas for future reference. This also facilitates user to manage and use available bookmarks. .

##### Steps:

1. Click on 'Bookmark' tool available in tool bar.
2. Application will open a new tab 'Bookmark' in left panel. This tab contains one button as star to add new bookmark on top-left, tow more button like any other tool in right-top: 'Help' and 'Close'. Below to these tools the tab contains the list of previously saved bookmarks with tool links: 'Zoom' and 'Remove'.

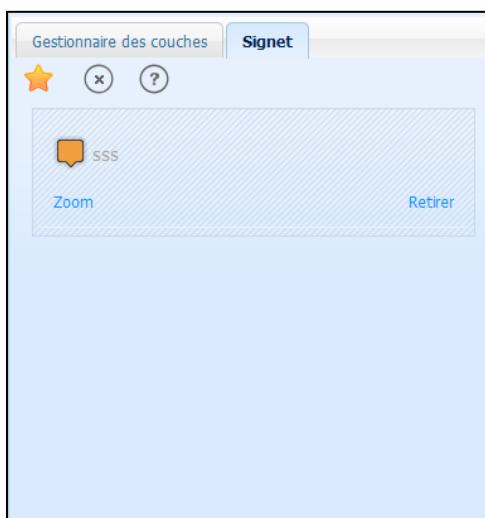
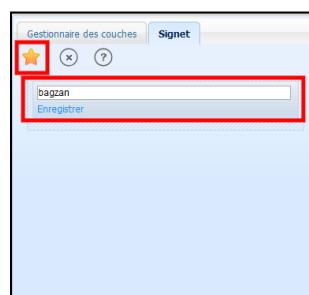


Figure 29 Bookmark

#### 7.1.2.25. CREATE BOOKMARK

1. 'Create Bookmark' facilitates user to create a new bookmark.
2. Click on bookmark tool.
3. In bookmark tab click on the star shaped button, application shows a text box below the tool with a link 'Save'.
4. Now set the map view to the required extent on required zoom level.
5. Enter the name of the new bookmark on the text box.



6. Click on the link 'Save'. Application will save the bookmark to the server and the saved bookmark will be shown in the bookmark list.



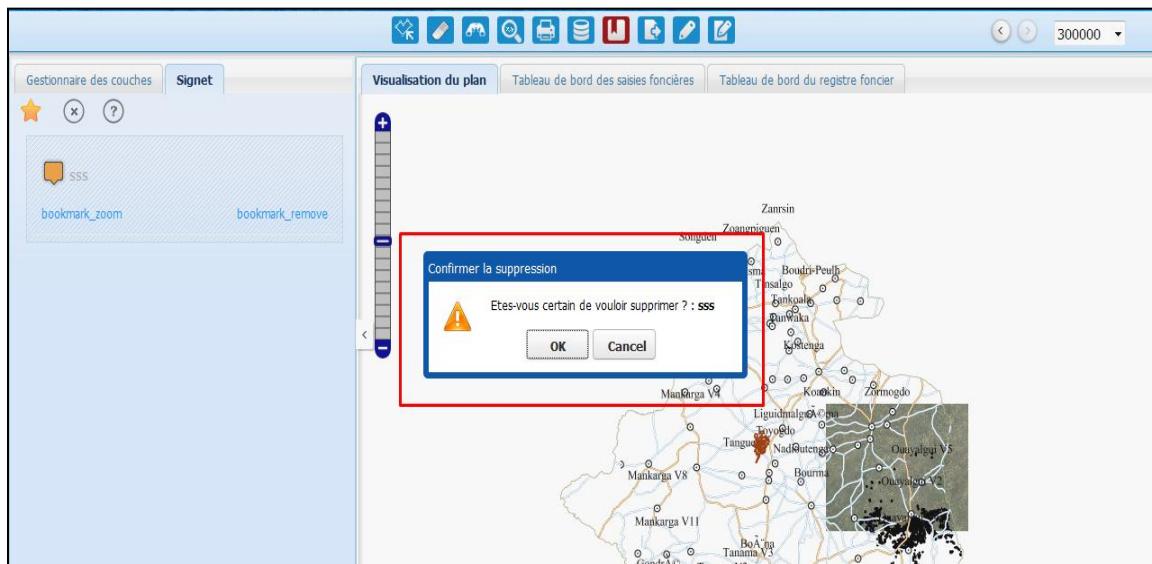
7. This bookmark can be used in future to go that extent and location.

#### 7.1.2.26. ZOOM TO BOOKMARK

To go to a previously saved bookmark, click on the link 'Zoom' below the saved bookmark. Application will set the map view to the bookmark's extent.

#### 7.1.2.27. REMOVE BOOKMARK

User can remove a saved bookmark by clicking on the link 'Remove' below of that bookmark. Application pops-up the confirmation message. Click 'Ok' to remove the bookmark or click 'Cancel' to exit from the message without removing the bookmark.



### 7.1.2.28. EXPORT DATA

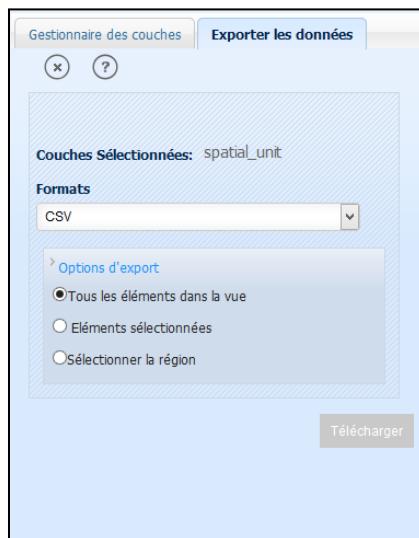
'Export Data' tool facilitates user to export data of selected land records in excel sheet. Data of all the key attributes will be exported to the excel sheet for filtered land records.

#### Steps:

1. Click on 'Export Data' tool available in tool bar.



2. Application will open a new tab on left panel as 'Export'. This tab contains one drop down: 'Formats' and accordion names 'Export Options' along with 'Download' button.
3. Select the format in which, data is to be exported.
4. Select any of the Export option like - 'All Features in View', 'Selected Features', 'Select Region'.



5. Click on Download button.
6. Application will invoke 'Save As' dialogue. Save the data on local drive.

### 7.1.2.29. EDITING

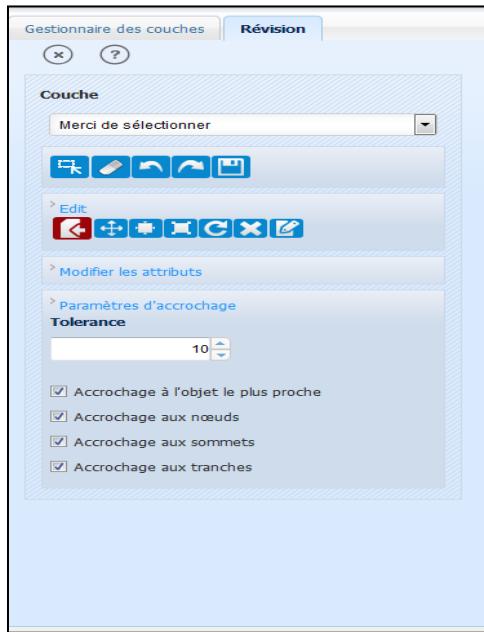
'Edit' functionality facilitates users to create new feature in selected layer. Using this tool, user can create new parcel only using direct editing feature. For creation/editing of other features, user needs to select features from the application.

It also allows users to edit features of a layer. User can reshape, resize, move, rotate and delete features under editing functionality. Users are also allowed to edit attributes of features of selected layer.

#### Steps:

1. Click on 'Edit' tool available in tool bar.

2. Application shows a new tab 'Editing' in the left panel. This tab displays active layer's name on the top, on which all the editing will be done. Below of this five tools: 'Select', 'Clear', 'Undo', 'Redo' and 'Save' are there. Below of these tools tab has four links:
- Create: to create new parcel.
  - Edit: to edit existing Parcel.
  - Edit Attributes: shows attributes fields and allows to edit attributes of parcel.
  - Snap Settings: allows users to set snapping options to avoid gaps and overlaps.



#### 7.1.2.30. GENERAL TOOLS

**Select** : This tool is used to select features for editing or snapping (selection of features changes them from WMS to WFS, since WMS features are not editable). To select feature/features, click on 'Select' tool and draw a rectangle on map at required location. The features of selected layer, covered by that rectangle will get selected.

**Clear** : This tool is used to remove features from the selection.

**Undo** : The undo tool allows user to undo the last activity in editing (except attribute editing).

**Redo** : Redo tool can be used after the use of undo tool. It redo the activity that was last undone by user.

**Save** : Save tool allows users to save all the editing made by user. After editing features users must have to click on save button to remain the changes done.

#### 7.1.2.31. EDIT

Edit functionality contains a list of tools to edit an existing feature. When Clickon the 'Edit' link these tool be shown to user, refer figure below.



To use the editing tools, user has to select the layer first whose features will be edited.

**Import Feature:** Import tool allows user to import feature from the Cosmetic layer to selected layer. A markup can be imported to selected layer if the selected markup is layer compatible feature i.e. the selected markup geometry must be as the selected layer's geometry. To import a feature, click on import tool and click on that markup feature. Then click on 'Save' tool. Now that markup can be seen in the selected layer.

**Move:** Move tool facilitates users to move a selected feature to a desired location on map.

1. To move a feature, make its layer as active layer.
2. Click on 'Edit' link.
3. Click on select tool and select a feature by drawing a rectangle on map. The selected features will be highlighted.
4. Click on 'Move' tool.
5. Click on the required feature among the selected features. Application shows a node.
6. Click on that node and without releasing the mouse button, move that node to required location. Then click in save button. Here user can use 'Undo' tool before saving the changes.

**Resize:** Resize tool allows users to change the size of a feature (except points). For resizing a feature:

1. Click on 'Edit' link. Select parcel by 'Select' tool.
2. Click on 'Resize' tool in edit and click on the feature. Application shows a node for resizing.
3. Click on that node and without releasing mouse button move the node towards to feature to make the feature smaller or move away from the feature to make its size larger and release mouse button on desired size.
4. Click on 'Save' button to save the changes.

**Reshape:** Reshape tool allows users to change the shape of the features (except point features). In reshape tool user can move an existing vertex of the feature or insert a new vertex or delete an existing vertex.

1. Click on 'Select' tool and select that feature. Now click on 'Reshape' tool.
2. Click on that features. All the vertices will highlighted with that feature.
3. Now user can click any of the vertices and move it to a required location.
4. To insert a new vertex, user has to click on the mid-point of two vertices and move it required location. Midpoint of every segment is also highlighted but with lower visibility.
5. To delete a vertex from the feature, keep the cursor on that vertex and press 'Ctrl+Delete'.
6. After doing all the changes, click on 'Save' button to save editing.

**Rotate:** Rotate tool allows users to rotate a feature (except point features) clockwise or anti-clockwise.

1. Click on 'Select' tool and select that feature.
2. Click on 'Rotate' tool and click on selected feature. A node will be shown in the map near to feature.
3. Click on that node and without releasing mouse button move it clockwise or anti-clockwise as required. Release the mouse button after rotating feature to required angle.
4. Now click on 'Save' button to save the changes.

**Remove Feature:** Remove  feature functionality allows users to delete a feature permanently from layer. User can remove any type of features (point/polygon/line).

1. Click on 'Select' tool and select that feature.
2. Click on 'Edit' link (if not expanded) and select 'Remove Feature' tool.
3. Now click on that feature. Application will show a pop-up message to confirm the deletion of that feature.
4. Click 'Ok' to confirm or 'Cancel' to go back without deleting feature.
5. As Click 'Ok' on that pop-up message, that feature will be highlighted.
6. Now click on 'Save' tool to remove the feature from layer and server.

**Edit Attribute:** Edit attribute  tool allows users to edit attributes of a selected feature. The fields of a selected feature will be shown in the link 'Edit Attributes' in the left panel. User can expand this link by clicking on it. Or it will be expended by application while using edit attribute tool.

To edit attributes of a feature, click on 'Select' tool and select feature on map.

1. Click on 'Edit Attribute' tool and click on the selected feature.
2. Application will expand the link 'Edit Attributes' (if it is not opened already). All the editable attributes will be shown in that list.
3. Edit required fields by clicking on the text boxes of those attributes.
4. After editing the attributes, click on 'Apply' button on the 'Edit Attributes' link.
5. And to save these changes, click on 'Save' button.

### 7.1.2.32. EDIT ATTRIBUTES

This link is related to 'Edit' and 'Create' links. And this functionality can be used only User want to edit attributes of a feature through 'Edit Attributes' tool in 'Edit' link or when user want to create a new feature. The two uses of this functionality are described below:

When user creates a new feature under any layer, After creating feature successfully if Click on 'Edit Attributes' link all the fields of the feature will shown to user according to attribute fields of that layer. User can fill the attribute details of new feature here.

After completing the attribute filling, click on 'Apply' button and then click on 'Save' tool.

If mandatory fields are not filled, on clicking 'Apply' button these fields will be marked with pink color. The new feature will be saved with the attribute details.

The other use of this functionality is to edit attributes of existing features:

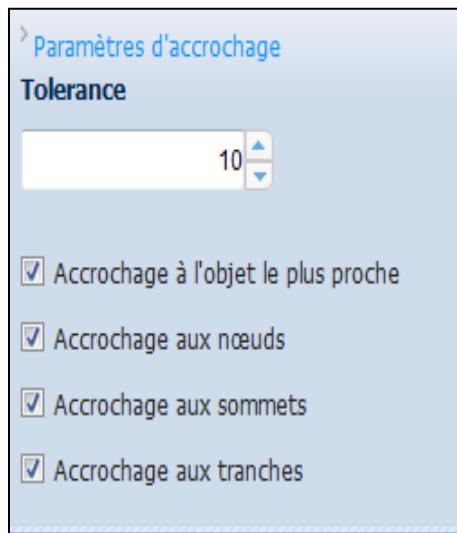
1. To edit attributes, select the feature first by 'Select' tool.
2. Click on 'Edit Attributes' tool.

3. Click on that feature. Attributes of that feature will be shown in left panel in 'Edit Attributes' link.
4. Edit desired fields then click on 'Apply' button.
5. Click on 'Save' tool to save all these changes.

#### 7.1.2.33. SNAP SETTINGS

Snap Settings functionality allows user to avoid gaps and overlaps while creating features or reshaping a feature. To activate the snap functionality the features should be in selected mode to those a new feature or an editing feature going to be snapped. Click on the 'Snap Settings' and applications shows a 'Tolerance' spin box where user can set (decrease/increase) the tolerance for snapping. Below this, four options are available with checkbox as shown in figure 85. The list of options is:

- Snap to Closest Feature
- Snap to Nodes
- Snap to Vertices
- Snap to Edges



By default all these four options are marked.

User can set the options according to his preferences. User wants to snap on larger tolerance, increase the tolerance value for snapping in the spin box.

1. First of the four options is to deactivate all other snap settings. User un-marks the check box of 'Snap to Closest Feature' check box, all the check boxes will be unmarked.
2. 'Snap to Nodes' is used to snap to nodes of nearest line feature under specified tolerance.
3. 'Snap to Vertices' can be used to snap to the vertices of a feature under given tolerance.
4. 'Snap to Edges' allows user to snap to edges of nearest feature under the specified tolerance.
5. To remove snapping, either set the tolerance at 0 or unmark the check box of 'Snap to Closest Feature'.

## 7.2.LAND RECORDS DASHBOARD

This functionality facilitates user to view all the data of Land Rights information for the selected project. Dashboard provides a consolidated view of the land rights data collected in the field and also enable the user to take further review and approval actions on it.

'Land Record' tab provide a search facility that enable user to search a record according to parcel stage.

'Land Records' tab provides a search facility that enables user to search a spatial record based on its 'Application number', 'PV Number', 'APFR Number', 'Name' and 'Application type'.

'Land Record' tab provides a facility that enable user generate the report according to gender, tenure and villages.

User can take following actions on a particular land data record by clicking on respective icon for that particular action in front of the record.

- Application number
- PV Number
- First name
- Last name
- Parcel type
- Application type
- Application stage
- Application status
- Comments
- Action

### Steps:

1. Login into the system with role as 'Administrator / Project Manager/SFR'. Click on 'Launch' link available in 'Data Management' section.
2. 'Land Management Tools' page will be displayed. Click on 'Land Records' tab.

### 7.2.1. SEARCH LAND RECORD

Land Records tab provides a search facility that enable user to search a spatial record based on its 'Application Number', 'PV Number', 'APFR Number', 'Name' and 'Application type'

The screenshot shows the 'Tableau de bord des saisies foncières' (Dashboard of cadastral entries) section of the MAST application. At the top, there are tabs for 'Visualisation du plan', 'Tableau de bord des saisies foncières' (selected), and 'Tableau de bord du registre foncier'. Below the tabs, there are filters for 'Project Name' (Burkina\_Faso\_Pilot), 'Pays' (Burkina Faso), 'Région' (PLATEAU CENTRAL), 'Province' (GANZOURGOU), and 'Commune' (BOUDRY). A search bar includes fields for 'Numéro de demande', 'Numéro de PV', 'Numéro d'APFR', 'Nom', and 'Type de demande', along with buttons for 'Rechercher' (Search) and 'Effacer' (Clear). The main area displays a table of search results with columns: Résumé de la procédure, Numéro de demande, Numéro de PV, Prénom, Nom, Parcel Type, Type de demande, Etape de la demande, Etat de la demande, Commentaires, and Action. The table lists several entries, each with a checkbox in the first column and various status and action details. Navigation buttons at the bottom include 'Filtrer' (Filter) and 'Générer le rapport' (Generate report).

**Steps:**

1. Enter valid input in any of the corresponding input option like 'Application number', 'PV Number', 'APFR Number', 'Name' and 'Application type'
2. Click on Search button.

3. Search result will be populated in grid.
4. Click on 'Clear' button, Search result will be clear from the grid and all available records will be populated.

### 7.2.2. WORKFLOW SUMMARY

This functionality facilitates user to search the parcel according to stage.

### 7.2.3. ACTIONS ON LAND RECORDS

This functionality facilitates user to view all the data of Land Rights information for the selected project. Dashboard provides a consolidated view of the land rights data collected in the field and also enable the user to take further review and approval actions on it.

User can take following actions on a particular land data record by clicking on respective icon for that particular action in front of the record.

- Application number
- PV Number
- First name
- Last name
- Parcel type
- Application type
- Application stage
- Application status
- Comments
- Action

#### **7.2.4. WORKFLOW STAGE (NEW PARCEL)-**

After the parcel is synced from mobile it displays in tabular form in 'Land Record Dashboard' as 'new' stage.

## **Steps:**

## New Stage-

1. Click on 'Action' button.

Visualisation du plan		Tableau de bord des saisies foncières		Tableau de bord du registre foncier																																																															
Project Name	Pays	Région	Province	Commune																																																															
Burkina_Faso_Pilot	Burkina Faso	PLATEAU CENTRAL	GANZOURGOU	BOUDRY																																																															
Numéro de demande	Numéro de PV	Numéro d'APFR	Nom	Type de demande																																																															
				Merci de sélectionner	<input type="button" value="Rechercher"/> <input type="button" value="Effacer"/>																																																														
<b>Résumé de la procédure</b>		<table border="1"> <thead> <tr> <th>Numéro de demande</th><th>Numéro de PV</th><th>Prénom</th><th>Nom</th><th>Parcel Type</th><th>Type de demande</th><th>Etape de la demande</th><th>Etat de la demande</th><th>Commentaires</th><th>Action</th></tr> </thead> <tbody> <tr> <td></td><td></td><td>ashu frncg</td><td>sjsjsej</td><td>New</td><td>Individuelle</td><td>Nouveau</td><td>Nouveau</td><td>Commentaires</td><td><input type="button" value="Action"/></td></tr> <tr> <td></td><td></td><td>aaaa1</td><td>djdj</td><td>New</td><td>Collective</td><td>Nouveau</td><td>Nouveau</td><td>Commentaires</td><td><input type="button" value="Action"/></td></tr> <tr> <td></td><td></td><td>dvhfj</td><td>dgrhtsj</td><td>New</td><td>Individuelle</td><td>Nouveau</td><td>Nouveau</td><td>Commentaires</td><td><input type="button" value="Action"/></td></tr> <tr> <td></td><td></td><td>sfge</td><td>xvdb</td><td>New</td><td>Individuelle</td><td>Nouveau</td><td>Nouveau</td><td>Commentaires</td><td><input type="button" value="Action"/></td></tr> <tr> <td></td><td></td><td>wthwh</td><td>dtndy</td><td>New</td><td>Individuelle</td><td>Nouveau</td><td>Nouveau</td><td>Commentaires</td><td><input type="button" value="Action"/></td></tr> </tbody> </table>						Numéro de demande	Numéro de PV	Prénom	Nom	Parcel Type	Type de demande	Etape de la demande	Etat de la demande	Commentaires	Action			ashu frncg	sjsjsej	New	Individuelle	Nouveau	Nouveau	Commentaires	<input type="button" value="Action"/>			aaaa1	djdj	New	Collective	Nouveau	Nouveau	Commentaires	<input type="button" value="Action"/>			dvhfj	dgrhtsj	New	Individuelle	Nouveau	Nouveau	Commentaires	<input type="button" value="Action"/>			sfge	xvdb	New	Individuelle	Nouveau	Nouveau	Commentaires	<input type="button" value="Action"/>			wthwh	dtndy	New	Individuelle	Nouveau	Nouveau	Commentaires	<input type="button" value="Action"/>
Numéro de demande	Numéro de PV	Prénom	Nom	Parcel Type	Type de demande	Etape de la demande	Etat de la demande	Commentaires	Action																																																										
		ashu frncg	sjsjsej	New	Individuelle	Nouveau	Nouveau	Commentaires	<input type="button" value="Action"/>																																																										
		aaaa1	djdj	New	Collective	Nouveau	Nouveau	Commentaires	<input type="button" value="Action"/>																																																										
		dvhfj	dgrhtsj	New	Individuelle	Nouveau	Nouveau	Commentaires	<input type="button" value="Action"/>																																																										
		sfge	xvdb	New	Individuelle	Nouveau	Nouveau	Commentaires	<input type="button" value="Action"/>																																																										
		wthwh	dtndy	New	Individuelle	Nouveau	Nouveau	Commentaires	<input type="button" value="Action"/>																																																										
<input checked="" type="checkbox"/> Tout sélectionner <input checked="" type="checkbox"/> Nouveau <input checked="" type="checkbox"/> Valider et créer la demande <input checked="" type="checkbox"/> Traiter la demande <input checked="" type="checkbox"/> Envoyer pour avis <input checked="" type="checkbox"/> Préparer pour la validation <input checked="" type="checkbox"/> Publier <input checked="" type="checkbox"/> Créer l'APFR <input checked="" type="checkbox"/> Signature et délivrance <input checked="" type="checkbox"/> Enregistrer  <input type="checkbox"/> Existant		<table border="1"> <tr> <td>1</td><td>To 5</td><td>of 20</td><td></td></tr> </table>				1	To 5	of 20																																																											
1	To 5	of 20																																																																	
<input type="button" value="Filtrer"/> <input type="button" value="Générer le rapport"/>		<div style="border: 2px solid red; padding: 5px;"> <a href="#">Visualiser le plan</a>  <a href="#">Visualiser les attributs</a>  <a href="#">Modifier les attributs</a>  <a href="#">Valider</a>  <a href="#">Rejeter</a>  <a href="#">Visualiser le numéro parcellaire</a> </div>																																																																	

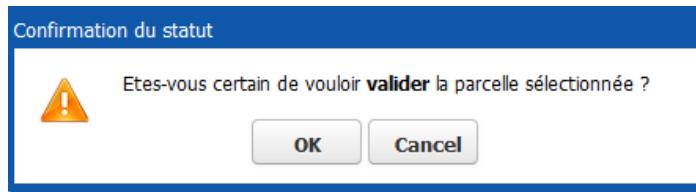
2. Click on 'Approve' button.
  3. Application displays a 'Dialog box' where user can fill the comments and clicks on 'Ok' button.

**Confirmation du statut**

**Commentaires optionnel**

Valider
Annuler

- Application displays a 'Confirmation Box', Click on 'Ok' button, the parcel gets 'Approved' and moves to next stage (validate and generate application) and also generate the application number.



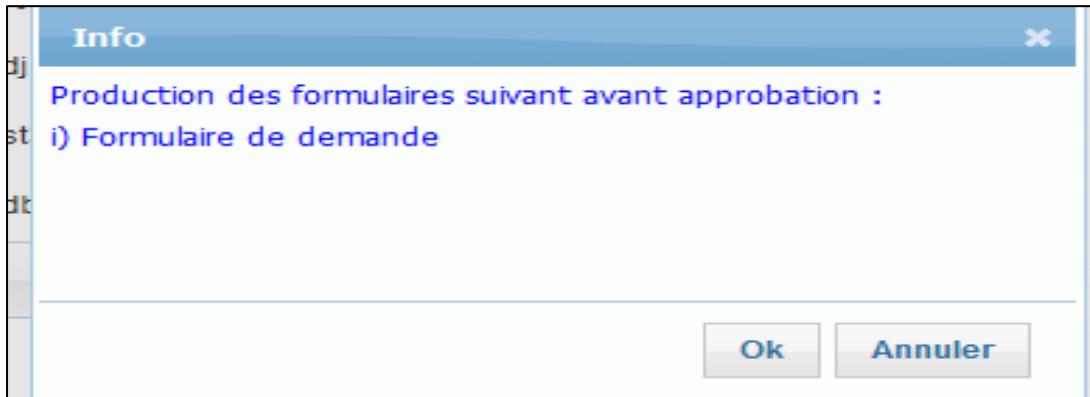
5. Click on 'Cancel' application will not perform any action on the parcel.

### **Validate and generate application Stage-**

1. Click on 'Action' button.

2. Click on 'Reject' option then application displays a comments box(mandatory fields)
  3. User fills the comments box and clicks on 'Reject' button then application displays an alert message for status confirmation.
  4. User click on ok button then application move on previous stage.

- Click on 'Approve' button for Approve the parcel after this application display a notification for generate the form-



- Click on 'Ok' button application display a comments box (optional) in which user fill the comments and then click on 'Ok' button.
- Click on 'Ok' application display a notification for Approve the parcel
- Click on 'Ok' button then parcel move on next stage (process application).
- Click on 'Cancel' application will not perform any action on the parcel.

### Process Application Stage-

- Click on 'Action'.

Numéro de la demande	Numéro de PV	Prénom	Nom	Parcel Type	Type de demande	Etape de la demande	Etat de la demande	Commentaires	Action
Ouay0032	test11	test31	New	Individuelle	Traiter la demande	En attente	En attente	Commentaires	Action
Quay0031	aaaa1	djdj	New	Collective	Valider et créer la demande	En attente	En attente	Commentaires	Action
Quay0030	sfg	xvdb	New	Individuelle	Valider et créer la demande	En attente	En attente	Commentaires	Action
Quay0029	ashu existi g1	last1	Existing	Collective	Nouveau	Rejetée	Nouveau	Commentaires	Action
	ashu frencc	sjjsjej	New	Individuelle	Nouveau	Nouveau	Nouveau	Commentaires	Action

- Click on 'Approve' application display a comments box (optional) in which user fill the comments and then click on 'Ok' button.
- After click on 'Ok' application display a notification for Approve the parcel

4. Click on 'Ok' button on notification then parcel move on to next stage (Send for Opinion).
5. Click on 'Cancel' application will not perform any action on the parcel.
6. Click on 'Reject' action
7. Application display a notification for Reject the parcel with 'Ok' and 'Cancel' button
8. Click on 'Ok' parcel move back to previous stage.

### **Send for Opinion Stage-**

1. **DPI login** and click on land registry dashboard.

Numéro de demande	Numéro de PV	Prénom	Nom	Parcel Type	Type de demande	Etape de la demande	Etat de la demande	Commentaires	Action
Guay0032	test11	test31	New	Individuelle	Envoyer pour avis	En attente	Commentaires		Action

2. Click on 'Approve', application displays a comments box (Mandatory) in which user fill the comments and then click on ok button.
3. Clicks on 'Ok' ,application displays a notification to Approve the parcel
4. Click on 'Ok' button on notification then parcel move on to next stage (Prepare for Adjudication).
5. Click on 'Cancel' application will not perform any action on the parcel.
6. Click on Reject action
7. Application displays a notification for Reject the parcel with 'Ok' and 'Cancel' button
8. Click on 'Ok' button and then parcel move back to previous stage.

## Prepare for Adjudication Stage -

1. Click on 'Action'

Project Name	Pays	Région	Province	Commune
Burkina_Faso_Pilot	Burkina Faso	PLATEAU CENTRAL	GANZOURGOU	BOUDRY
Numéro de demande	Numéro de PV	Numéro d'APFR	Nom	Type de demande
				Merci de sélectionner
<input type="button" value="Rechercher"/> <input type="button" value="Effacer"/>				
<b>Résumé de la procédure</b> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Select All</li> <li>+ Nouveau</li> <li><input checked="" type="checkbox"/> Nouveau</li> <li><input checked="" type="checkbox"/> Valider et créer la demande</li> <li><input checked="" type="checkbox"/> Traiter la demande</li> <li><input checked="" type="checkbox"/> Envoyer pour avis</li> <li><input checked="" type="checkbox"/> Préparer pour la validation</li> <li><input checked="" type="checkbox"/> Publier</li> <li><input checked="" type="checkbox"/> Crée IAPFR</li> <li><input checked="" type="checkbox"/> Signature et délivrance</li> <li><input checked="" type="checkbox"/> Enregistrer</li> <li>+ Existantes</li> </ul>				
Numéro de demande	Numéro de PV	Prénom	Nom	Parcel Type
Ouay0032	test11	test31	New	Individuelle
Ouay0031	aaaaa1	djdj	New	Collective
Ouay0030	sfge	xvdb	New	Individuelle
Ouay0029	ashu existi g1	last1	Existing	Collective
	ashu frenchg	sjsjsjej	New	Individuelle
				Nouveau
				Nouveau
<input type="button" value="Commentaires"/> <input type="button" value="Action"/>				
<input type="button" value="Valider"/> <input type="button" value="Rejeter"/> <input type="button" value="Créer le plan"/> <input type="button" value="Créer les formulaires"/>				
<input type="button" value="Commentaires"/> <input type="button" value="Action"/>				
<input type="button" value="1"/> To <input type="button" value="5"/> Of <input type="button" value="37"/> <input type="button" value="Next"/>				

2. Click on 'Approve' application displays a notification to generate form with 'Ok' and 'Cancel' button.
3. Click on 'Ok' button application display a comments box (optional) in which user fill the comments and then click on 'Ok' button.
4. Click on 'Ok', application displays a notification to approve the parcel.
5. Click on 'Ok' button on notification then parcel move on next stage (publish) and also generate the PV Number.
6. Click on 'Cancel' application will not perform any action on the parcel.
7. Click on 'Reject' action
8. Application displays a notification for Reject the parcel with 'Ok' and 'Cancel' button
9. Click on 'Ok' button then parcel move to previous stage.

## **Publish Stage -**

1. PV number will be shown at 'Publish' stage. Click on 'Action'

The screenshot shows the MAST application dashboard. At the top, it displays the project name 'Burkina\_Faso\_Pilot', country 'Burkina Faso', region 'PLATEAU CENTRAL', province 'GANZOURGOU', and commune 'BOUDRY'. Below this, there are tabs for 'Visualisation du plan', 'Tableau de bord des saisies foncières' (selected), and 'Tableau de bord du registre foncier'. A search bar shows '300000'. The main area is a grid of land records. One record, 'Ouay0014', has its 'Numéro de PV' field highlighted with a red box. To the right of the grid, a context menu is open for this record, also with a red box around it. The menu items are 'Validier' (Validate) and 'Rejeter' (Reject). The 'Validier' button is highlighted with a blue box.

Résumé de la procédure	Numéro de demande	Numéro de PV	Prénom	Nom	Parcel Type	Type de demande	Etape de la demande	Etat de la demande	Commentaires	Action
<input checked="" type="checkbox"/> Select All	Ouay0032	Ouay0014	test11	test31	New	Individuelle	Publier	En attente	Commentaires	Action
<input type="checkbox"/> Nouveau	Ouay0031		aaaa1	djij	New	Collective	Valider et créer la demande	En attente	Commentaires	Action
<input checked="" type="checkbox"/> Nouveau	Ouay0030		sfg	xvdb	New	Individuelle	Valider et créer la demande	En attente	Commentaires	Action
<input checked="" type="checkbox"/> Valider et créer la demande	Ouay0029		ashu existi g1	last1	Existing	Collective	Nouveau	Rejetée	Commentaires	Action
<input checked="" type="checkbox"/> Traiter la demande			ashu frencg	sjjsjej	New	Individuelle	Nouveau	Nouveau	Commentaires	Action
<input checked="" type="checkbox"/> Envoyer pour avis										
<input checked="" type="checkbox"/> Préparer pour la validation										
<input checked="" type="checkbox"/> Publier										
<input checked="" type="checkbox"/> Créer IAPFR										
<input checked="" type="checkbox"/> Signature et délivrance										
<input checked="" type="checkbox"/> Enregistrer										
<input type="checkbox"/> Existant										

2. Click on 'Approve', application display a comments box (optional) in which user fill the comments and then click on ok button.
3. Application display a notification for Approve the parcel.
4. Click on 'Ok' button on notification then parcel move on to next stage (Generate APFR).
5. Click on 'Cancel' application will not perform any action on the parcel.
6. Click on 'Reject' action.
7. Application displays a notification for reject the parcel with 'Ok' and 'Cancel' button.
8. Click on 'Ok' button then parcel move to previous stage.

## Generate APFR Stage -

1. Click on 'Action' .

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de Gestion des Données

Bienvenue ! user\_SFR Déconnexion

Administrateur Configuration mobile

300000

Visualisation du plan Tableau de bord des saisies foncières Tableau de bord du registre foncier

Project Name Pays Région Province Commune

Burkina\_Faso\_Pilot Burkina Faso PLATEAU CENTRAL GANZOURGOU BOUDRY

Numéro de demande Numéro de PV Numéro d'APFR Nom Type de demande

Merci de sélectionner Rechercher Effacer

Résumé de la procédure

- Select All
- Nouveau
- Valider et créer la demande
- Traiter la demande
- Envoyer pour avis
- Préparer pour la validation
- Publier
- Créer IAPFR
- Signature et délivrance
- Enregistrer
- Existant

Numéro de demande	Numéro de PV	Prénom	Nom	Parcel Type	Type de demande	Etape de la demande	Etat de la demande	Commentaires	Action
Ouay0032	Ouay0014	test11	test31	New	Individuelle	Créer IAPFR	En attente	Commentaires	Action
Ouay0031		aaaa1	djdj	New	Collective	Valider et créer la demande	En attente	Validier	
Ouay0030		sfge	xvdb	New	Individuelle	Valider et créer la demande	En attente	Rejeter	
Ouay0029		ashu existi g1	last1	Existing	Collective	Nouveau	Rejetée	Créer les formulaires	
		ashu frencg	sjsjej	New	Individuelle	Nouveau	Nouveau	Commentaires	Action

1 To 5 Of 37

2. Click on 'Approve', application display a comments box (optional) in which user fill the comments and then click on ok button.
3. Application display a notification for Approve the parcel .
4. Click on 'Ok' button on notification then parcel move on next stage (Signature and Delivery stage).
5. Click on 'Cancel' application will not perform any action on the parcel.
6. Click on 'Reject' action
7. Application displays a notification for Reject the parcel with 'Ok' and 'Cancel' button
8. Click on 'Ok' button then parcel move to previous stage

## Signature and delivery Stage -

1. Click on 'Action' .

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de Gestion des Données

Bienvenue ! user\_SFR Déconnexion

Administrateur Configuration mobile

300000

Visualisation du plan Tableau de bord des saisies foncières Tableau de bord du registre foncier

Project Name Pays Région Province Commune

Burkina\_Faso\_Pilot Burkina Faso PLATEAU CENTRAL GANZOURGOU BOUDRY

Numéro de demande Numéro de PV Numéro d'APFR Nom Type de demande

Merci de sélectionner Rechercher Effacer

Résumé de la procédure

- Select All
- Nouveau
- Valider et créer la demande
- Traiter la demande
- Envoyer pour avis
- Préparer pour la validation
- Publier
- Créer IAPFR
- Signature et délivrance
- Enregistrer
- Existant

Numéro de demande	Numéro de PV	Prénom	Nom	Parcel Type	Type de demande	Etape de la demande	Etat de la demande	Commentaires	Action
Ouay0032	Ouay0014	test11	test31	New	Individuelle	Signature et délivrance	En attente	Commentaires	Action
Ouay0031		aaaa1	djdj	New	Collective	Valider et créer la demande	En attente	Validier	
Ouay0030		sfge	xvdb	New	Individuelle	Valider et créer la demande	En attente	Rejeter	
Ouay0029		ashu existi g1	last1	Existing	Collective	Nouveau	Rejetée	Info paiement	
		ashu frencg	sjsjej	New	Individuelle	Nouveau	Nouveau	Info signature	

1 To 5 Of 37

2. Click on 'Approve', application display a comments box (optional) in which user fill the comments and then click on ok button.
3. Application display a notification to Approve the parcel
4. Click on 'Ok' button on notification then parcel move on next stage (Registered).
5. Click on 'Cancel' application will not perform any action on the parcel.
6. Click on 'Reject' action
7. Application displays a notification to Reject the parcel with 'Ok' and 'Cancel' button
8. Click on 'Ok' button then parcel move to previous stage.
9. Approved parcel moves from 'Signature and delivery' stage to 'Register' and will be shown on 'Land registry dashboard' page and application status is final.

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de Gestion des Données

Bienvenue ! user\_SFR Déconnexion

Administrateur Configuration mobile

300000

Visualisation du plan Tableau de bord des saisies foncières Tableau de bord du registre foncier

Numéro de demande Numéro de PV Numéro d'APFR Nom Type de demande

Merci de sélectionner Rechercher Effacer

Numéro de demande	Numéro de PV	Numéro d'APFR	Prénom	Nom	Type de demande	Etape de la demande	Etat de la demande
Ouay0032	Ouay0014	Ouay0017	test11	test31	Individual	Register	Final
Ouay0028	Ouay0013	Ouay0016	eth	dgi	Individual	Register	Final
Ouay0026		Ouay0015	adg	adg	Collective	Register	Final
Ouay0023		Ouay0012	existing	In	Individual	Register	Final

1 To 4 Of 4

## 7.2.5. WORKFLOW STAGE (EXISTING)

### New Stage -

1. User selects Existing parcel and clicks on 'Action' button.

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de Gestion des Données

Bienvenue ! admin Déconnexion

Administrateur Configuration mobile

300000

Visualisation du plan Tableau de bord des saisies foncières Tableau de bord du registre foncier

Project Name pays Région Province Commune

Burkina\_Faso\_Pilot Burkina Faso PLATEAU CENTRAL GANZOURGOU BOUDRY

Numéro de demande Numéro de PV Numéro d'APFR Nom Type de demande

Merci de sélectionner Rechercher Effacer

Résumé de la procédure	Numéro de demande	Numéro de PV	Prénom	Nom	Type de parcelle	Type de demande	Etape de la demande	Etat de la demande	Commentaires	Action
Tout sélectionner			Existant	test	Existant	Collective	Nouveau	Nouveau	Commentaires	Action
Nouveau										
Existant										
<input checked="" type="checkbox"/> Nouveau										
<input type="checkbox"/> Valider le titre										
<input type="checkbox"/> Traiter l'APFR										
<input type="checkbox"/> Créer l'APFR										
<input type="checkbox"/> Enregistrer										

Filtrer Générer le rapport

Visualiser le plan Visualiser les attributs Modifier les attributs Valider Rejeter

2. Click on 'Approve', application display a comments box (optional) in which user fill the comments and then click on ok button.
3. Application display a notification to Approve the parcel
4. Click on 'Ok' button on notification then parcel move to next stage (Validate Title).
5. Click on 'Cancel' application will not perform any action on the parcel.
6. Click on 'Reject' action
7. Application displays a notification for Reject the parcel with 'Ok' and 'Cancel' button
8. Click on 'Ok' button then application status changed to 'reject'.

### **Validate Title Stage -**

1. Clicks on 'Action' button.
2. Click on 'Approve', application display a comments box (optional) in which user fill the comments and then click on ok button.
3. Application display a notification for Approve the parcel
4. Click on 'Ok' button on notification then parcel move on next stage (Process APFR).

5. Click on 'Cancel' application will not perform any action on the parcel.
6. Click on 'Reject' action
7. Application displays a notification for Reject the parcel with 'Ok' and 'Cancel' button
8. Click on 'Ok' button then parcel move to previous stage.

## **Process APFR Stage -**

1. Clicks on 'Action' button.

2. Click on 'Approve', application display a comments box (optional) in which user fill the comments and then click on ok button.
3. Application display a notification for Approve the parcel
4. Click on 'Ok' button on notification then parcel move to next stage (Generate APFR).
5. Click on 'Cancel' application will not perform any action on the parcel.
6. Click on 'Reject' action
7. Application displays a notification for Reject the parcel with 'Ok' and 'Cancel' button
8. Click on 'Ok' button then parcel move to previous stage.

## **Generate APFR -**

1. Clicks on 'Action' button.

2. Click on 'Approve', application display a comments box (optional) in which user fill the comments and then click on ok button.
3. Application display a notification for Approve the parcel
4. Click on 'Ok' button on notification then parcel move on next stage (Registered).
5. Parcel will be displayed in 'land registry dashboard page'
6. Click on 'Cancel' application will not perform any action on the parcel.
7. Click on 'Reject' action
8. Application displays a notification for Reject the parcel with 'Ok' and 'Cancel' button
9. Click on 'Ok' button then parcel move to previous stage.

The screenshot shows the MAST application interface. At the top, there's a header with 'Application Mobile de Sécurisation Foncière (MAST)' and 'Infrastructure de Gestion des Données'. Below the header is a toolbar with various icons. The main area has three tabs: 'Visualisation du plan', 'Tableau de bord des saisies foncières' (which is selected), and 'Tableau de bord du registre foncier'. The central part of the screen displays a table of land parcels. The columns include: 'Résumé de la procédure', 'Numéro de demande', 'Numéro de PV', 'Prénom', 'Nom', 'Type de parcelle', 'Type de demande', 'Etape de la demande', 'Etat de la demande', 'Commentaires', and 'Action'. A sidebar on the left contains a tree view with items like 'Tout sélectionner', 'Nouveau', 'Existant', 'Nouveau', 'Valider le titre', 'Traiter IAPFR', 'Créer IAPFR', and 'Enregistrer'. The 'Enregistrer' item is checked. The 'Ouay0041' row is highlighted with a red border. At the bottom of the table area, there are buttons for 'Filtrer' and 'Générer le rapport'.

### 7.2.6. ACTION

Application display following action-

- View Map
- View Attribute
- Edit Attribute
- Approve
- Reject
- Generate Map
- Generate Form
- Payment info
- Signature info
- View parcel number

**1. View Map**-Click on 'view map' application will zoom the parcel on map.

View map display in following stage-

- New
- Validate and generate application
- Send for opinion
- Register
- Validate title

**2. View Attribute-**

- View Attribute display in following stage-
  - a) New stage
  - b) Validate and generate application
  - c) Send for opinion
  - d) Register
  - e) validate title
- In view attribute action user view the following attribute-
  - a) General info
  - b) Natural person
  - c) Person of interest(In case of collective)
  - d) Multimedia
  - e) Map coordinates

The screenshot shows a modal dialog titled "Visualiser les attributs". The "Info générale" tab is active. The form contains the following fields:

- Numéro de demande:** --
- Numéro de PV:** --
- Numéro d'APFR:** --
- Date de la demande:** [empty input]
- Nature de la demande:** [dropdown menu: Merci de sélectionner]
- Numéro village:** [empty input]
- Superficie de la parcelle:** 232235.63
- Utilisation actuelle:** [dropdown menu: Sylvicole]
- Autre utilisation:** null
- Numéro de la parcelle:** [empty input]
- Numéro d'enregistrement (optionnel):** [empty input]
- Type de mutation:** [dropdown menu: Merci de sélectionner]
- Date contradictoire:** [empty input]
- Date d'effet de la publication:** [empty input]
- Date de fin de la publication:** [empty input]
- Date de reconnaissance des droits:** [empty input]
- Voisin Nord:** [checkbox checked]
- Voisin Sud:** [checkbox checked]

**Annuler** button is located at the bottom right.

### 3. Edit Attribute-

- Click on 'Edit attribute', Application displays attributes in editable mode with update and cancel button.
- Edit Attribute display in following stage-
  - f) New stage
  - g) Validate and generate application
  - h) validate title
- User can update General Info, Natural Person, Person of Interest and Multimedia.

**Modifier les attributs**

Info générale	Personne physique	Ayant-droit	Multimédia	Coordonnées du plan
Numéro de demande	Numéro de PV	Numéro d'APFR		
--	--	--		
Date de la demande	Nature de la demande	Numéro village		
<input type="text"/>	<input type="button" value="Merci de sélectionner"/>	<input type="text"/>		
Superficie de la parcelle	Utilisation actuelle	Autre utilisation		
<input type="text" value="232335.63"/>	<input type="button" value="Sylvicole"/>	<input type="text"/>		
Numéro de la parcelle	Numéro d'enregistrement (optionnel)	Type de mutation		
<input type="text"/>	<input type="text"/>	<input type="button" value="Merci de sélectionner"/>		
Date contradictoire	Date d'effet de la publication	Date de fin de la publication		
<input type="text"/>	<input type="text"/>	<input type="text"/>		
Date de reconnaissance des droits	Voisin Nord	Voisin Sud		
<input type="text"/>	<input type="text"/>	<input type="text"/>		
<input type="button" value="Mise à jour"/> <input type="button" value="Annuler"/>				

- Click on natural person tab-

**PLATEAU CENTRAL GARDONIGOU BOUDRY**

**Modifier les attributs**

Info générale	Personne physique	Ayant-droit	Multimédia	Coordonnées du plan			
ID	Prénom	Nom	Nom du père	Genre	Référence de la carte d'identité	Nature du pouvoir	Modifier
3487	sfge	xvdb	ab db	Homme	affe		

- Click on 'Update link'

The screenshot shows the 'Personne physique' edit dialog. The 'Attributs maîtres' tab is selected. The form contains fields for Prénom (test1), Deuxième prénom (test2), Nom (test3), Date de naissance (03/12/2016), and Lieu de naissance (degr). At the bottom right of the dialog are 'Mise à jour' and 'Annuler' buttons. A red box highlights the 'Modifier' button in the top right corner of the dialog.

- User updates Person's details and click on 'update button', an alert box of successful message will be shown of data saved successfully.

The screenshot shows a success alert dialog with the message 'Données enregistrées avec succès'. At the bottom right of the dialog is an 'OK' button. A red box highlights the 'OK' button.

- Click on 'Person of Interest' tab, User edit and delete a 'Person of Interest'(In case of collective)

The screenshot shows the 'Ayant-droit' tab of the 'Personne physique' list. The table includes columns: ID, Prénom, Deuxième prénom, Nom, Genre, Adresse, Référence de la carte d'identité, 'Modifier' (Edit) button, and 'Supprimer' (Delete) button. A red box highlights the 'Supprimer' button and the '+ Ajouter' (Add) button at the bottom right of the table.

- User adds 'Person of Interest' by clicking on 'Add' button (In case of collective).

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de

Modifier les attributs

Ajant-droit

ID	Prénom	Deuxième prénom	Nom	Genre	Adresse	Référence de la carte d'identité	Modifier	Supprimer
4175	demo	demo	demo	Homme	demo			

**Ajant-droit**

Prénom: demo  
Deuxième prénom: demo  
Nom: demo  
Genre: Homme  
Adresse: demo

+ Ajouter

Enregistrer Annuler

Mise à jour Annuler

- After filling all the required details Click on 'Save' button 'POI' will be added and an alert box of successful message will be shown.

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de

Modifier les attributs

ID	Prénom	Deuxième prénom	Nom	Genre	Adresse	Référence de la carte d'identité	Modifier	Supprimer
4175	demo	demo	demo	Homme	demo			
4179	demo1	demo1	demo1	Homme	demo1			

**Alerte**

Données enregistrées avec succès

OK

+ Ajouter

Mise à jour Annuler

- User delete the 'Person of Interest' by clicking on 'Delete' icon

Application Mobile de Sécurisation Foncière (MAST)  
Infrastructure de

Modifier les attributs

ID	Prénom	Deuxième prénom	Nom	Genre	Adresse	Référence de la carte d'identité	Modifier	Supprimer
4175	demo	demo	demo	Homme	demo			
4179	demo1	demo1	demo1	Homme	demo1			

**Confirmer la suppression**

Etes-vous certain de vouloir supprimer ? : demo1

OK Cancel

+ Ajouter

Mise à jour Annuler

- User click on Multimedia tab and view the multimedia details.
- User will perform edit, delete and view action.

The screenshot shows the 'Tableau de bord des saisies foncières' (Dashboard of cadastral entries). On the left, there's a sidebar for 'Résumé de la procédure' (Procedure summary) with various status checkboxes. The main area has tabs: 'Visualisation du plan', 'Tableau de bord des saisies foncières' (selected), and 'Tableau de bord du registre foncier'. A sub-modal window titled 'Modifier les attributs' (Modify attributes) is open, showing the 'Multimédia' (Multimedia) tab. This tab contains a table with one row for a document named 'mast\_1025\_165432.jpg' from 2016-10-25. The last column of the table has three buttons: 'Modifier' (Edit), 'Supprimer' (Delete), and 'Voir le document' (View document), which are highlighted with a red box.

- Click on 'map coordinate tab'.
- Click on 'Export', it will export coordinate details in csv format.

The screenshot shows the 'Coordonnées du plan' (Map coordinates) tab of the 'Modifier les attributs' (Modify attributes) window. It displays a map with a single orange polygon and a table titled 'Liste de vertex' (List of vertices) showing three coordinates:

PT	X	Y
1	742757.27	1336004.59
2	743011.08	1336113.47
3	742791.64	1335798.21

A red 'Exporter' (Export) button is visible at the bottom right of the table. At the bottom of the window are 'Mise à jour' (Update) and 'Annuler' (Cancel) buttons.

4. **Generate Map**-Click on generate map and generate the following forms
  - Boundary map
  - Area map
  - Land Record form(individual & collective)
  - In case of 'Individual' application display land record for individual.
  - In case of 'Collective' application displays land record for individual as well as collective.
  - User selects the form and click on ok button then system generates the map.

- Generate map display in following stage-
  - Validate and generate application
  - Process Application
  - Send for opinion
  - Prepare for Adjudication
  - Register

Région	Province	Commune	Type de demande	Etape de la demande	Etat de la demande
PLATEAU CENTRAL	GANZOURGOU	BOUDRY	Merci de sélectionner		
Numéro de PV	Nom				
Numéro de demande	Numéro de PV	Préf.	Sélectionner votre choix :		
uay0034	abas	<input checked="" type="radio"/> Croquis de délimitation	Traiter la demande	En attente	
uay0033	ashu	<input type="radio"/> Plan	Valider et créer la demande	Rejetée	
uay0029	ashu	<input type="radio"/> Report des saisies (individuel)	Enregistrer	Final	
	g1		Nouveau	Nouveau	
	skdk		Valider et créer la demande	En attente	
	<den				

## 5. Generate Form-

- Generate Form display in following stage and different-different forms generate according to stages-
  - 'Validate and generate application'- Application form
  - 'Prepare for Adjudication' - Application form, public notice,PV contradictory form.
  - 'Generate APFR'-Payment request letter,APFR Form
  - 'Register'- All forms.

- Click on generate form

The screenshot shows the MAST application interface. A modal dialog titled "Sélectionner Formulaire" is open, listing various form options. The selected option is "APFR(individuel)(Forme 5)". The main application window displays a table of demandes, with one row highlighted. The top right corner shows the user is logged in as "admin".

Type de demande	Etape de la demande	Etat de la demande	Commentaires	Action
Individuelle	Enregistrer	Final	Commentaires	Action
Individuelle	Enregistrer	Final	Commentaires	Action
Individuelle	Enregistrer	Final	Commentaires	Action
Individuelle	Enregistrer	Final	Commentaires	Action

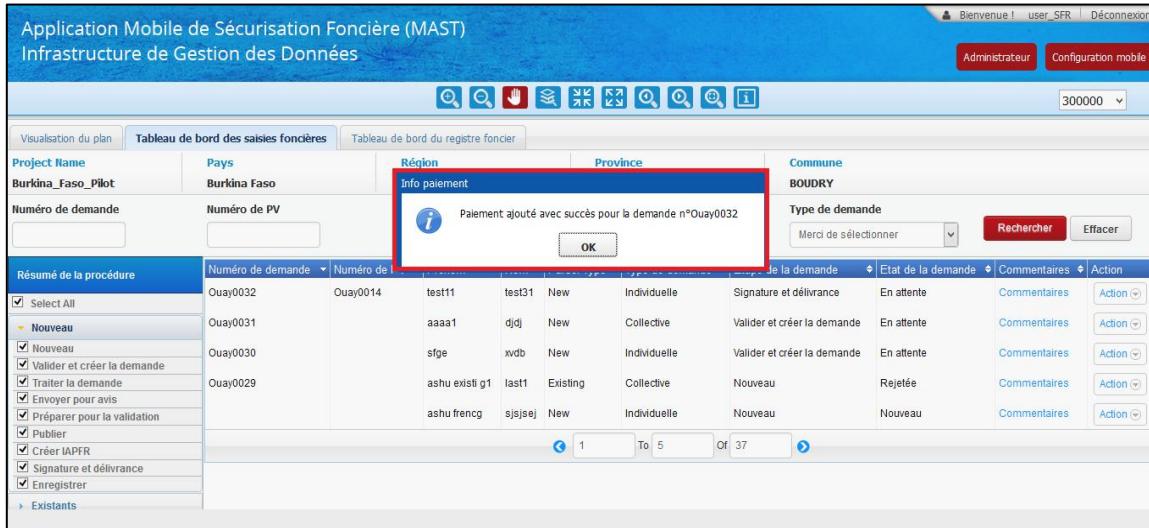
- Selects the form and click on Ok button then application generate the form

## 6. Payment info-

- Payment info display in following stages-
  - Signature and Delivery(New)
  - Generate APFR(Existing)
- Click on Payment info.

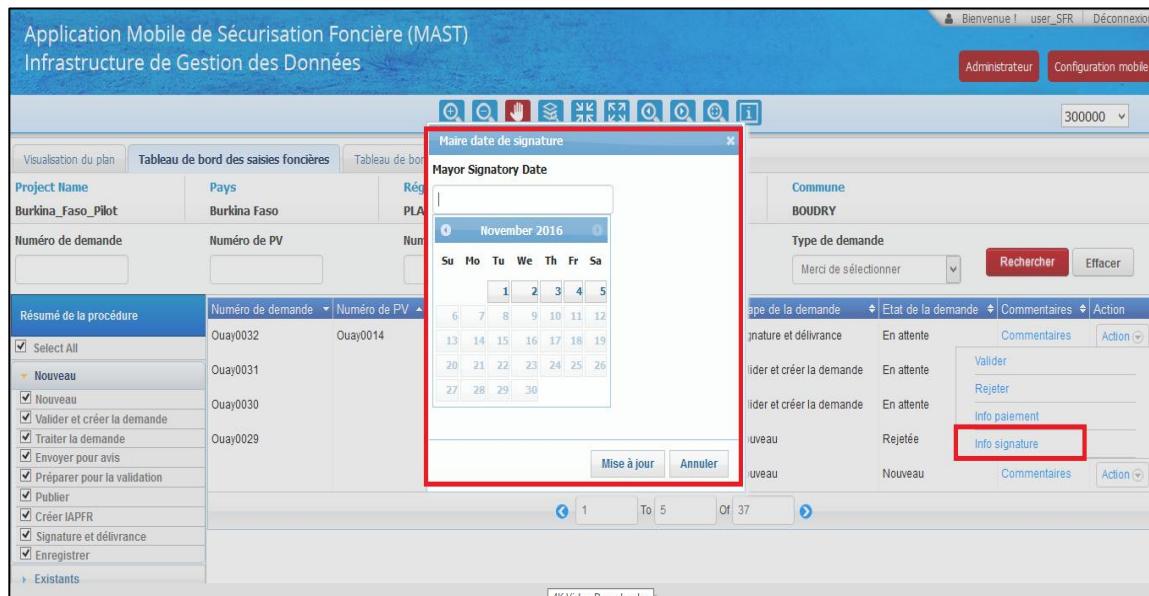
The screenshot shows the MAST application interface with a modal dialog titled "Info paiement" open. The dialog contains fields for "Reçu N°", "Montant", "Date", and "Commentaires", all filled with sample data. The main application window shows a table of demandes, with one row highlighted. The top right corner shows the user is logged in as "admin".

- Fills the payment info form and click on 'Ok' button then application displays a notification box for successful payment with application number.



## 7. Signature info-

- Payment info display in following stages-
  - Signature and Delivery(New)
  - Generate APFR (Existing)
- Click on signature info and select the signature date
- Click on 'Ok' to update signature date.



## 8. View parcel number-

- View parcel number display in following stages-
  - a) New
  - b) Validate and generate application
- Click on 'View parcel number' application display the parcel number.

The screenshot shows the MAST application interface. At the top, it displays 'Bienvenue ! admin Déconnexion' and 'Administrateur Configuration mobile'. Below this is a toolbar with various icons. The main area has tabs: 'Visualisation du plan', 'Tableau de bord des saisies foncières' (selected), and 'Tableau de bord du registre foncier'. A search bar at the top right contains '300000'. The central part of the screen shows a table with columns: 'Project Name' (Burkina\_Faso\_Pilot), 'Pays' (Burkina Faso), 'Région' (PLATEAU CENTRAL), 'Province' (GANZOURGOU), and 'Commune' (BOUDRY). Below this is a summary table for procedures. A modal dialog titled 'Visualiser le numéro parcellaire' is open, showing a table with columns: 'Numéro de demande', 'Numéro de PV', 'Prénom', 'Nom', 'Parcel Type', 'Type de demande', 'Etape de la demande', 'Etat de la demande', 'Commentaires', and 'Action'. It displays data for two parcels: Ouay0030 (Section 20, Lot 000, Numéro 2603) and Ouay0029. The 'Commentaires' column for Ouay0030 is highlighted with a red box. At the bottom of the modal is an 'Ok' button.

### 7.2.7. COMMENTS

'Comments' tool facilitates User to view the comments history of Approved/Rejected parcels.

#### Steps:

1. Click on 'Comments' option associated with the corresponding parcel.

The screenshot shows the MAST application interface. At the top, it displays 'Bienvenue ! user\_SFR Déconnexion' and 'Administrateur Configuration mobile'. Below this is a toolbar with various icons. The main area has tabs: 'Visualisation du plan', 'Tableau de bord des saisies foncières' (selected), and 'Tableau de bord du registre foncier'. A search bar at the top right contains '300000'. The central part of the screen shows a table with columns: 'Project Name' (Burkina\_Faso\_Pilot), 'Pays' (Burkina Faso), 'Région' (PLATEAU CENTRAL), 'Province' (GANZOURGOU), and 'Commune' (BOUDRY). Below this is a summary table for procedures. A table below shows parcels with columns: 'Numéro de demande', 'Numéro de PV', 'Prénom', 'Nom', 'Parcel Type', 'Type de demande', 'Etape de la demande', 'Etat de la demande', 'Commentaires', and 'Action'. Several rows have their 'Commentaires' column highlighted with a red box. At the bottom of the table is a navigation bar with '1 To 5 Of 37'.

2. User can view the comments history according to stage.

The screenshot shows the MAST application interface. At the top, there's a header bar with the title "Application Mobile de Sécurisation Foncière (MAST)" and "Infrastructure de Gestion des Données". Below the header, there are several search and filter icons. On the right side of the header, there are buttons for "Administrateur" and "Configuration mobile". A dropdown menu shows the value "300000".

The main area has tabs: "Visualisation du plan", "Tableau de bord des saisies foncières" (which is selected), and "Tableau de bord du registre foncier".

To the left, there's a sidebar titled "Résumé de la procédure" with a list of checkboxes for various actions like "Nouveau", "Valider et créer la demande", etc. Some checkboxes are checked, while others are not.

The central part of the screen displays a table titled "Historique des commentaires". This table lists comments made by users ("Nom d'utilisateur") on specific dates ("Modification Date"). The columns include "Nom d'utilisateur", "Modification Date", "Étape" (Step), "Action" (Action), and "Commentaires" (Comments). One row is highlighted with a red box:

Nom d'utilisateur	Modification Date	Étape	Action	Commentaires
user_SFR	2016-11-05	Signature et délivrance	Validée	test
user_SFR	2016-11-05	Créer IAPFR	Validée	
user_SFR	2016-11-05	Publier	Validée	ee
user_SFR	2016-11-05	Préparer pour la validation	Validée	sss
user_DPI	2016-11-05	Envoyer pour avis	Validée	tr

Below this table, there's a footer with navigation links and a page number indicator "1 To 5 Of 37".

## 8. APPLICATION FORM

### 8.1.GENERATE FORM

**Application form(Individual)**-In current form all details are rough.

<p>Région de :PLATEAU CENTRAL Province de :GANZOURGOU Commune de :BOUDRY</p> <p>Village de : Ouayalgui V3</p>	 <p>Burkina Faso ***** Unité-Progrès-Justice</p>
<p><b>Formulaire de demande de constatation de possession foncière rurale à titre Individuelle</b> <i>(Art 39 de la loi N°034-2009/AN du 16 juin 2009 portant régime foncier rural)</i> Nº Ouay0050 du <b>10/11/2016</b></p>	
<p><i>Premier volet</i></p> <p>Nature de la demande :</p> <p>Etat civil du <b>requérant individuel</b></p> <p>Nom : <b>koloko</b> Prénom(s) : <b>ablase</b> Date et lieu de naissance : <b>01/01/1944</b> Profession : <b>cultivateur</b> Domicile : <b>Ouayalgui V3</b> Références de la pièce d'identité : <b>ext619 du 22/04/1975</b> Père : <b>koloko poussien</b> Mère : <b>zougrana bilpoko</b> Situation matrimoniale : <b>Marié(e)</b></p> <p>Nature des pouvoirs du requérant : date et lieu de délivrance :</p> <p>Description et désignation du terrain Situation : <b>BOUDRY Ouayalgui V3</b> Superficie : <b>7937.00 ha</b> Limites (<i>indiquer les possesseurs voisins ou les limites naturelles</i>)</p> <p>Nord : <b>ouedrapgo jeanvie</b> Est : <b>bonkongou ousmane</b> Sud : <b>koloko sibiri robert</b> Ouest : <b>kabore isouf</b></p> <p>Fait à <b>BOUDRY</b>, le <b>10/11/2016</b></p> <p>Signature ou empreinte digitale du requérant</p> <p>Signature ou empreinte digitale du témoin</p>	<p><i>Deuxième volet</i></p> <p>Récépissé de la demande Nº <b>Ouay0050</b> ( )</p> <p>Formulée Par M./Mme... <b>koloko ablase</b> Habitant à : <b>Ouayalgui V3</b></p> <p>Aux fins de faire constater ses droits de possession foncière rurale conformément à la loi N°034-2009/AN du 16 juin 2009 sur un terrain sis à : <b>BOUDRY</b> <b>Ouayalgui V3</b> D'une superficie approximative de : <b>7937.00 ha</b> Limites Nord : <b>ouedrapgo jeanvie</b> Est : <b>bonkongou ousmane</b> Sud : <b>koloko sibiri robert</b> Ouest : <b>kabore isouf</b></p> <p>Fait à <b>BOUDRY</b> Le <b>10/11/2016</b></p> <p><i>(Signature du secrétaire de la commission foncière villageoise et cachet s'il en existe)</i></p>

**Application form(Collective)**- In current form all details are rough

Région de : **PLATEAU CENTRAL**

Province de : **GANZOURGOU**

Commune de : **BOUDRY**

Village de : **Ouayalgui V1**



Burkina Faso

\*\*\*\*\*

Unité-Progrès-Justice

### **Mandat pour l'obtention de l'attestation de possession foncière rurale (APFR) à titre collectif**

Nous soussignés, membres de la famille domiciliée à **Ouayalgui V1** dont la liste est jointe en annexe, réunis ce jour **03/11/2016** à **Ouayalgui V1** donnons mandat à M. / Mme **modi** né (e) le **09/12/2016** à **place** pièce d'identité N° **id** du **09/12/2016** de représenter tous les membres, d'agir au nom et pour le compte de la famille susnommée pour accomplir les formalités et actes requis aux fins de la délivrance d'une attestation de possession foncière rurale (APFR) à titre collectif afférente à une terre rurale sise dans le village de **Ouayalgui V1** de la Commune de **BOUDRY**

Fait à **Ouayalgui V1**, le **03/11/2016**

*NB. A faire légaliser par une autorité compétente*

Ont signé ou apposé leurs empreintes digitales, les personnes dont les noms et prénoms suivent :

Nº	Nom et Prénom(s)	Références de la pièce d'identité	Adresse	Signature ou empreinte digitale
1	q q	q	q	

**Public notice-** In current form all details are rough

<b>Région de : PLATEAU CENTRAL</b> <b>Province de : GANZOURGOU</b> <b>Commune de : BOUDRY</b> <b>Village de : Ouayalgui V3</b>	 <b>Burkina Faso</b> ***** Unité-Progrès-Justice
<p style="text-align: center;"><b>AVIS AU PUBLIC</b> <i>(Publicité de la demande de constatation de possession foncière rurale)</i></p> <p><small>(Articles 8 à 11 du Décret N°2010-402 PRES/PM/MAHRH/MRA/MECV/MEF/MATD/ MJ du 29 juillet 2010 portant procédure de constatation de possession foncière rurale des particuliers)</small></p> <p>Sur une demande de constatation de possession foncière rurale d'une terre située dans le village de <b>Ouayalgui V3</b>, le/la président(e) de la commission foncière villageoise dudit village informe la population que M./Mme <b>ablaise koloko</b> domicilié (e) à <b>Ouayalgui V3</b> né (e) le <b>01/01/1944</b> à <b>nedogo</b>, agissant 1) <b>pour son propre compte</b> 2) <b>pour le compte de la famille</b> a demandé la constatation contradictoire de la possession foncière rurale sur une terre Section <b>15</b>, Ilot <b>000</b>, Parcelle <b>2623</b>, Superficie : <b>7937.00 ha</b>.</p> <p>Le terrain objet de la demande est actuellement à usage</p> <ul style="list-style-type: none"><li><input type="radio"/> Agricole</li><li><input type="radio"/> Autre (s) :</li></ul> <p>Il est limité :</p> <ul style="list-style-type: none"><li><input type="radio"/> Au nord par : <b>ouedrapgo jeanvie</b></li><li><input type="radio"/> A l'est par : <b>koloko sibiri robert</b></li><li><input type="radio"/> Au sud par : <b>bonkongou ousmane</b></li><li><input type="radio"/> A l'ouest par : <b>kabore isouf</b></li></ul> <p>Toute personne pouvant faire valoir des droits sur le terrain objet de la demande ou ayant connaissance de faits de nature à affecter ou à remettre en cause la constatation des droits du demandeur est invitée à se manifester auprès du service foncier de la commune de <b>BOUDRY</b></p> <p>Les réclamations, oppositions et réserves sont reçues tous les jours et heures ouvrables de <b>08:00</b> heures à <b>15:00</b> heures jusqu'au <b>13/01/2017</b></p> <p>La constatation publique contradictoire sur le terrain aura lieu le <b>15/01/2017 10:00</b> heures à l'issue de laquelle aucune opposition ou réserve n'est recevable devant la commission foncière villageoise.</p> <p style="text-align: right;">Fait à <b>BOUDRY Ouayalgui V3</b>, le .....</p> <p style="text-align: center;"><b>(Nom, prénom(s) signature et cachet du/de la président(e) ou du/de la secrétaire de la CFV)</b></p>	

## **PV Contradictory form- In current form all details are rough**

(Art. 12 et 13 du Décret N°2010-402 PRES/PM/MAHRH/MRA/MECV/MEF/MATD/ MJ du 29 juillet 2010 portant procédure de constatation de possession foncière rurale des particuliers)

L'an deux mil **2016** et le **10 ,Octobre** sur demande

N° **Ouay0050** de : .....

Nom et Prénoms : **M koloko ablase** Exerçant la profession

de : **cultivateur** domicilié(e) à : De la Commune

de : **BOUDRY** Nous, Président (e) de la

Commission Foncière Villageoise de **Ouayalgui V3**, conformément aux dispositions des articles 12 et 13 du Décret N°2010-402 PRES/PM/MAHRH/MRA/MECV/MEF/MATD/MJ du 29 juillet 2010 portant procédure de constatation de possessions foncières rurale des particuliers, avons fait sur place et publiquement les constatations et vérifications concernant un terrain rural d'une superficie de **7937.00 ha** sis à **Ouayalgui V3** limitié:

Au Nord: **ouedrapgo jeanvie**

A l'Est: **bonkongou ousmane**

Au Sud: **koloko sibiri robert**

A l'Ouest: **kabore isouf**

dont le croquis est joint en annexe,

avons vérifié la qualité du requérant vis-à-vis de la coutume foncière et le contenu exact des droits de **M koloko ablase**

Sommation a été faite autour de ce terrain de relever tous droits opposables à ceux dont nous avons requis d'en effectuer la constatation

Aucune opposition ou réserve n'ayant été faite à nous, ni par les notables, les autorités traditionnelles et coutumières, ni par les possesseurs limitrophes depuis la publication de la demande en date du :

Tous ayant affirmé qu'il est de leur connaissance que le terrain est la possession de : **M koloko ablase**

Exerçant la profession de **cultivateur** et domicilié(e)

à :

### **(Verso de la page précédente)**

Avons dressé le présent procès-verbal constatant que le terrain ci-dessus est bien la possession foncière de :

**M koloko ablase**

Traduction dudit procès-verbal a été donnée à toutes les personnes invitées dans la langue du milieu et nous l'avons signé avec le requérant, les possesseurs limitrophes, le représentant des autorités coutumières et traditionnelles et le représentant du service foncier rural ou du bureau domanial .

Avis a été cependant donné que toute contestation ultérieure des droits ne peut être faite que devant la juridiction civile compétente.

### **Annexe : croquis de délimitation du terrain**

Fait à **Ouayalgui V3**, (les jour, mois et an ci-dessus)

### **Signature et cachet**

Président (e) de la commission foncière villageoise

### **SIGNATURE /EMPREINTE DIGITALE DES PERSONNES INVITEES**

S.No.	Nom et Prénom(s)	Signature ou empreinte digitale
1	ouedrapgo jeanvie	
2	koloko sibiri robert	
3	bonkongou ousmane	
4	kabore isouf	

**Payment Request letter**- In current form all details are rough

Région de : PLATEAU CENTRAL Province de : GANZOURGOU Commune de : BOUDRY		Burkina Faso ***** Unité-Progrès-Justice																																																																
 <p><b>Object :Notification des frais de délivrance d'APFR</b> Réf : demande N° Ouay0050 en date du 10/11/2016 du village de Ouayalgui V3</p> <p>Le Maire A Monsieur / Madame ablase koloko</p> <p>Monsieur / Madame, Suite à votre demande dont l'objet et les références sont susmentionnés, et suivant le procès-verbal de la constatation de possession foncière rurale N° <b>Ouay0050</b> En date du <b>10/11/2016</b> Du village de <b>Ouayalgui V3</b> J'ai l'honneur de vous inviter à bien vouloir payer à la caisse du comptable de la commune de BOUDRY, la somme de ..... détaillée comme suite :</p> <table border="1"> <thead> <tr> <th>SUPERFICIE DE LA PARCELLE</th> <th>Unité</th> <th>Cout unitaire</th> <th>Cout Total</th> </tr> </thead> <tbody> <tr> <td>Imprimé de la demande</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Imprimé du PV de constatation de possession foncière rurale</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Imprimé de la publicité</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Chemise cartonnée</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Imprimé de l'attestation</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Droits d'inscription au registre</td> <td></td> <td></td> <td></td> </tr> <tr> <td><b>Sous Total I</b></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Participation au frais de délimitations sur le terrain</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Taxe pour la délivrance de l'APFR</td> <td></td> <td></td> <td></td> </tr> <tr> <td><b>Sous Total II</b></td> <td></td> <td></td> <td></td> </tr> <tr> <td><b>Total notification</b></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4" style="text-align: center;">Répartition de la taxe de délivrance</td> </tr> <tr> <td>Pour la commune (75%)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pour la région (25%)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Ampliation : Service Foncier rural : Service Comptable</td> <td></td> <td>BOUDRY le 25/11/2016</td> <td>Le Maire</td> </tr> </tbody> </table>			SUPERFICIE DE LA PARCELLE	Unité	Cout unitaire	Cout Total	Imprimé de la demande				Imprimé du PV de constatation de possession foncière rurale				Imprimé de la publicité				Chemise cartonnée				Imprimé de l'attestation				Droits d'inscription au registre				<b>Sous Total I</b>				Participation au frais de délimitations sur le terrain				Taxe pour la délivrance de l'APFR				<b>Sous Total II</b>				<b>Total notification</b>				Répartition de la taxe de délivrance				Pour la commune (75%)				Pour la région (25%)				Ampliation : Service Foncier rural : Service Comptable		BOUDRY le 25/11/2016	Le Maire
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Pour la région (25%)																																																																		
Ampliation : Service Foncier rural : Service Comptable		BOUDRY le 25/11/2016	Le Maire																																																															

**APFR Form (individual)**- In current form all details are rough

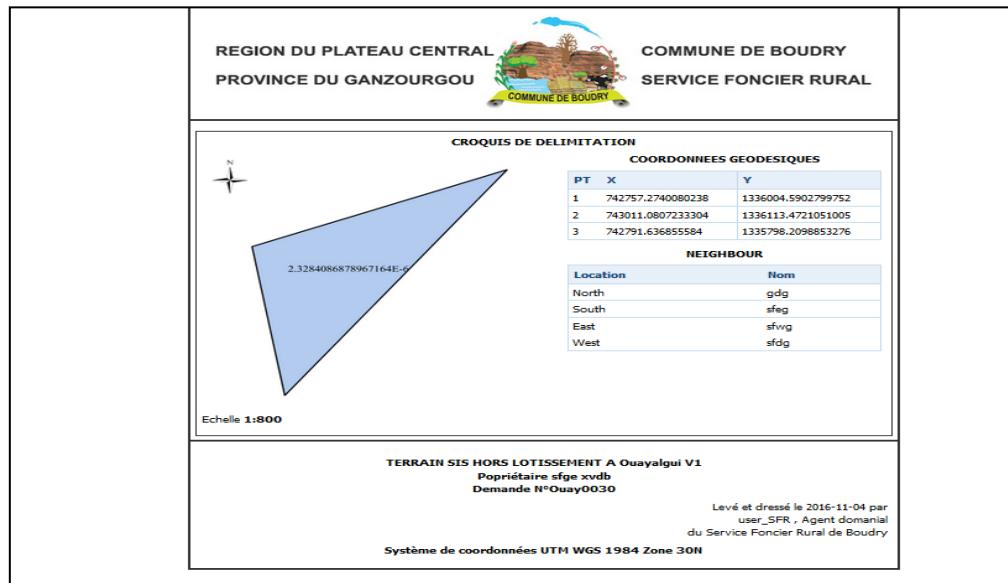
Région de : PLATEAU CENTRAL Province de : GANZOURGOU Commune de : BOUDRY		Burkina Faso ***** Unité-Progrès-Justice
 <p><b>Attestation de possession foncière rurale à titre individuel</b> N° Ouay0026 du <b>10/11/2016</b></p> <p>(Art. 20 du Décret N°2010-402 PRES/PM/MAHRH/MRA/MECV/MEF/MATD/ MJ du 29 juillet 2010 portant procédure de constatation de possession foncière rurale des particuliers)</p> <p><b>1. Identification du titulaire</b> Nom : <b>koloko</b> Prénom(s) : <b>ablase</b> Sexe : <b>Homme</b> Références de la pièce d'identité : <b>ext619</b> du <b>01/01/1944</b> à <b>nedogo</b> Profession : <b>cultivateur</b> Domicile : <b>Ouayalgui V3</b></p> <p><b>2. Description du terrain</b> Terrain sis à : <b>BOUDRY Ouayalgui V3</b> Section <b>15</b>, Ilot <b>000</b>, Parcalle <b>2623</b>, Superficie : <b>7937.00 ha.</b></p> <p>Limites :  <input type="radio"/> Nord: <b>ouedrapgo jeanvie</b>  <input type="radio"/> Est: <b>bonkongou ousmane</b>  <input type="radio"/> Sud: <b>koloko sibiri robert</b>  <input type="radio"/> Ouest: <b>kabore isouf</b></p> <p><b>3. Utilisation actuelle du terrain :</b>  <input type="radio"/> <b>Agricole</b>  <input type="radio"/> Autre (s) : <b>Jeff</b></p> <p>Nous soussigné(e) : <b>Jeff</b> Maire de la Commune de : <b>BOUDRY</b>, Vu la demande n° <b>Ouay0026</b> en date du <b>10/11/2016</b> et le procès-verbal de constatation contradictoire de possession foncière rurale n° <b>Ouay0019</b> en date du <b>10/11/2016</b> délivrons la présente attestation pour servir et valoir ce que de droit.</p> <p>Fait à <b>BOUDRY</b> le <b>10/11/2016</b>.</p>		

**APFR Form (Collective)**- In current form all details are rough

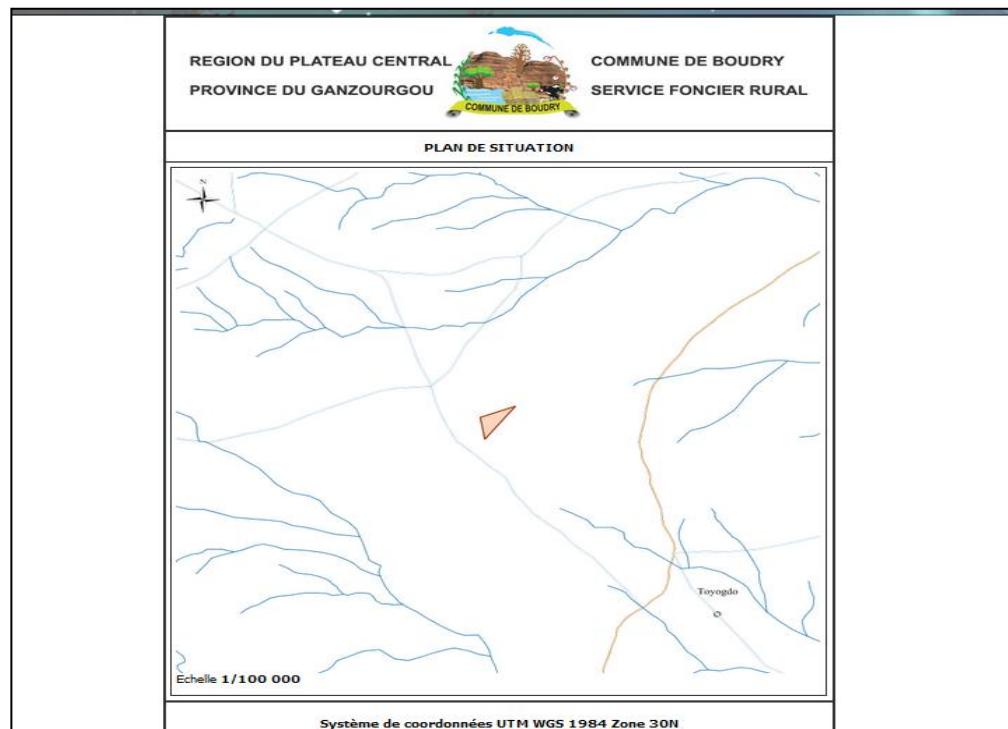
<b>Région de : PLATEAU CENTRAL</b> <b>Province de : GANZOURGOU</b> <b>Commune de : BOUDRY</b>	 <b>BOUDRY</b> <b>COMMUNE DE BOUDRY</b>	<b>Burkina Faso</b> ***** Unité-Progrès-Justice										
<b>Attestation de possession foncière rurale à titre collectif</b> N° BOUD-00039 du <b>24/11/2016</b>												
<i>(Art. 22 et 23 du Décret N°2010-402 PRES/PM/MAHRH/MRA/MECV/MEF/MATD/ MJ du 29 juillet 2010 portant procédure de constatation de possession foncière rurale des particuliers.)</i>												
<b>1. Identification de la famille</b> Nom : <b>modi modi</b> Adresse : <b>aaaaaaaa</b> <b>2. Identification du mandataire</b> Nom : <b>modi</b> Prénom(s) : <b>modi</b> Date et lieu de naissance : <b>09/12/2016</b> à place Sexe : <b>Femme</b> Références de la pièce d'identité : <b>id</b> Date et lieu de naissance : <b>idà</b> Profession : <b>aaaaaaaa</b> Domicile : <b>Ouayalgui V1</b> <b>3. Références du mandat :</b> Mandat du <b>03/11/2016</b> Village de <b>Ouayalgui V1</b> <b>4. Description du terrain</b> Terrain sis à : <b>BOUDRY</b> Superficie : <b>29339.99 ha</b> Limites : <input type="radio"/> Nord : <b>nn</b> <input type="radio"/> Est : <b>ne</b> <input type="radio"/> Sud : <b>ns</b> <input type="radio"/> Ouest : <b>nw</b> <b>5. Utilisation actuelle du terrain :</b> <input type="radio"/> Autre (préciser) <input type="radio"/> Autre (s) : <b>demo</b> Nous soussigné(e) : <b>Jeff</b> Maire de la Commune de : <b>BOUDRY</b> Vu la demande n° <b>BOUD-00053</b> en date du <b>11/11/2016</b> et le procès-verbal de constatation contradictoire de possession foncière rurale n° <b>BOUD-00030</b> en date du Délivrons la présente attestation au nom de la famille <b>modi modi</b> à M./Mme <b>modi modi</b> ci-dessus mandaté(e) pour servir et valoir ce que de droit. <b>Liste des membres de la famille paraphée et annexée</b> Fait à <b>BOUDRY</b> le <b>24/11/2016</b>												
<b>Jeff</b>												
<b>Liste des membres de la famille (paraphée et annexée)</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">N°</th> <th style="width: 30%;">Nom et Prénom(s)</th> <th style="width: 30%;">Références de la pièce d'identité</th> <th style="width: 15%;">Adresse</th> <th style="width: 20%;">Signature ou empreinte digitale</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td><b>q q</b></td> <td>Homme</td> <td></td> <td></td> </tr> </tbody> </table>			N°	Nom et Prénom(s)	Références de la pièce d'identité	Adresse	Signature ou empreinte digitale	1	<b>q q</b>	Homme		
N°	Nom et Prénom(s)	Références de la pièce d'identité	Adresse	Signature ou empreinte digitale								
1	<b>q q</b>	Homme										

## 8.2.GENERATE MAP

### 1. BOUNDARY MAP



### 2. AREA MAP



### 3. LAND RECORD

#### 3.1 Land record(individual)-

**Plan**

**Land Records table**

Région	PLATEAU CENTRAL
Province	GANZOUGOU
Commune	BOUDRY
Village	Ouayalgui V3
Numéro village	
Numéro de demande	Ouay-0033
Nature de la demande	
Prénom	ashu frencg
Nom	ejejed
Date de naissance	03/12/2016
Lieu de naissance	shsh
Profession	djej

#### 3.2 Land record(collective):

**Area map**

**Land Records table**

Région	PLATEAU CENTRAL
Province	GANZOUGOU
Village	Ouayalgui V1
First Name	ashu
Last Name	djej
Date of birth	2016-12-03
Place of birth	huho
Reference of ID Card	ouau
ID Card Date/Aliment Date	2016-12-03
Family Name	1
Date of Mandate	
Commune of Mandate	
CPV name	

N°	Nom et Prénom(s)	Référence de la pièce d'identité	Adresse	Signature ou empreinte digitale
1	domo domo	d123 du undefined	domo	
2	d d	d du undefined	d	

## **9. MOBILE DATA CAPTURE APPLICATION MAP LAYOUT**

### **9.1. SCOPE OF WORK FOR DEVELOPMENT ITEM**

The Map Layout function in MAST will be developed to be used for field data verification by CFV Agent . The integration of a map layout in MAST will streamline data verification, and if needed data correction. The map layout will consist of a customized and preconfigured map layout, and will include a list of attributes that is to be used for data verification. Map layout will be created with a tabular listing of attributes. The map layout shall allow for the display of spatial units, along with attribute information of a spatial unit. The generation of template layout is rendered on screen and printed in standard printers.

## **10. PURPOSE OF MAP LAYOUT**

Map layout is required to help with the process of verifying and correcting data, especially correcting parcel boundary information.

### **10.1. SYSTEM FUNCTION**

After the data has been captured by the CFV Agent and synced to the MAST web application, it is anticipated that there will be scenarios like overlapping parcels, in some cases, there may be instances of where incorrect data has been captured. The map layout will therefore be used for a quick verification of data. A print functionality will be developed to facilitate this process which will enable users to easily get all the information of the parcels in a single layout.

This functionality will be provided in the tools section of the map viewer in the Data Management module of the MAST web application.



User need to adjust the map on the parcels for which field verification needs to be done. On clicking the map layout tool (Print tool as shown below) from the toolbar, the web app will capture screen from the map viewer and list the attributes of all the parcels in the map view.

### **10.2. MAST SPATIAL DATA VALIDATION**

#### **10.2.1. SCOPE OF WORK**

Spatial data validation is an important feature that will be implemented using a combination of client/server side validation. Client/server technologies will be integrated into the MAST suite. To enhance performance Java Script Topological Suite (JSTS) will be utilized wherever possible rather than utilizing server side processes. The functionality should allow users to validate the spatial data of spatial units according to topology and allow other checks that are necessary for cleaning data. Validation will be done based on the defined options outline in the section below.

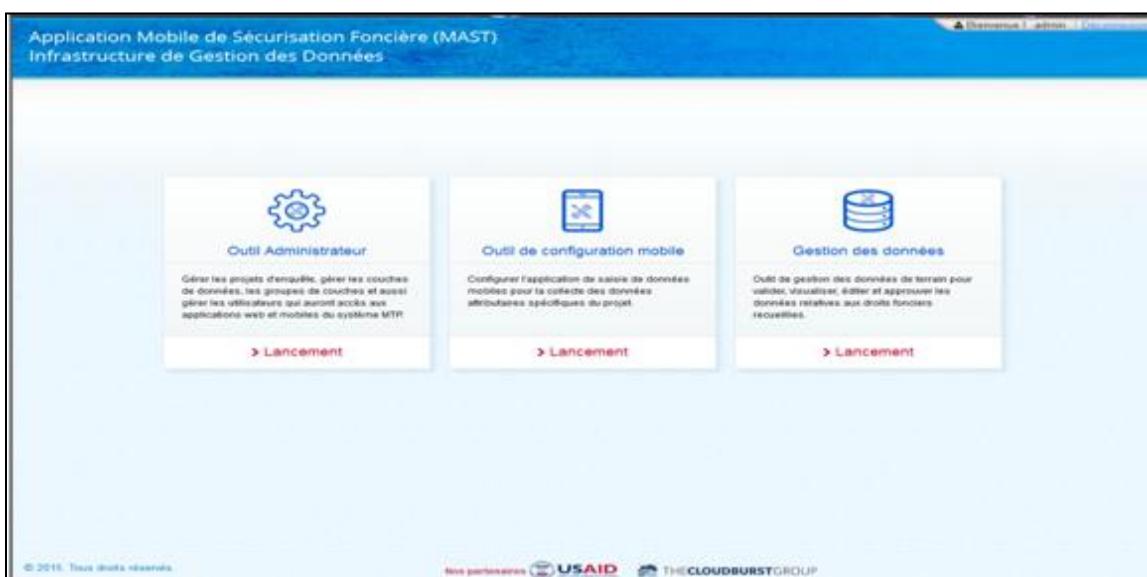
Topology checks will be run on parcels from a MAST project within a particular region/area of the village.

### 10.2.2. PURPOSE OF SPATIAL DATA VALIDATION

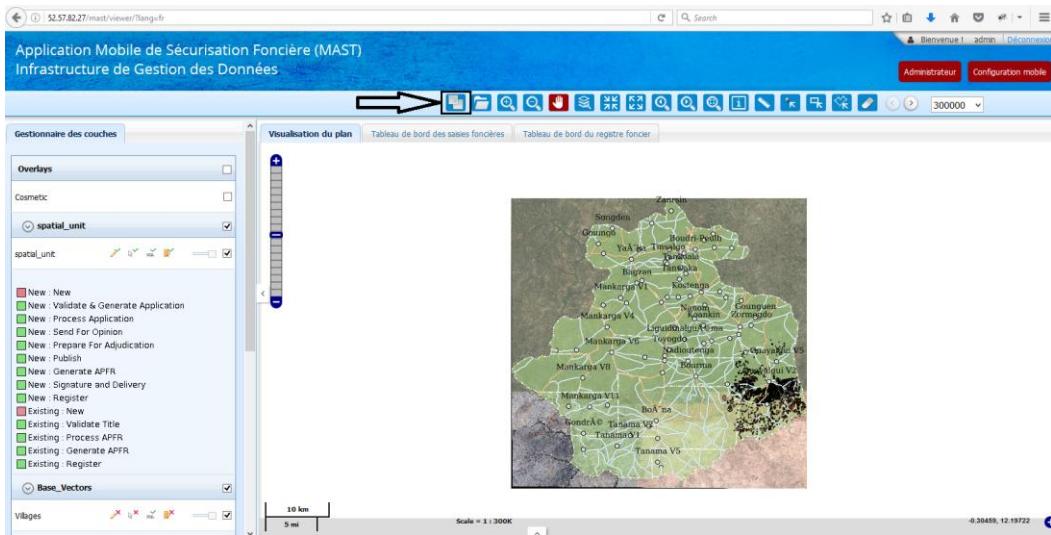
Spatial data validation is required to find any discrepancies in data and to remove/resolve the discrepancies in features. Any intersection/overlapping of the features or invalid geometry will be identified and the user will be able to resolve the errors using existing editing tools provided in the MAST data management module.

### 10.2.3. SYSTEM FUNCTION

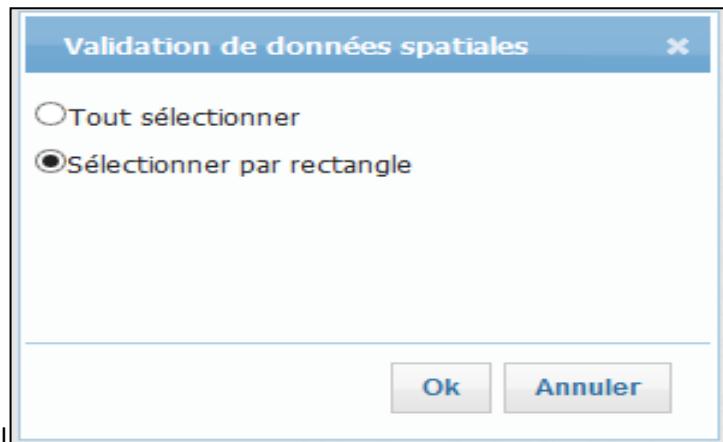
Click on Data Management tool as shown below:



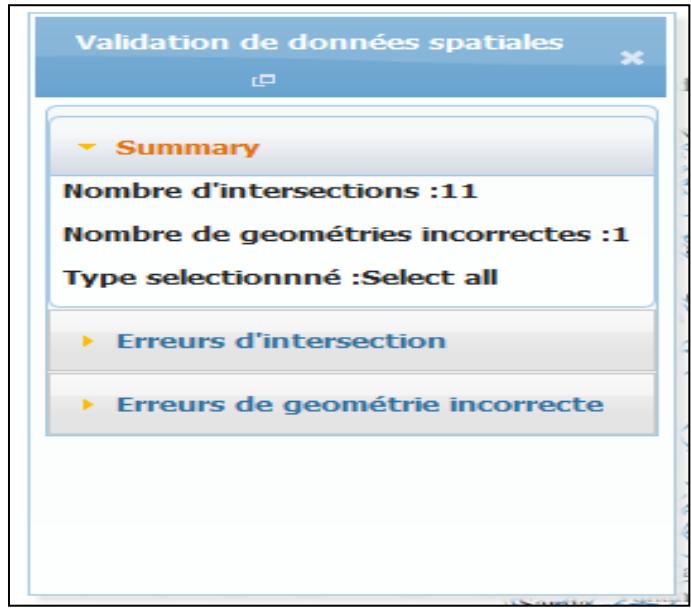
- Users will select a spatial validation tool in map viewer as shown below:



- On selecting the spatial validation tool, a popup will appear providing the user with the following options to check topology. Users will be allowed to check topology by geographic area, either for an entire Village, or will be able to utilize the select tool for a specific rectangle. The user will also be provided the option to select all spatial units in a project.
  - Select by Rectangle
  - Select All parcels



- Select by Rectangle:** On selecting this option, user can select the spatial unit geometries within the map view using the rectangle selection. Spatial validation tool will run on all the features selected using the rectangle selection.
- Select all parcels:** On selection of this option spatial validation tool will run for all the parcels captured in the project.



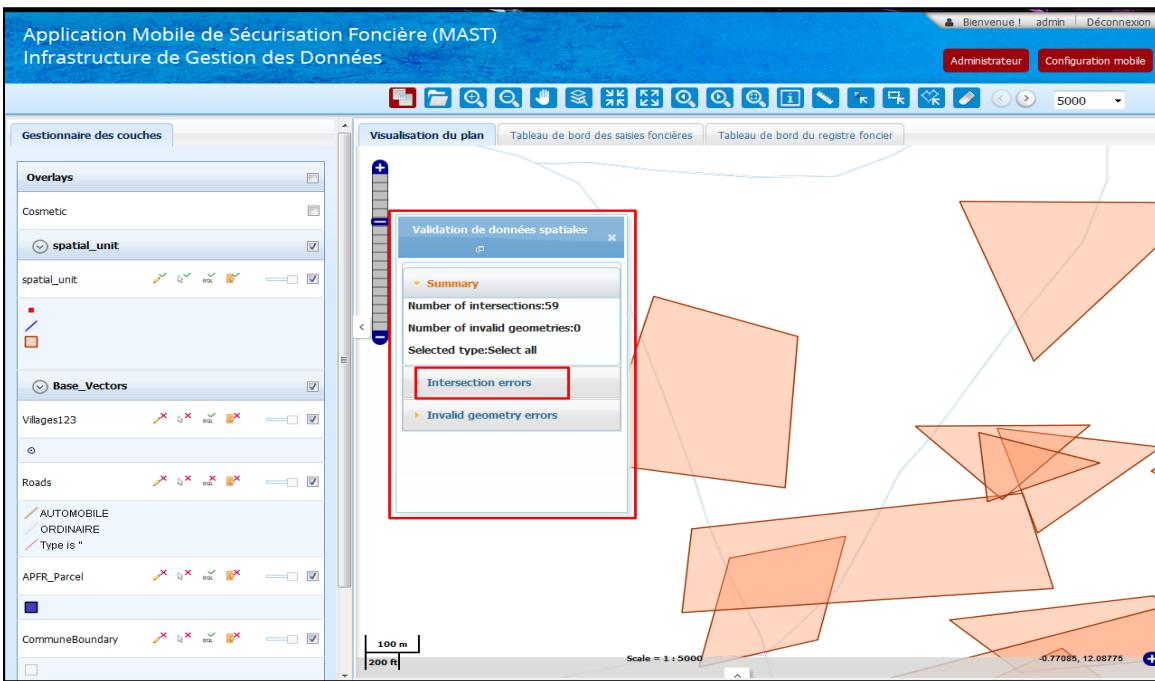
#### 10.2.4. SPATIAL VALIDATION METHODOLOGY

MAST web application utilizes JSTS processes/methods for geometry validation pertaining to a single Layer. Java Script Topological Suite or JSTS is a JavaScript library of spatial predicates and functions for processing geometry conforming to the Simple Features Specification for SQL published by the Open Geospatial Consortium. JSTS Topology has a built in parser for Open Layers geometries which eases the spatial validations parsing. Following are the geometric validations that will be executed by the system along with the corresponding operation/feature of JSTS that will be utilized for the validation:

Function	JSTS geometric operation
Geometry validation  Ref: Must Not Self-Overlap. Must Not Self-Intersect. Must Be Single Part	Validation  isValid()
Intersect operations  Ref: Computes a Geometry representing the points shared by this Geometry and other.	Spatial Predicates  intersects() intersection(other)

#### 10.2.5. SPATIAL VALIDATION RESULTS

Now system will generate **validation error** result in three sections viz. Summary, Intersection errors & Invalid geometry errors as a popup as shown in image below:



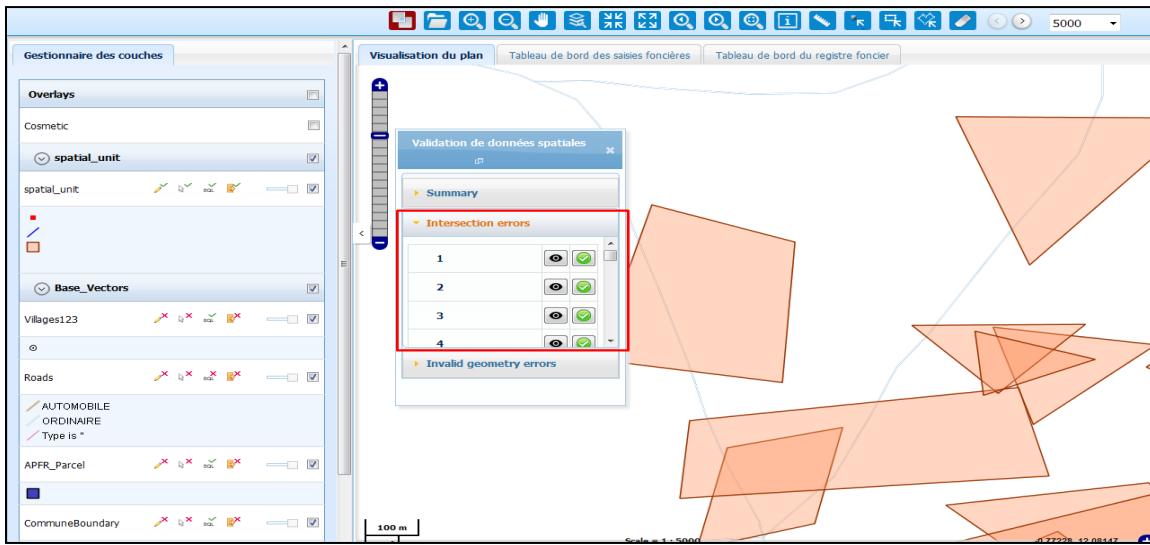
Summary section will show the type of selection & counts of Intersection errors & Invalid geometry errors.

**Error Listing:** - when user selects one of the sections from validation errors option i.e. either **Intersection errors** or **Invalid geometry errors**, system will show listing of all the topological errors in geometries found by the validation tool under the relevant selected section.

Then user selects one of the geometry error listed in a section by clicking on the list item, the clicked geometry error will get highlighted on map.

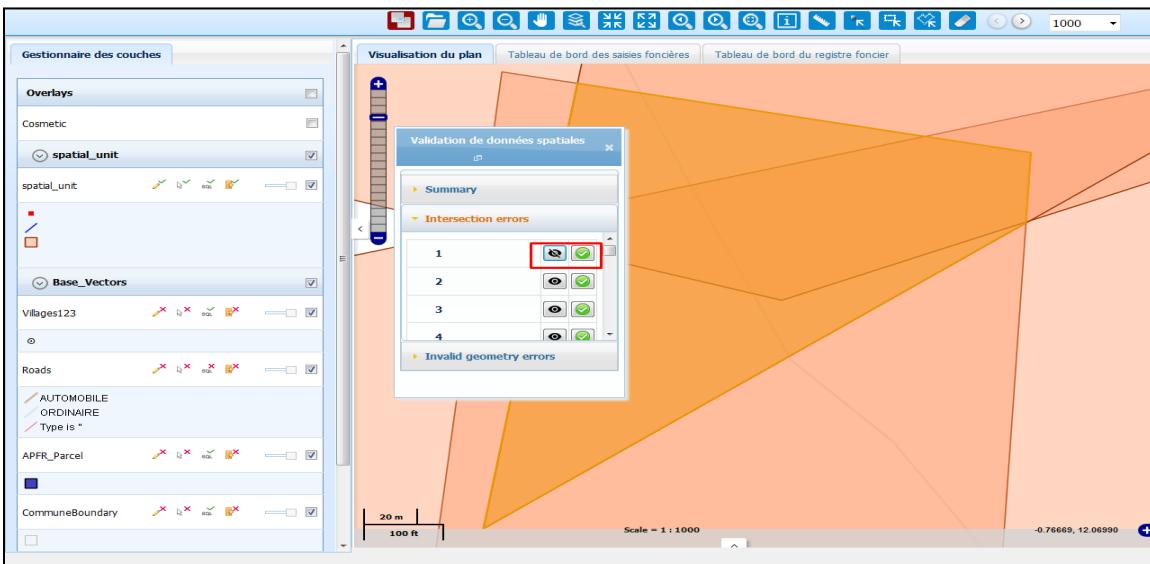
The result of the spatial validation tool is categorized under two headings:

### 10.2.5.1. INTERSECTION/OVERLAPPING GEOMETRY ERRORS



When user selects the **Intersection geometry** errors option following screen will be shown as shown in the image below:

Now, Clickon view icon as shown in image above, the selected intersection error will get highlighted on map. User again clicks on view icon as shown in image above, then highlighted geometry will get in normal state as shown in image below

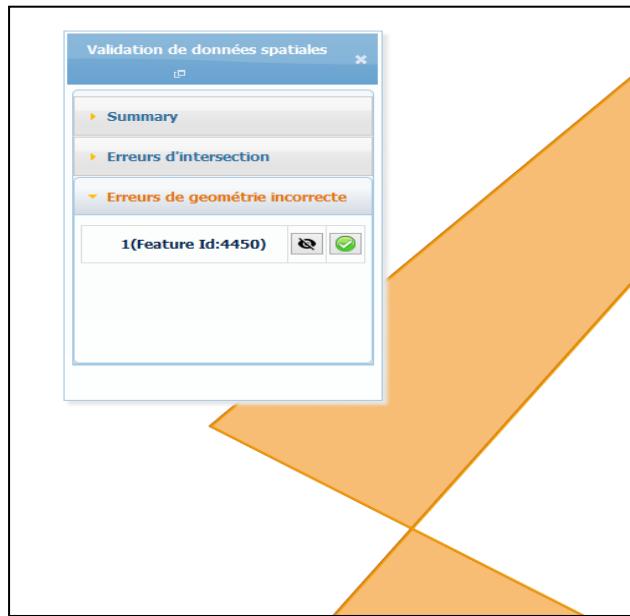


This functionality is provided to toggle display of error markup. This would facilitate in editing when user wants to observe and fix the actual error in the geometry.

#### 10.2.5.2. INVALID GEOMETRY ERRORS

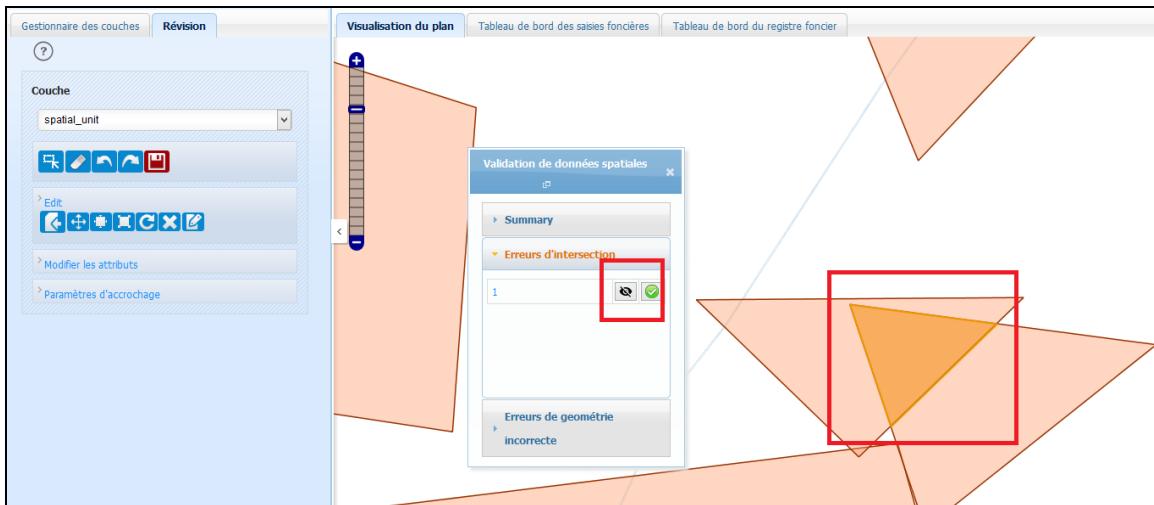
User selects any invalid geometry errors, following screen will be shown as shown below (currently no any invalid geometry available):

Geometry error markup toggle in invalid geometry works similar to intersection error.



#### 10.2.5.3. SPATIAL VALIDATION ERROR CORRECTION

User can fix the geometry errors by selecting Editing tool as shown below:

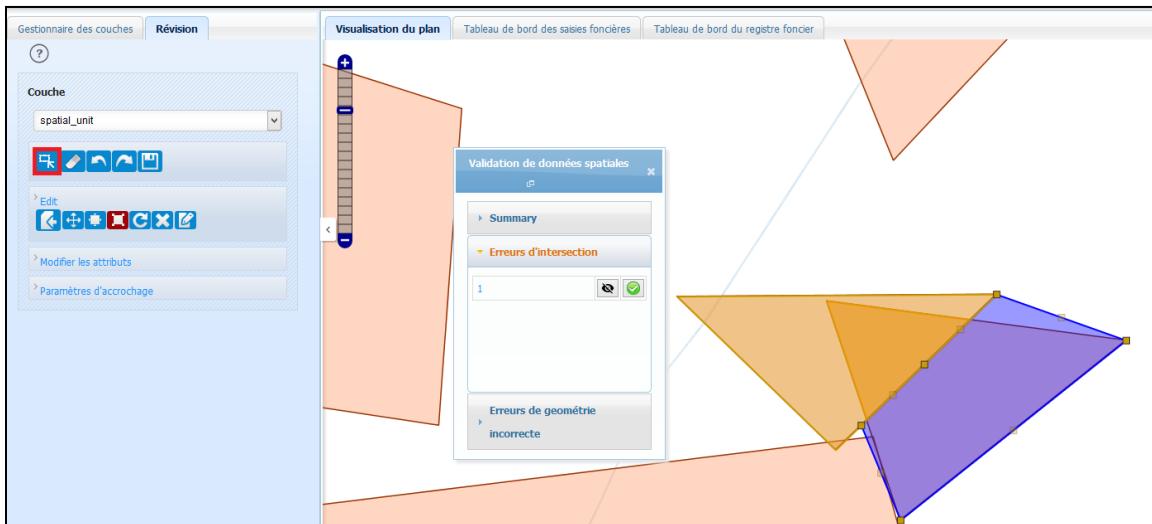


Before the user starts the editing work, he/she needs to set a snap tolerance, which would be 10 pixels by default.

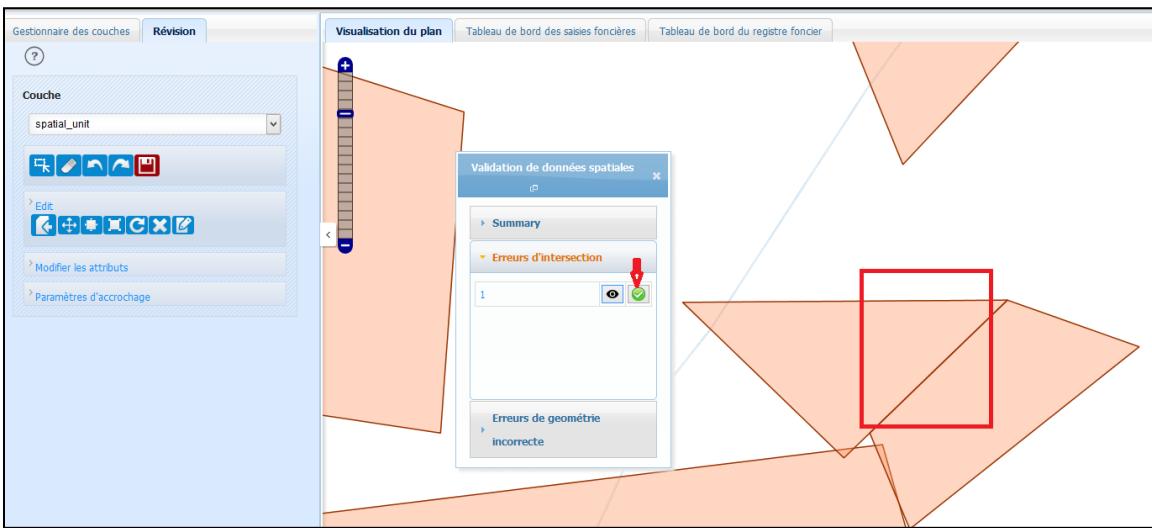


Snap setting are available in the last accordion of the editing tab. User can select the snap parameters according to requirement. Available options are:

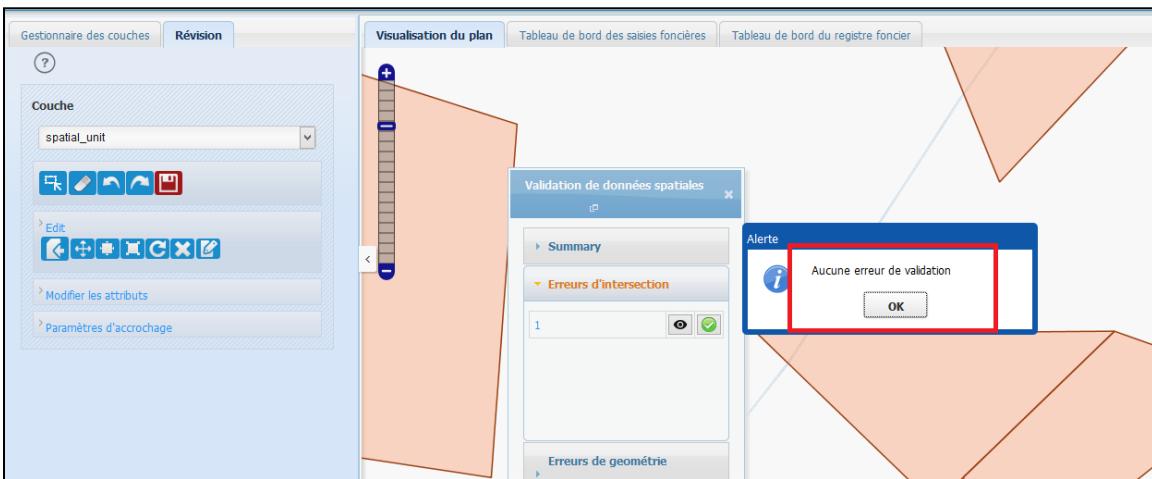
After selecting the **Editing** tool user will be shown the editing menu on left side, user will select the **Layer (spatial\_unit)** & then clicks on **edit** tab, user will be shown more options to edit the geometry as shown below:



Now user can reshape the geometry by dragging Nodes and vertex as shown above. User can save the edited geometry by clicking on save button icon.



User can mark the error as fixed by clicking on fixed icon as shown in image above. When Clickon fixed icon, error item that have been fixed will be removed from the list as shown in image.



Once the Clickon fixed icon, error list get refreshed & error count would be decreased by one as shown in above image.

Once all the errors are fixed, user can run the validation tool again to check if any other error is introduced in data while editing. Validation tools should be rerun till all the topological errors are removed from the data.

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