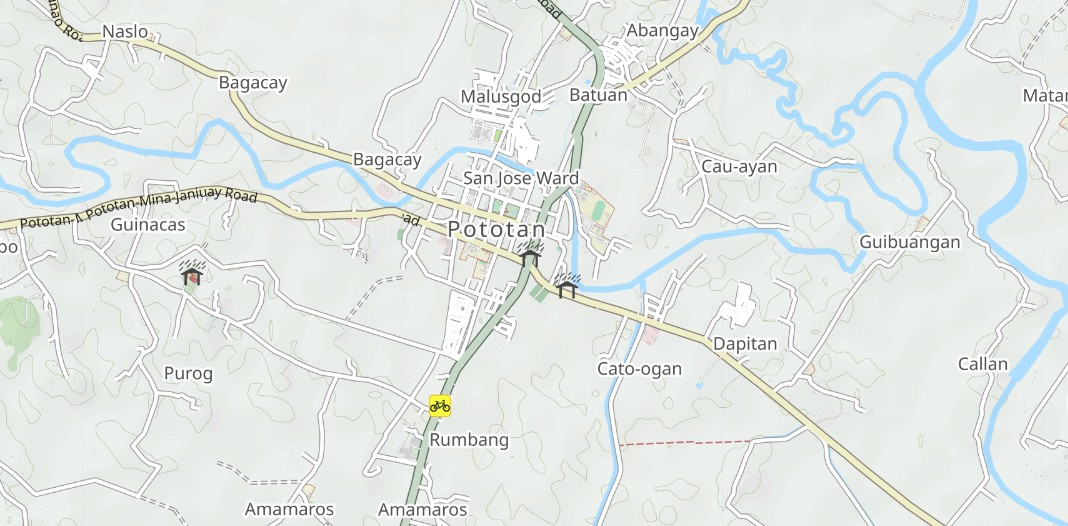


June 2024

Land Tax and Land Mapping Information System with Decision-Rule Based Land Classification



**USER MANUAL**

BARIGUES PRANDAS TABUNLUPA TOMAS VELEZ

**Land Tax And Land Mapping Information System with Decision-Rule Based Land Classification**

User Manual Barigues, Rence Ahne L. Prandas, Ma. Prandas Q. Tabunlupa, Mary Hope E. Tomas, Adrian James C.

Velez, Mike Joseph A.

June 2024

Disclaimer

This web-based system project and its corresponding documentation entitled “Land Tax And Land Mapping Information System with Decision-Rule based Land Classification” is submitted to the College of Information and Communication Technology, West Visayas State University, in partial fulfillment of the requirements for the degree, Bachelor of Science in Information Systems. It is the product of our work, except where indicated text.

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Barigues, Rence Ahne L. Prandas, Ma. Romela Q. Tabunlupa, Mary Hope E. Tomas, Adrian James Velez, Mike Joseph A.

June 2024

**Table of Contents**

Disclaimer 3

Table of Contents 4

Getting Started

Introduction 5

[System Requirements 6](#_TOC_250004)

Installation 6

[Usage](#_TOC_250003)

Web System Features 9

[Troubleshooting 24](#_TOC_250002)

[FAQ (Frequently Asked Questions) 25](#_TOC_250001)

[Contact Details 27](#_TOC_250000)

Getting Started Introduction

The Land Valuation System is designed to assist assessors in referencing the actual value of lands. It aims to represent market value by incorporating essential factors for each land, using a decision tree model for land classification analysis. Additionally, the system integrates maps via Leaflet for tax mapping.

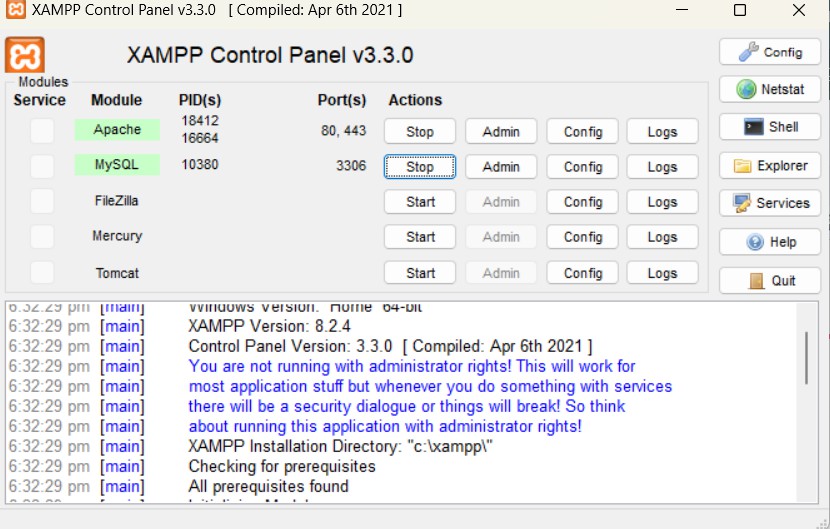
This User Manual contains all the essential information for the user to make use of the Land Tax and Land Mapping with Decision-based Information System, graphics and pictures are also provided for the step-by-step instructions.

# System Requirements

* Download and install any local web server such as XAMPP/WAMP.
* Download the provided source code zip file.

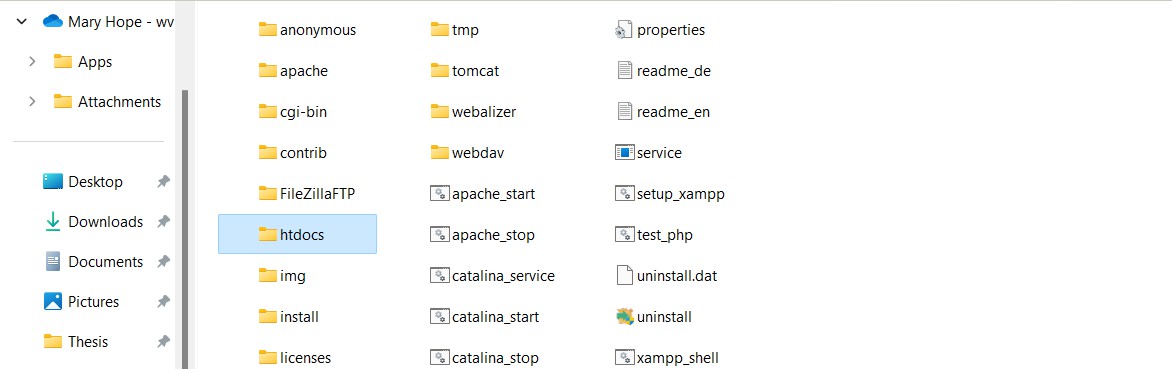
# Installation/Setup

1. Open your XAMPP/WAMP's Control Panel and start Apache and MySQL.

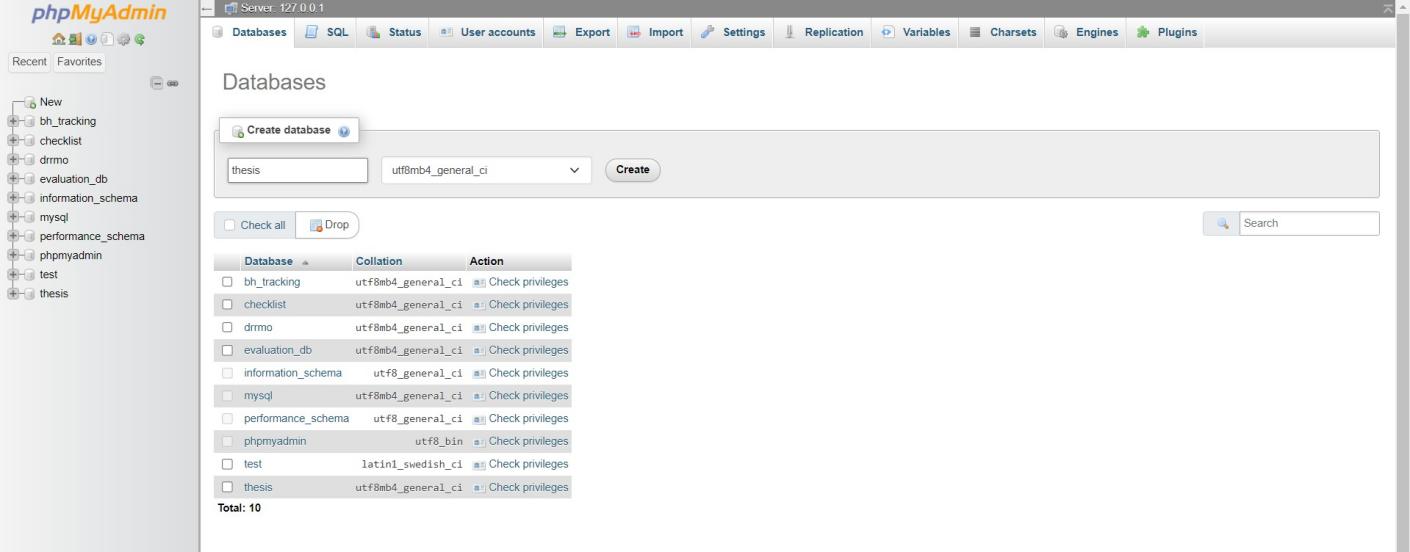


1. Extract the downloaded source code zip file.
2. If you are using XAMPP, copy the extracted source code folder and paste it into the

XAMPP's "htdocs" directory. If you are using WAMP, paste it into the "www" directory.



1. Browse the localhost in a browser and select the i.e. phpMyAdmin.
2. Create a new database naming thesis.



1. Import the provided SQL file. The file is known as thesis.sql located inside the SQL folder.
2. Browse the Land Tax And Land Mapping with Decision-based Information System in a browser. i.e. <http://localhost/TaxMapping/admin> and sign in.

# Admin Credentials

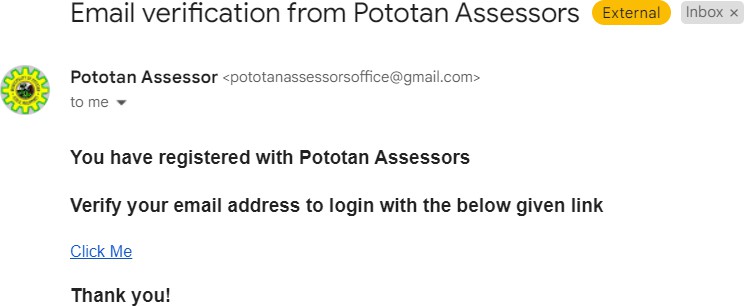
* + Admins access the system using the following credentials:
    - Username: adminjuan
    - Password: Admin@2023

# Usage

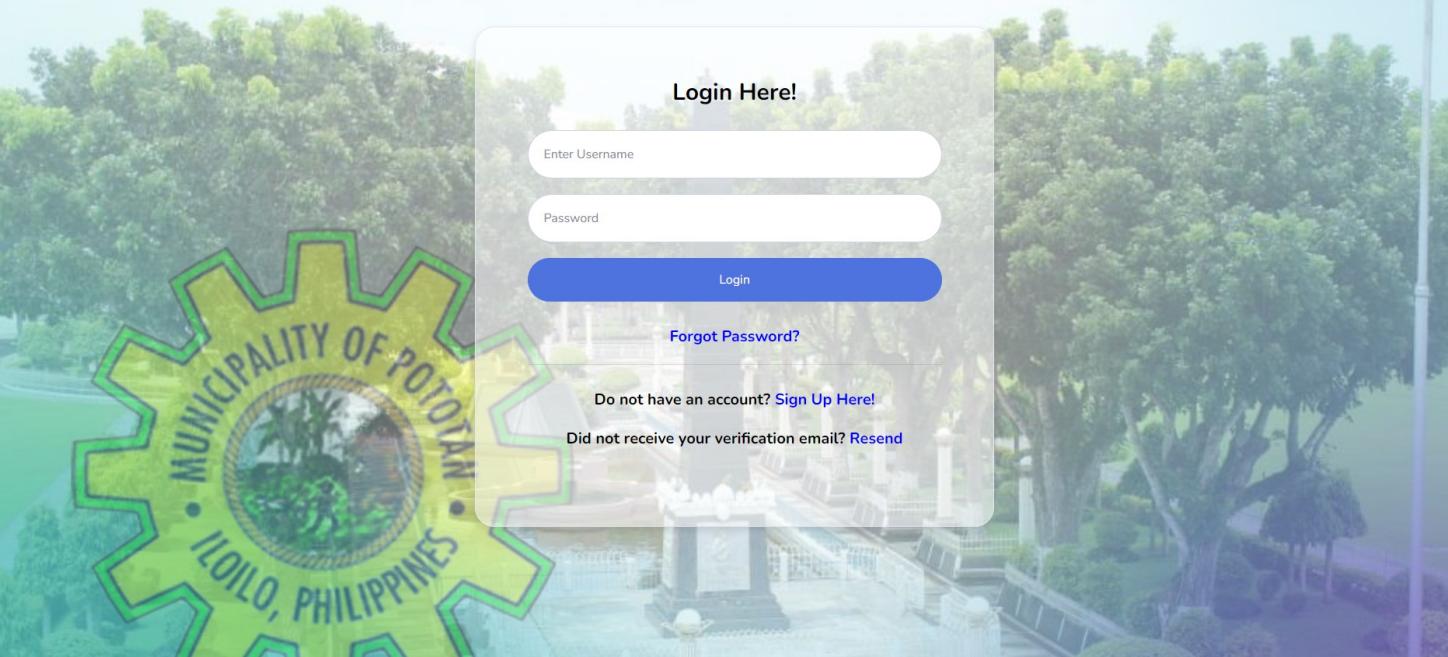
Web System Features

***Account registration of landowners to access their land information.***

The landowners will need to sign in and verify the registered email that will be sent to their email account.



Once verified, they will be directed to the login page where they can enter their username and password to access their land details.



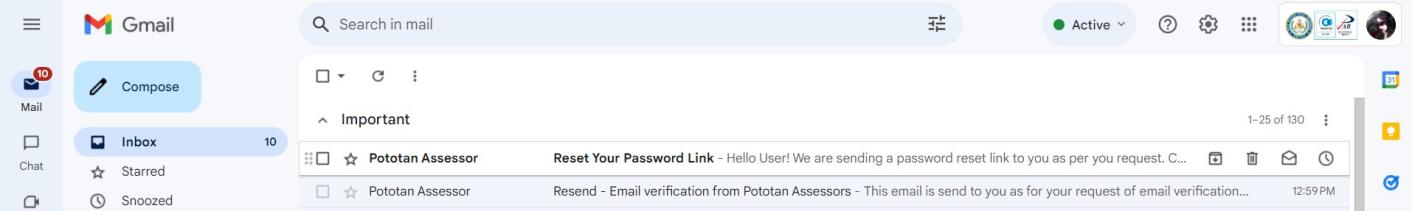
# Error Messages

* + If a lot number or username is not registered, the system displays a message indicating that the land record or username doesn't exist. Warning messages also appear if a

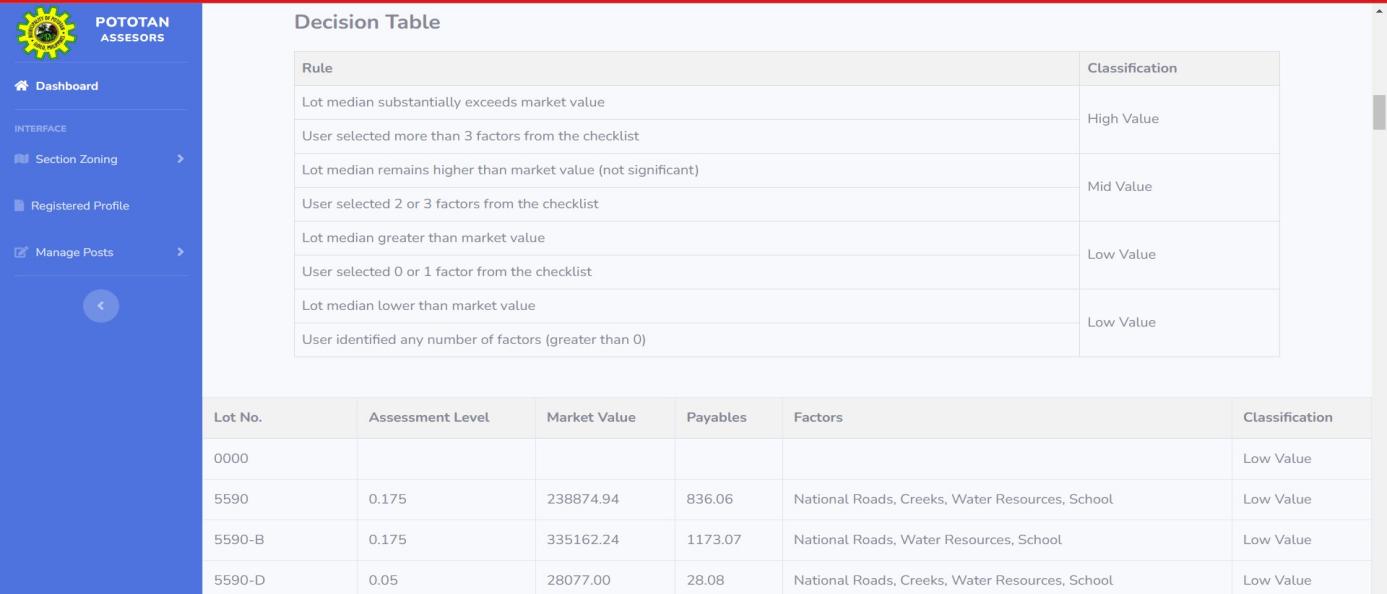
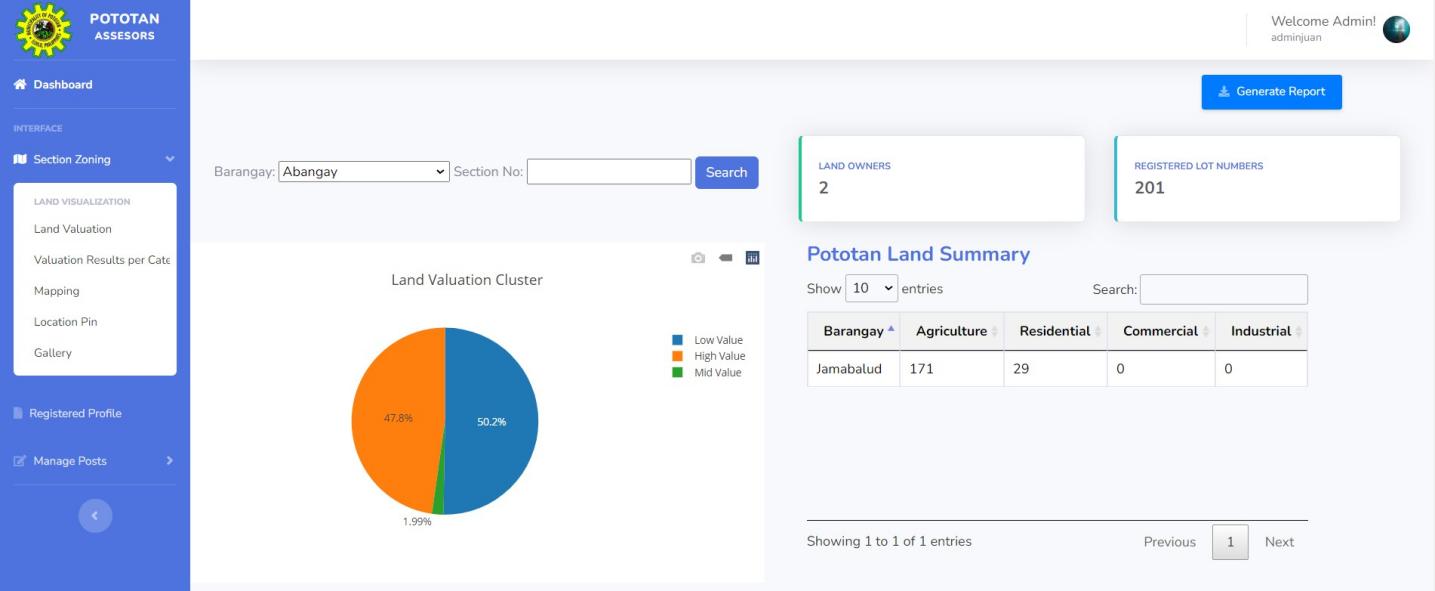
username is already saved in the database.

# Password Reset and Email Resending

* + Users who forget their password can reset it through the system.
  + Email verification can be re-sent if users don't receive it after a successful registration.

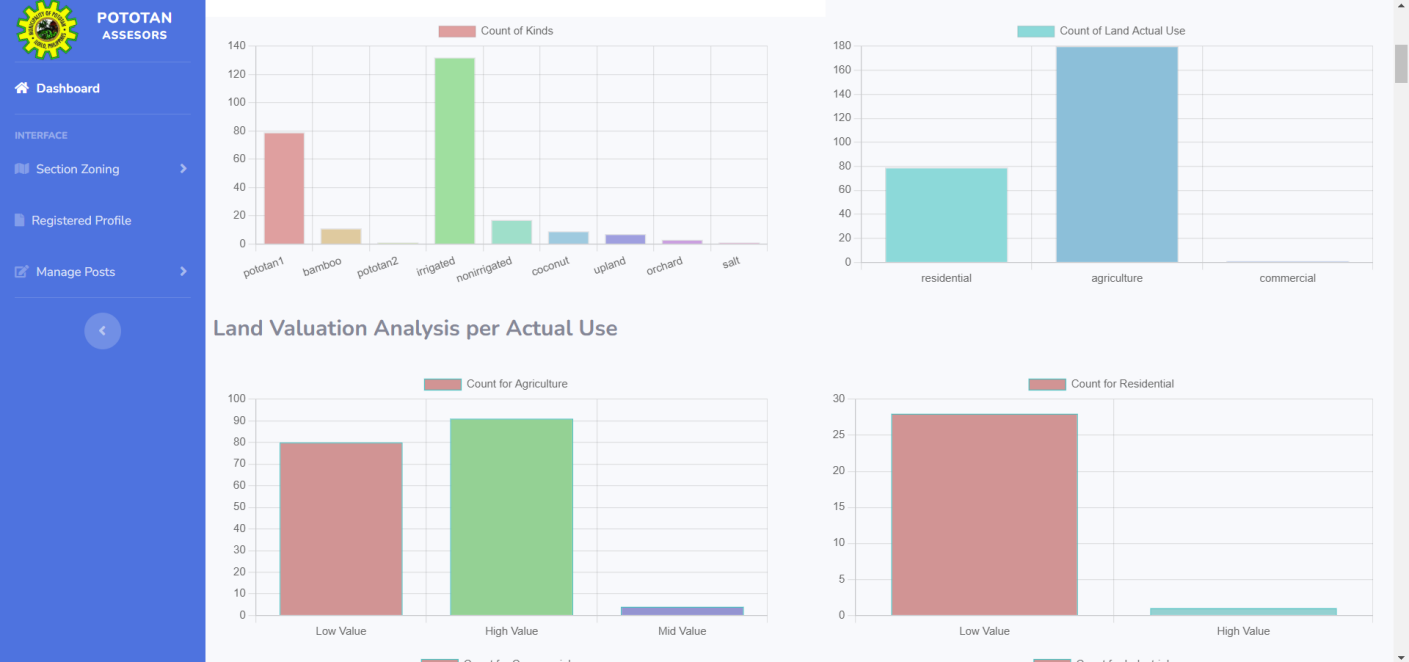


# Admin Dashboard

On the main dashboard, the admin can view the Pototan Land Summary and the diagram results based on the recorded data. A decision-rule table is displayed to provide an easy understanding of the classification result in the table.

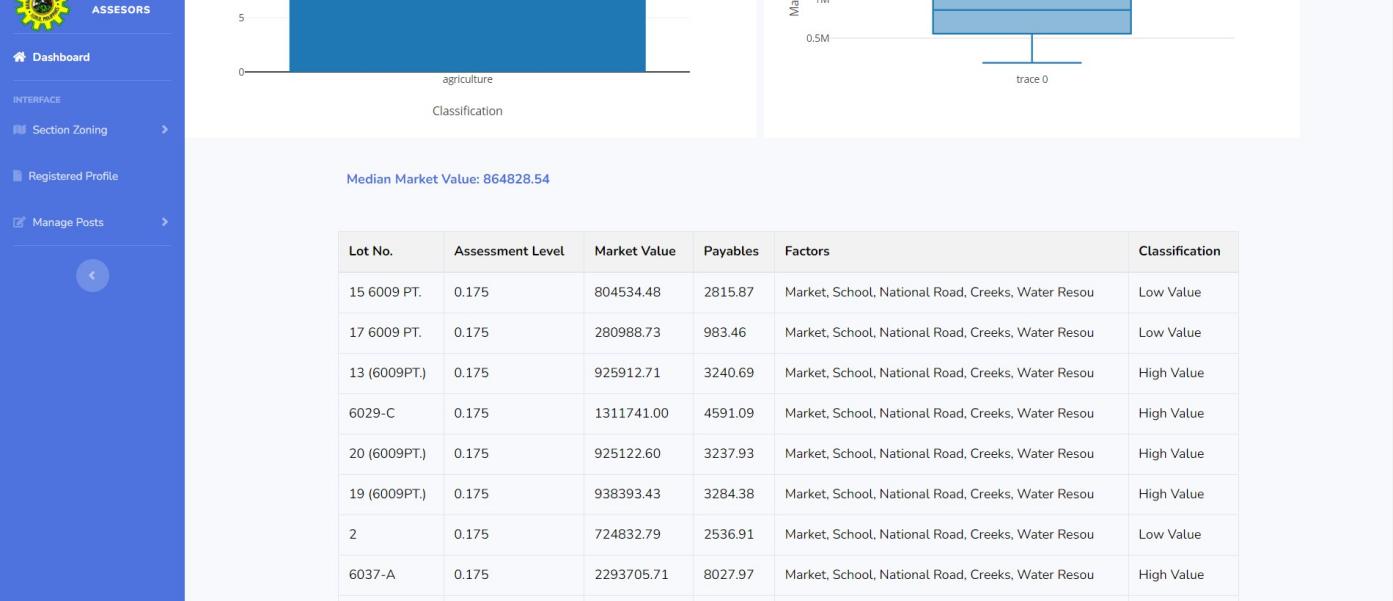
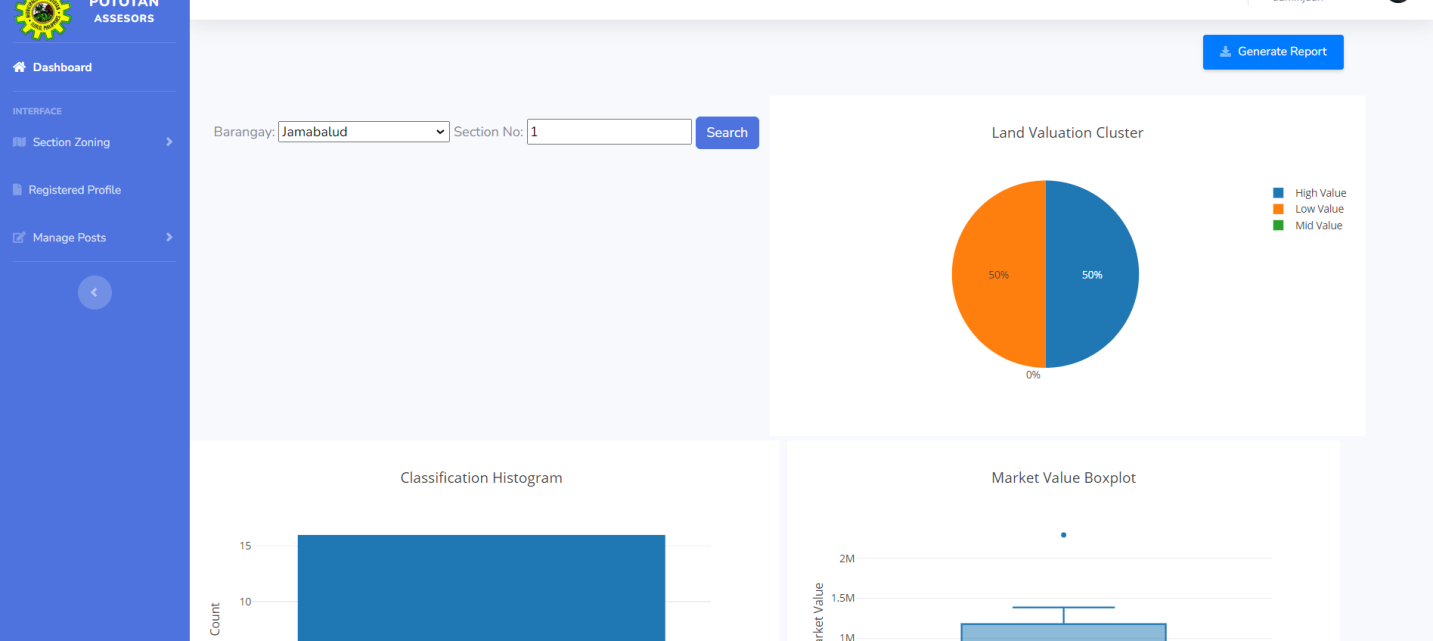
# The Admin Dashboard Includes:

1. **Land Valuation Overview -** A pie chart displays the percentage of land valuation

classifications in the municipality. The summary of land classifications in each barangay and the histogram that visualizes the number of kinds and classifications in the records. And provides information on registered landowners and recorded lots.

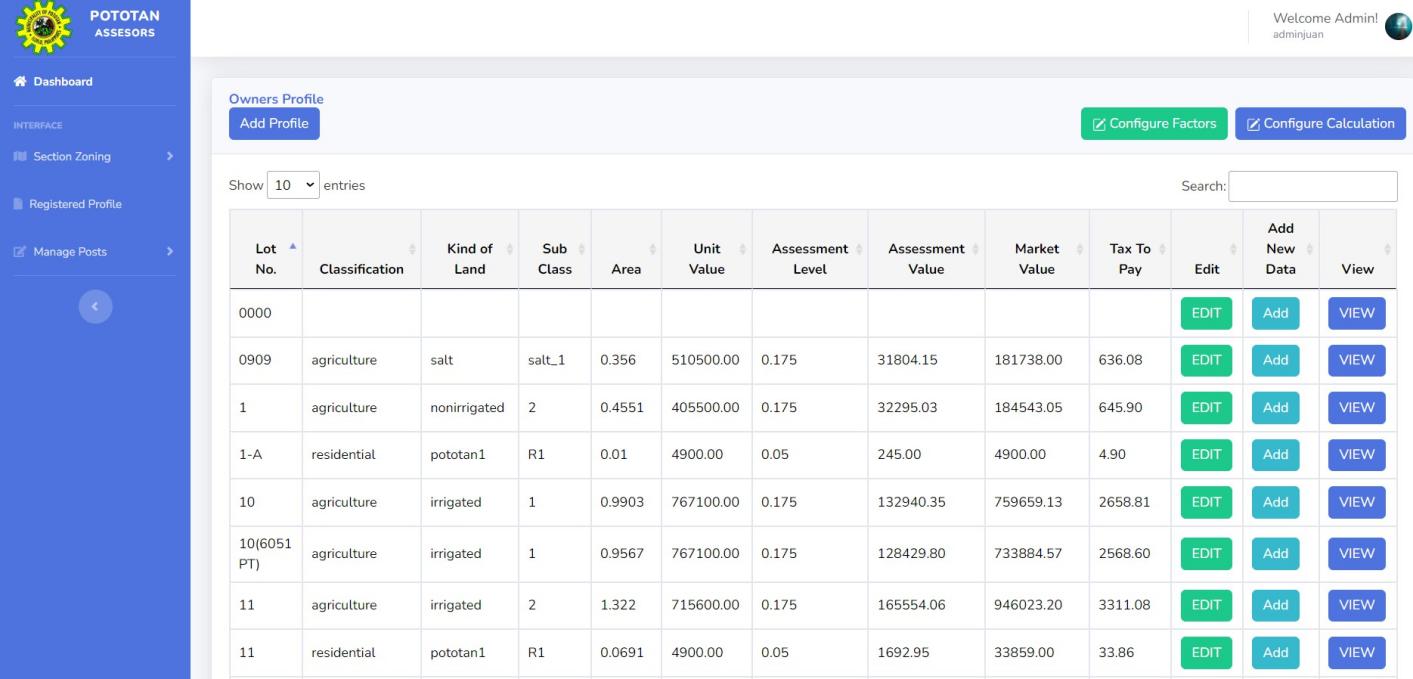
1. **Search Function -** The search function allows searching for specific data based on barangay and section. Then it calculates the median of market value and visualizes the land valuation classification through a pie chart, boxplot for market value, and histogram for the count of actual use.





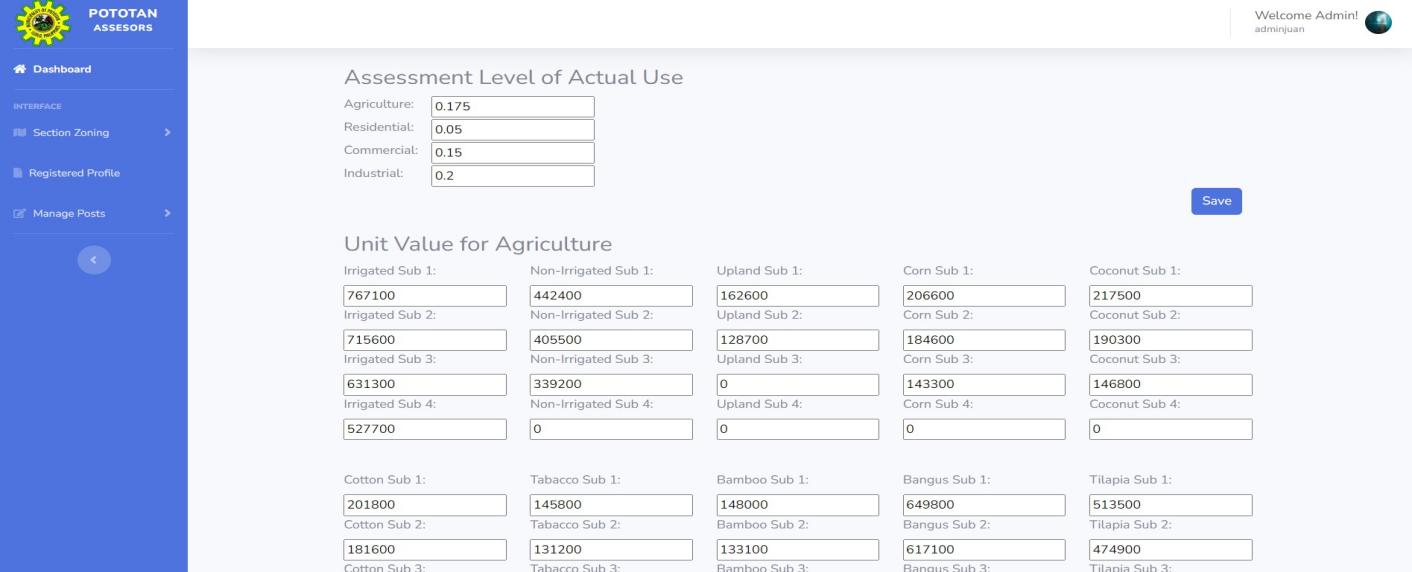
# Section Zoning

The “Section Zoning” has five tabs that consist of:

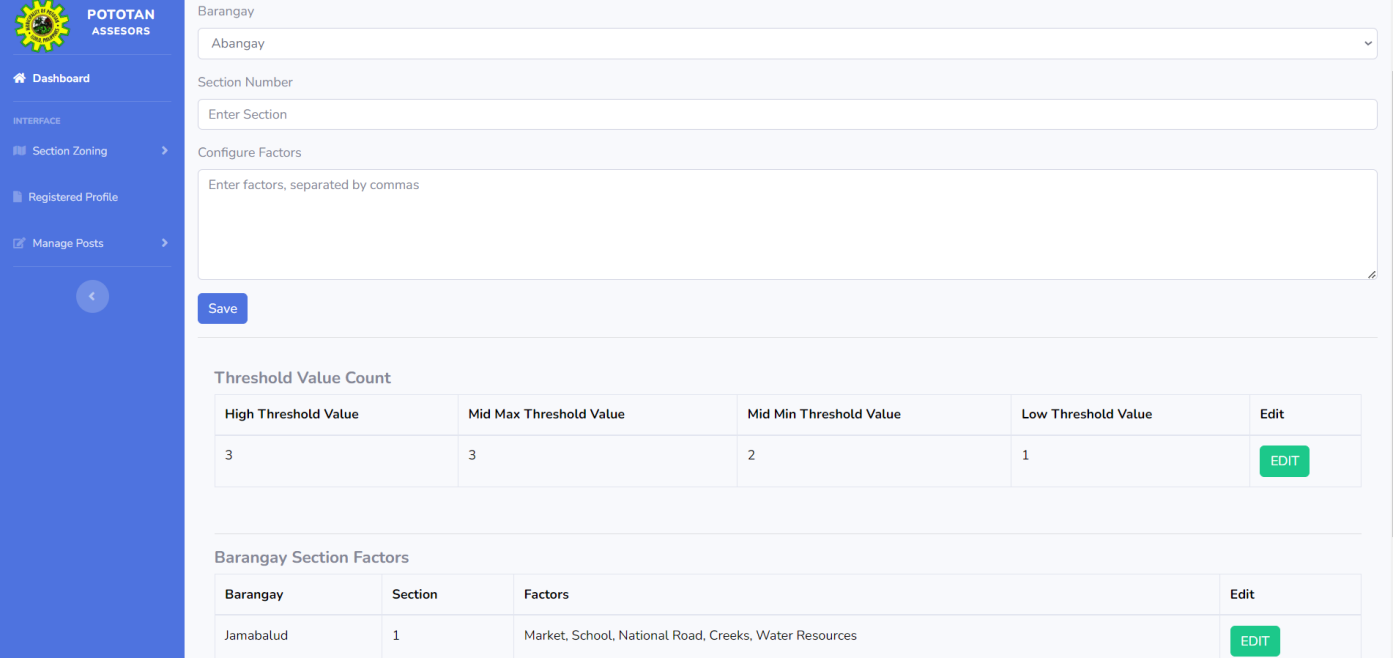
1. **Land Valuation** - This is where the admin can find all the registered data. Giving them authorization to edit, add additional land information, and view.

Functions such as “Configure Calculations” and “Configure Factors” are essential when adding new land records as:

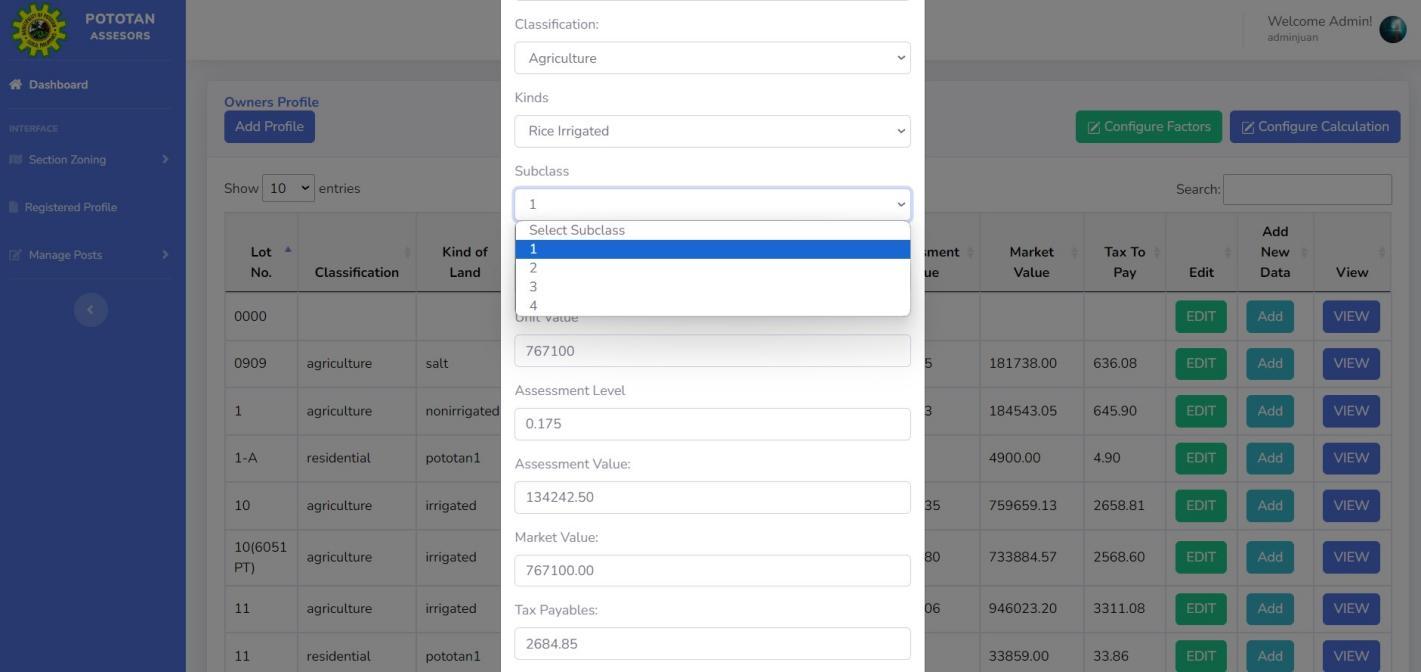
**Configure Calculations -** Admins can configure the unit values of land, as these values will be automatically displayed in the newly added data or edited data based on the classification and subclass selected. These values play an important role in automatically calculating the land value.

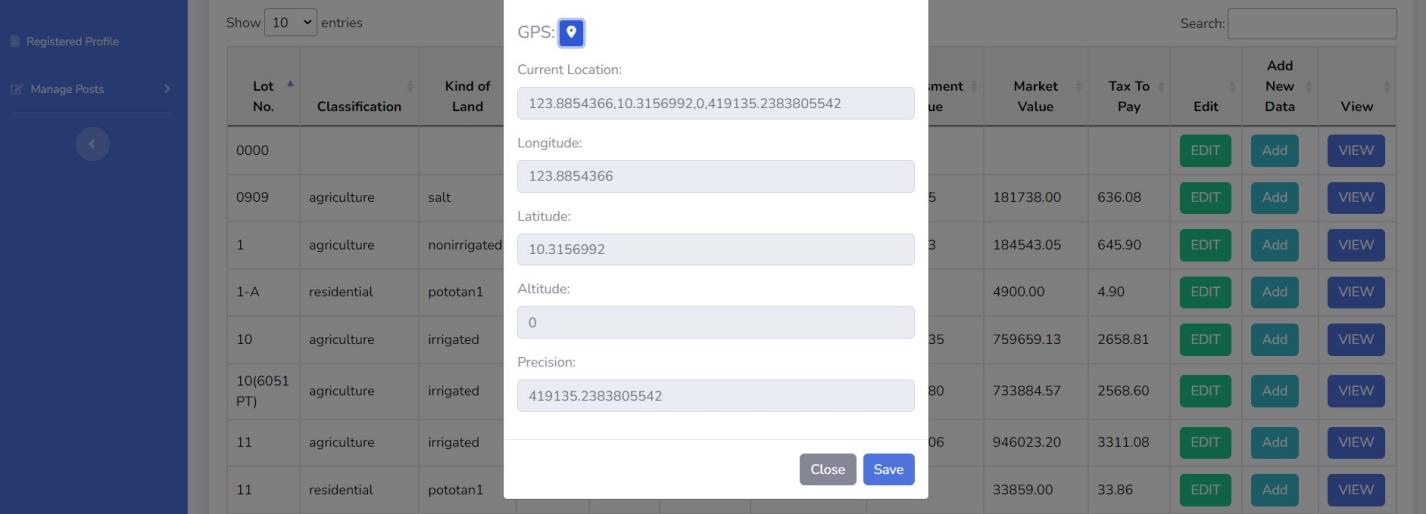


**Configure Factors *-*** Admins can define resources and infrastructure within zones and edit threshold counts, these counts will be automatically updated in the dashboard decision table and affect the result of the classification of the land (high, mid, or low value).

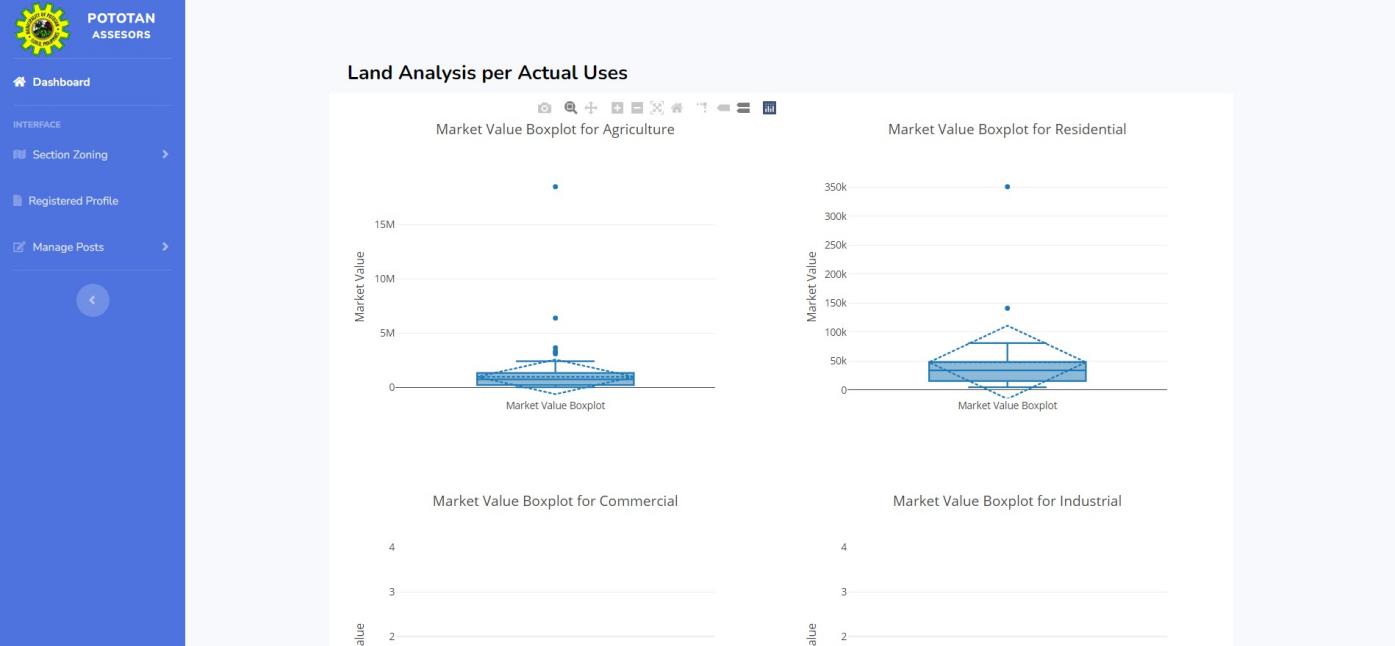
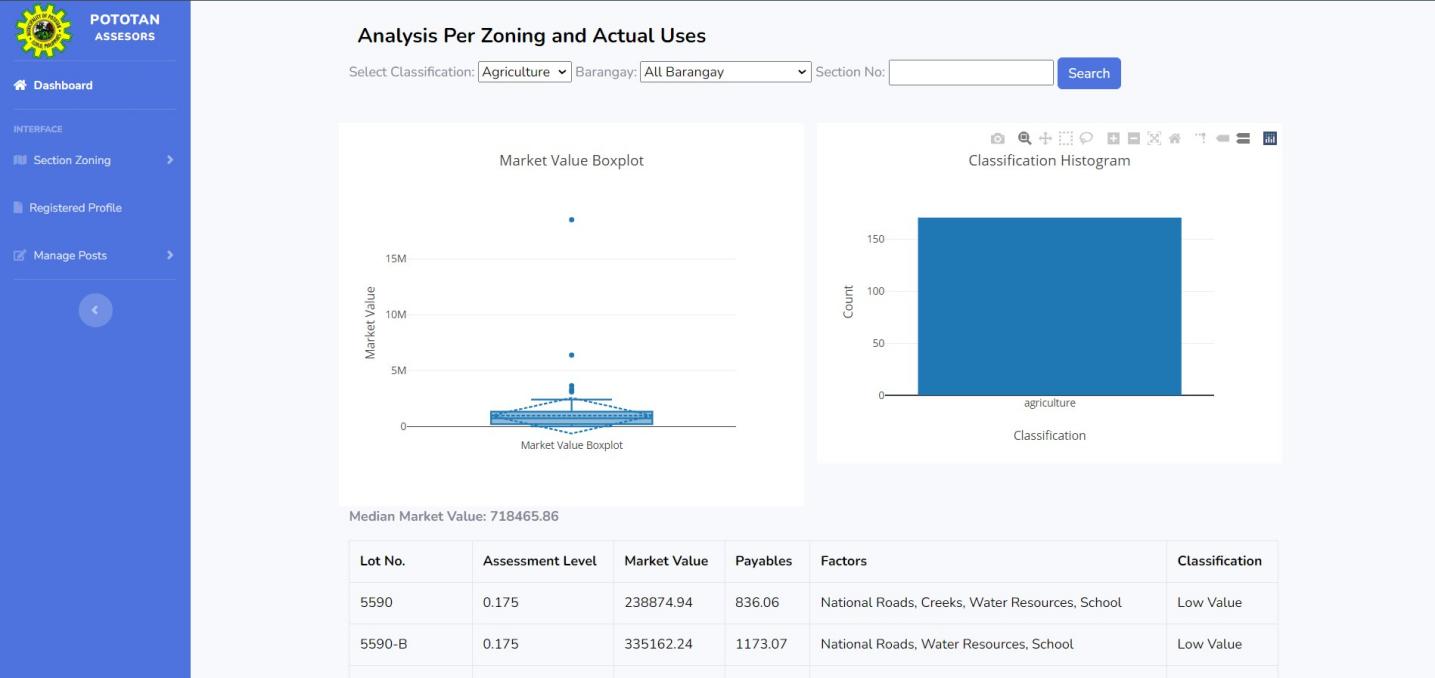


After saving the two configurations, the admin can now add a new land record. The GPS provided in this form can be used by the land inspector where when the location pin is clicked it will fetch the inspector's location automatically.



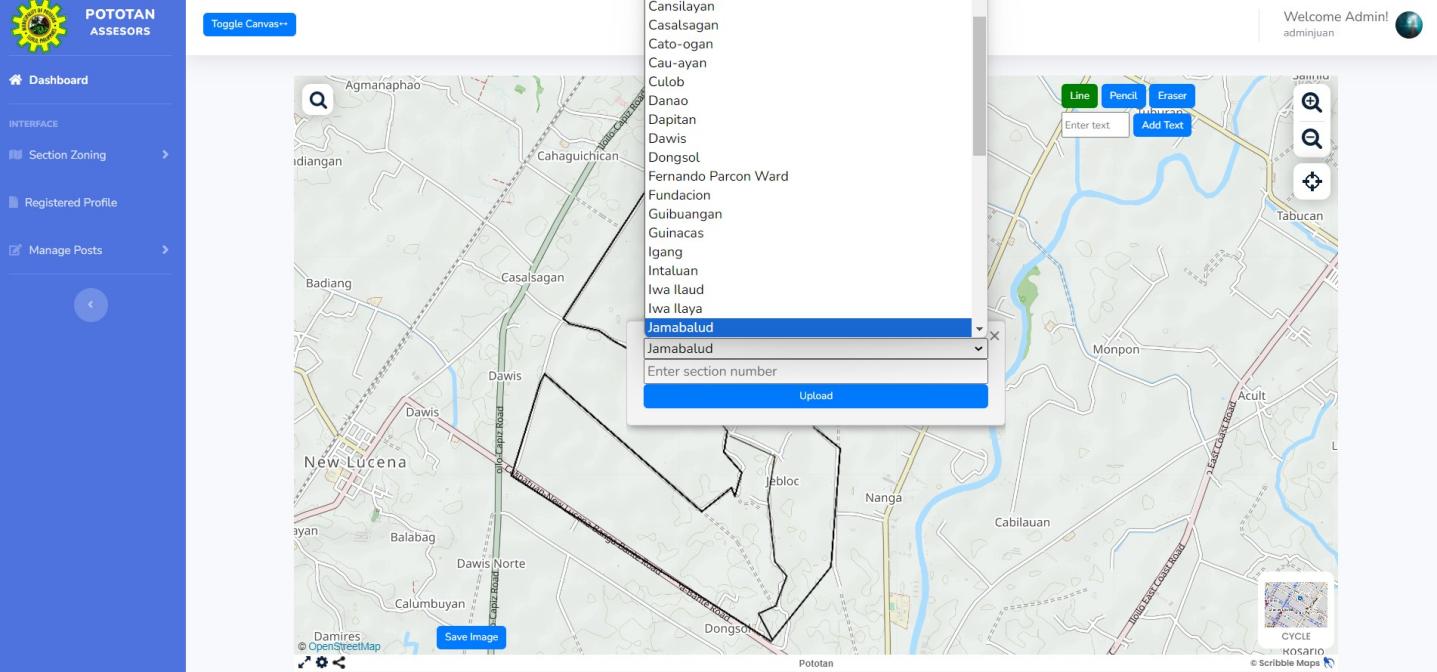


**Valuation Result per Category-** The system automatically generates analyses of valuation results per category. It also allows the admin to search for specific actual uses of a barangay and section number then output a boxplot for market value and count the actual uses of land. Providing dynamic boxplots for analyzing actual uses of land per classification for all barangays to identify outliers.

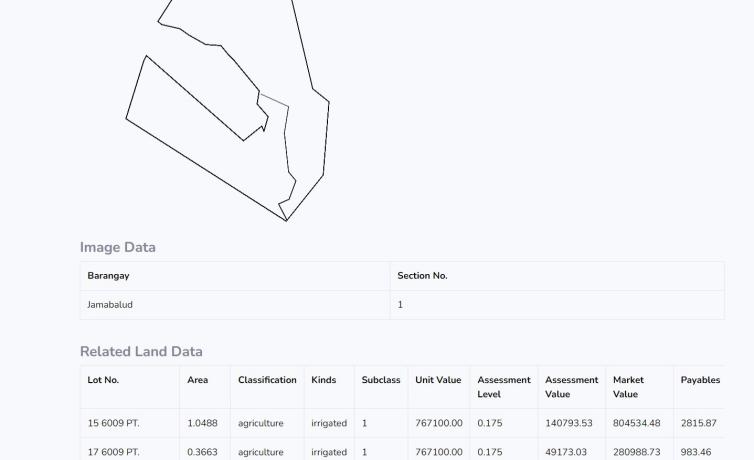
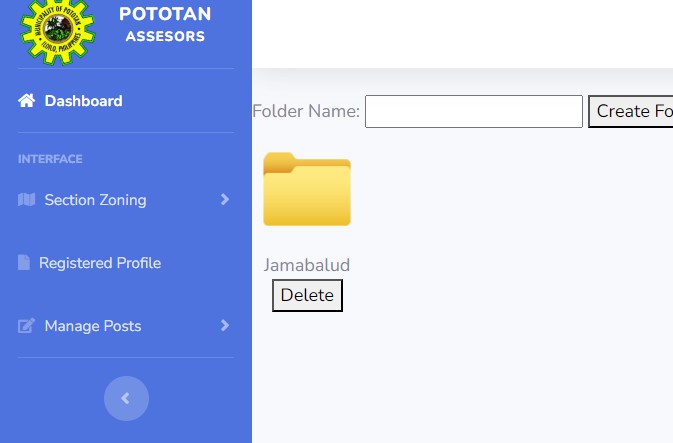


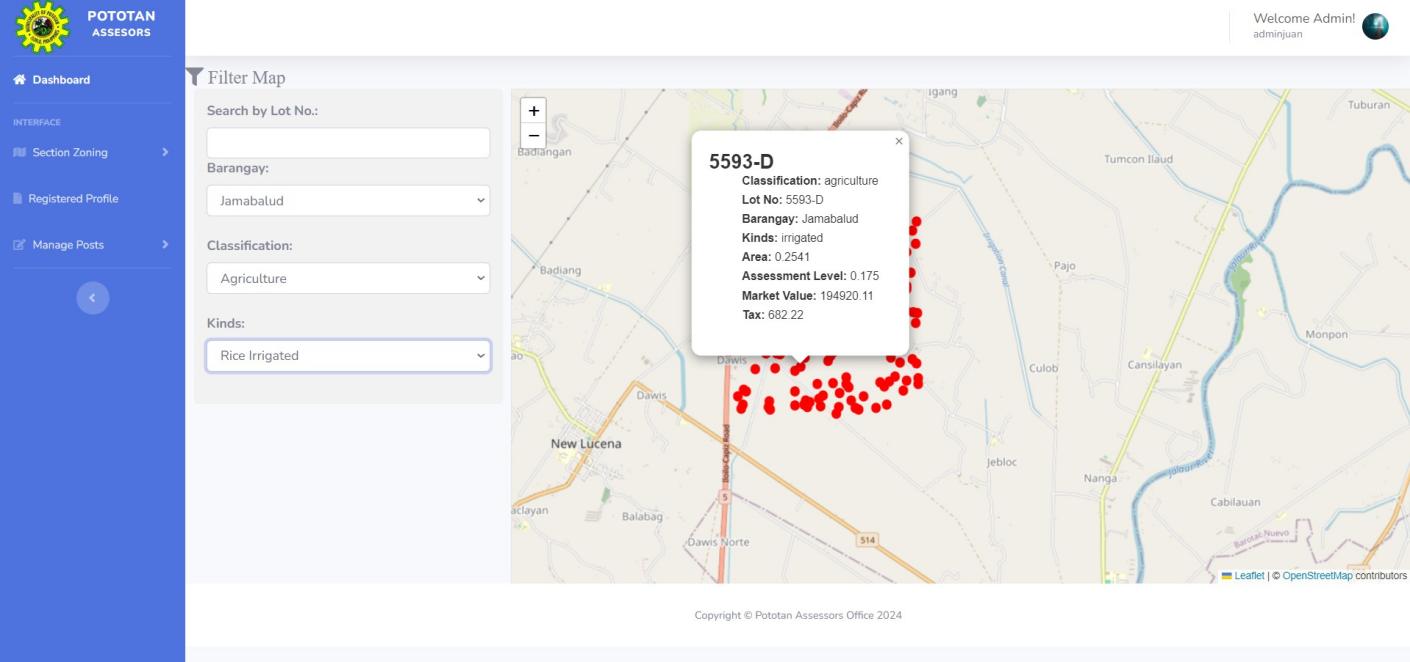
1. **Mapping -** Provide admin to sketch maps for reference and visualization of the available infrastructure and resources near each zone. Allowing to save drawn maps directly to

specific or premade galleries. When the image is clicked it will output the data based on the section and barangay it was named.



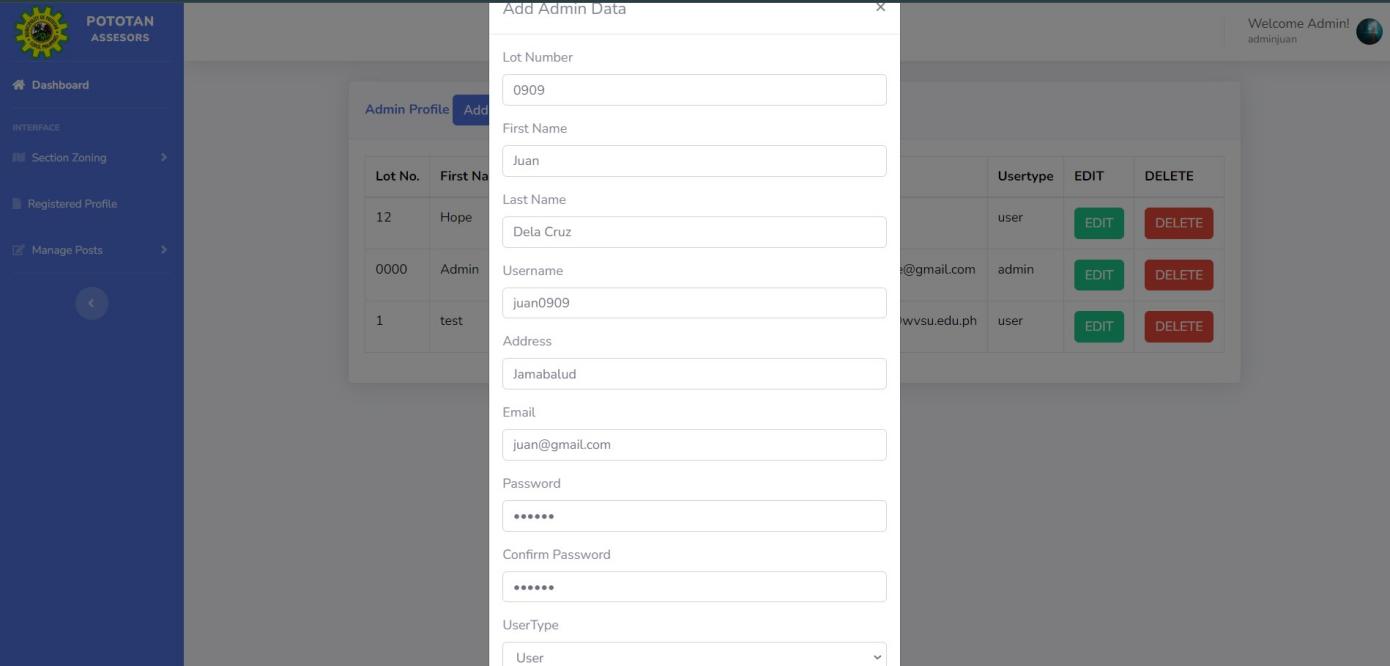
1. **Gallery** - This is where the admin can see all the saved maps uploaded from the “Mapping”. Moreover, the admin can create folders ahead of time and upload images inside them.



1. **Location Pin -** The admin can see the location of the data recorded in the system through the map based on the location coordinates inputted or generated by the system. The filter beside the map also provides the admin to filter data based on their desired results of similarities. Viewing the data of the markers are also present by clicking on it.

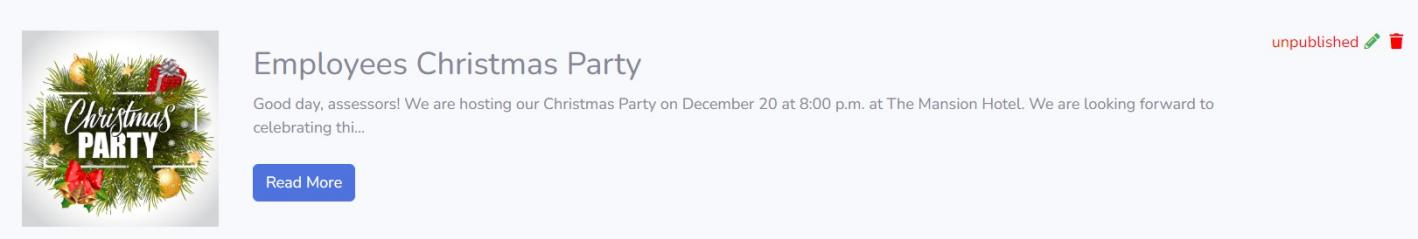
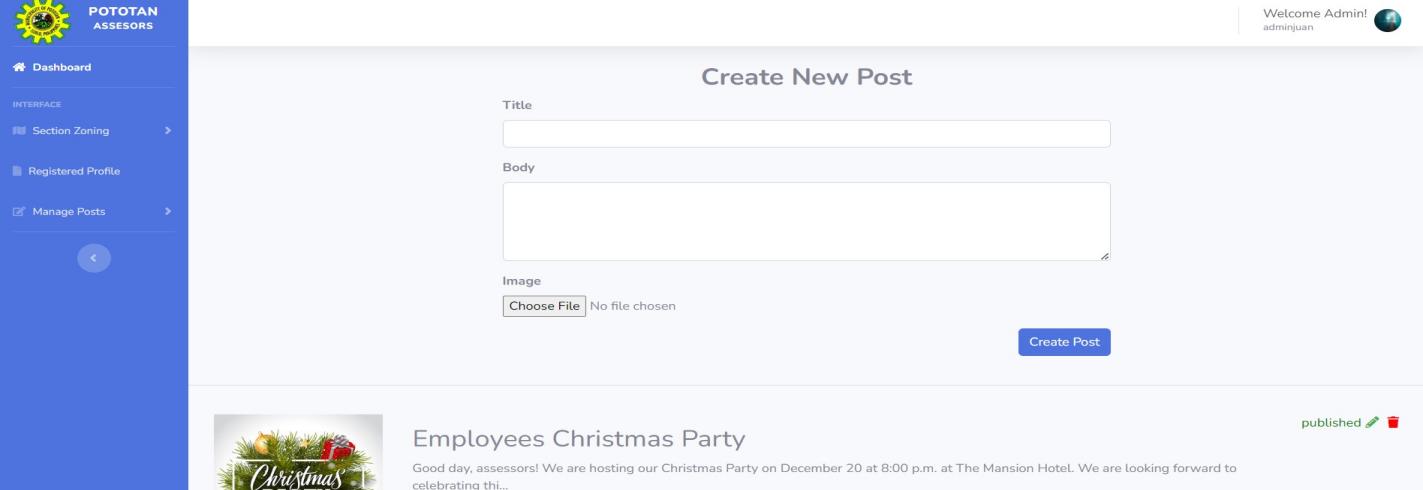
# Registered Profile

The admin can add the landowners to access their data online. This can be done if the

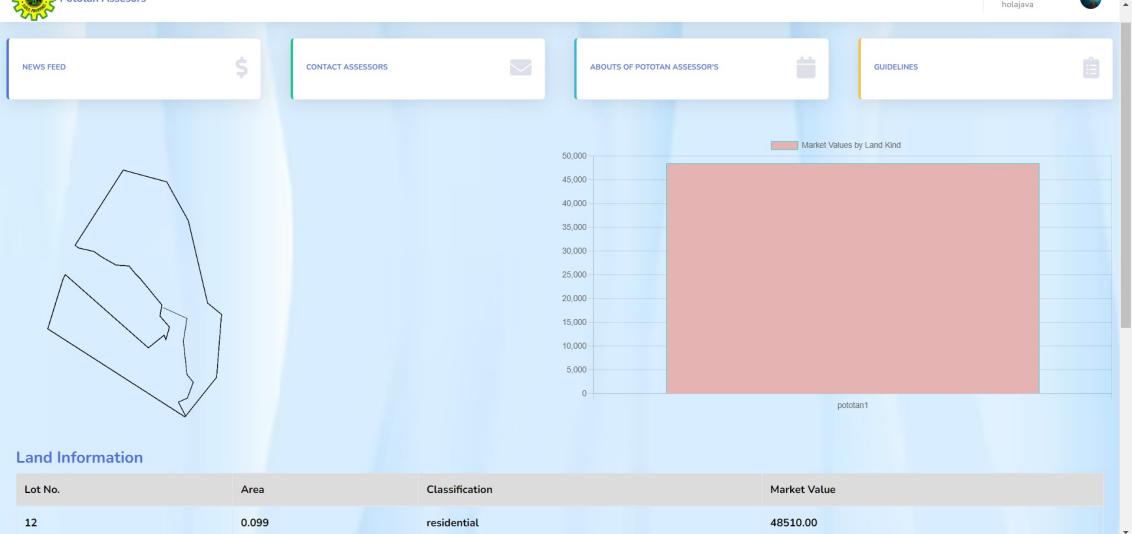
landowners personally visit the office and would like to have their account created. The email entered in the form will receive an email verification that when clicked and confirmed the user will get access to view their data.

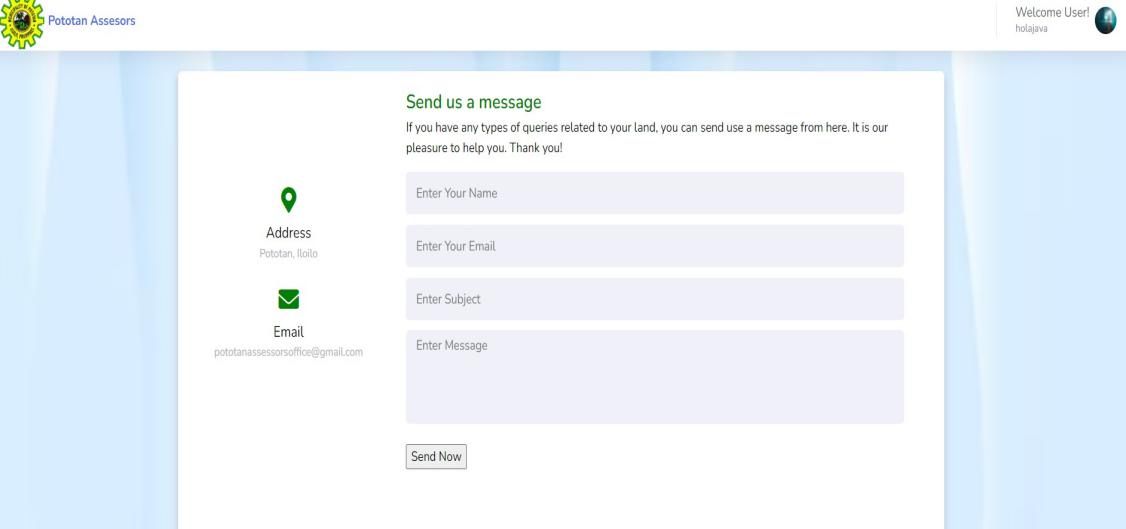
# Manage Posts

The admin can create and manage posts, deciding whether they are public or private which means that landowners can be updated with current reminders and news about the assessor's programs.

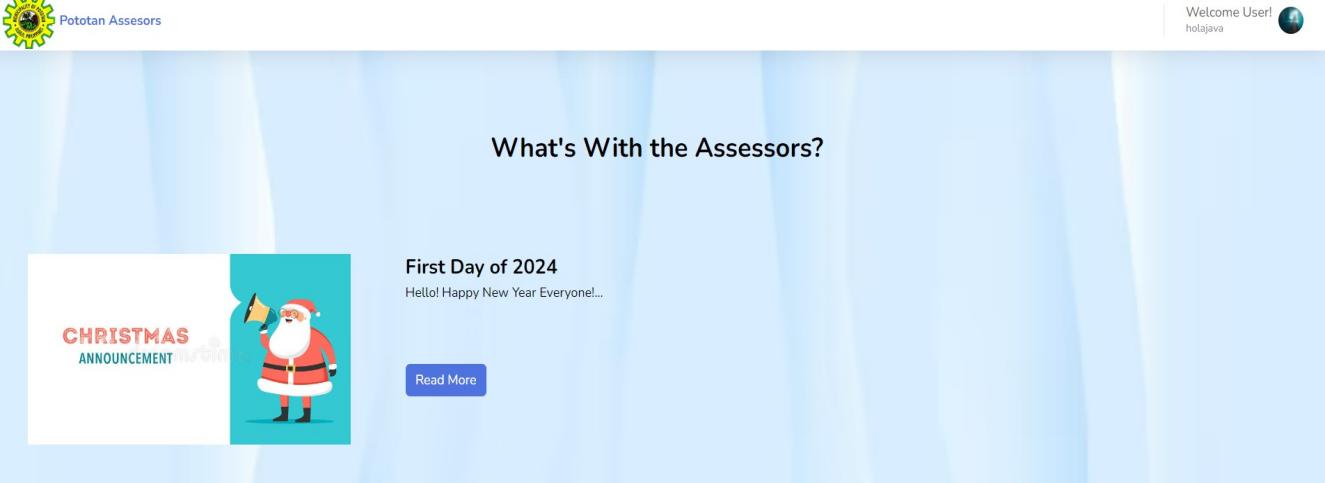


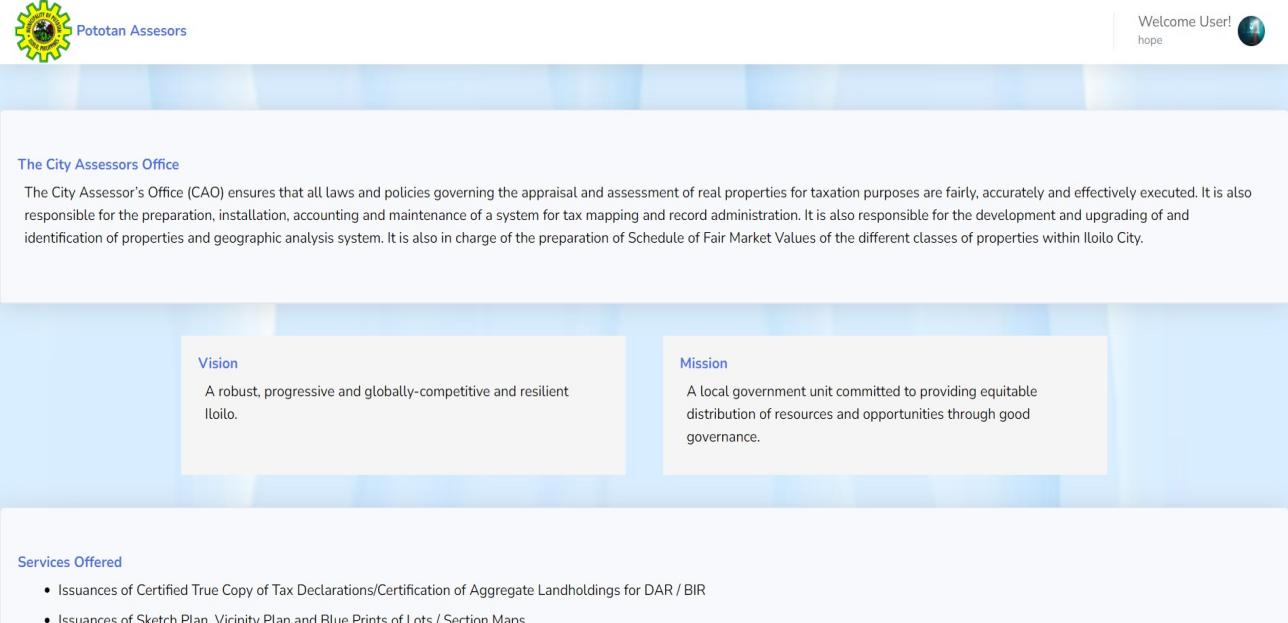
# Landowners Dashboard

1. **Land Records -** Landowners can view detailed land records, including section locations and annual tax payments.
2. **Contact Assessors -** Landowners can send inquiries to assessors through an email contact form.

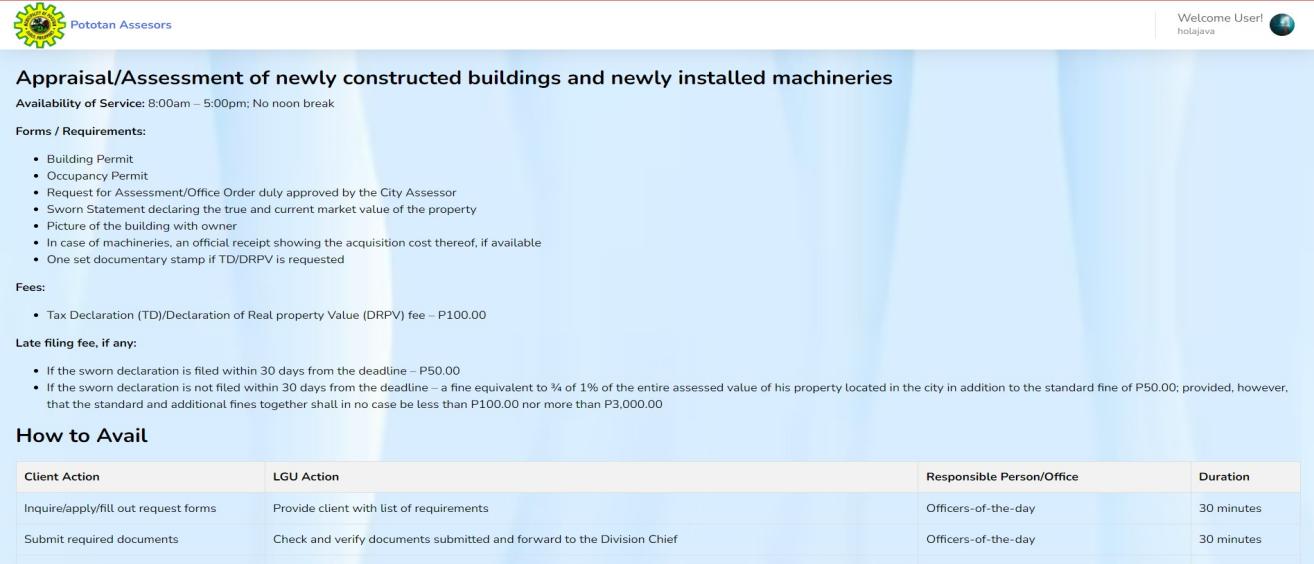


1. **About The City Assessor's Office *-*** Display the mission, vision, and services offered by the City Assessor's Office.





1. **Guidelines *-*** Provide service details and requirements for landowners.



1. **News Feed *-*** Display the important information from admins

# Troubleshooting

Web System not proceeding to the login page after installation

- Always check MySQL if it's active or not to access the system.

Email verification for login

* Make sure to have a good internet connection and check spam folders for emails.

# FAQ (Frequently Asked Questions)

What is the main use of the system?

* The system's main use is to determine the land valuation and classification of the land

records using decision rules. This becomes a basis for future investors and land buyers in choosing the land because the greater the amenities available in the area the greater the

benefits the buyer will acquire. Optimizing transaction efficiency by streamlining the communication between assessors and landowners. Improving the transparency and efficiency of the tax system, the technology also seeks to speed up tax mapping procedures.

How can this help the landowners and the assessors?

* This system provides the assessor and landowners the flexibility to identify lot/s with high, low, and mid valuations. Making it easier to endorse a specific land for future

buyers and sellers based on the actual use they want. It also helps the landowners to make informed decisions about their land investments offering reliable market-based land value and classification computations as well as efficient land valuation, tax computation, and mapping administration.

Why do landowners need to know their land valuation?

* Landowners need to understand the taxes that they need to pay. With our system, they will be updated on the current payables annually and understand how the taxes change over time. Moreover, landowners can make well-informed decisions about investing or

selling their property when they are aware of their land valuation. It is essential to ensure accurate assessments and equitable property taxation. Landowners are better equipped to manage their properties and make wise financial decisions with this knowledge.

How can the graphs be helpful for land reports?

* Graphs in land reports give data, including trends and valuations, visual clarity, and simplifying complex information. They assist stakeholders in making reasonable choices by providing a concise overview of important findings. Graphs improve the overall value of land reports by clearly highlighting patterns and trends.

Does the map measure the distance when drawn?

* No, unfortunately not, because the system is designed only for map tracing and reference to the available infrastructures within the section number of a specific barangay.

How accurate is the land valuation?

* There are many factors to consider in the analysis of land valuation accuracy, with the actual formula given by the assessors and the analysis of data using SPSS the accuracy of land value depends on the procedures and data used. It is essential to have accurate information on the location, features of the property, and market trends. Accurate land valuation is ensured by professional competence and regular updates.

# Contact Details

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**Land Tax And Land Mapping Information System with**

**Decision-Rule Based Land Classification**

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