Geotagging and Monitoring of Houses Covered under National Mission "Housing for all" (HFA) using Bhuvan

(Bhuvan – HFA)

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Abstract (with Keywords):

This document is a user manual elaborates the procedures of accessing the Bhuvan Geo-Platform, user registration, authorization, moderation of geotagged 'Housing for All' (urban) (HFA) mission assets through web & tabular view and report generation.

Keywords: Bhuvan, Geo-Platform, Geotagging, Monitoring

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Geotagging and Monitoring of Houses Covered under National Mission "Housing for all" (HFA) using Bhuvan

1. Introduction

Pradhan Mantri Awas Yojana (PMAY) 'Housing for All' (urban) (HFA) mission for urban areas will be implemented during 2015-2022 and the mission will provide central assistance to implementing agencies through State / UTs for providing houses to all eligible families/ beneficiaries by 2021. All 4041 statutory towns as per Census 2011, with a focus on 500 Class I cities will be covered in three phases under this scheme. The mechanism of release of Central assistance to the States/UTs will be made based on the urban population and estimated slum population and other criteria as may be decided by Ministry of Housing and Urban Poverty Alleviation (MoHUPA). As per the guidelines, the progress of individual houses should be tracked through geo-tagged photographs, so that each house can be monitored effectively. Its decided between NRSC and MoHUPA, MoU will be signed between organizations and Bhuvan Geo-platform Services and mobile application for photograph based geo-tagging of beneficiary houses will be made available. This would enable MoHUPA and the other participating States/UTs to monitor the progress of the 'Housing for All" mission to the level of individual beneficiary.

Towards this MoU between NRSC/ISRO and MoRD has been signed on 05 Oct 2015 with Roles and Responsibilities of NRSC as follows.

- Design and Development of the Bhuvan-MoHUPA Geo-portal including all functionalities like Visualization, Query and Analysis and User privilege based logins.
- Development of Android based Mobile Application for taking geo-tagged photographs and Customisation of user interface as per requirements of MoHUPA.
- Integration of Management Information System (MIS) of 'Housing for All' mission with Bhuvan-MoHUPA Geo-Portal.
- Capacity Building of MoHUPA and participating States/UTs officials on Mobile Application and Bhuvan-MoHUPA Geo-Portal.

To address the roles and responsibilities, an exclusive Bhuvan-MoHUPA application has been developed. This document is a user manual describing the detailed procedural steps for Geotagging and Monitoring of MGNREGA Assets using Bhuvan. This user manual elaborates the procedures of accessing the Bhuvan Geo-Platform, user registration, authorization, moderation of geotagged assets through web view and report generation

2. Authorizing City level Surveyors and Supervisors

There are 4 level of users are there having different privilege in Bhuvan-MoHUPA application i) Central Administrator, ii) State Administrator, iii) City Level Surveyor and iv) City Level Supervisor.

State Administrators can approve city-level Surveyors and Supervisors (Moderators).

URL -
http://bhuvan.nrsc.gov.in/governance/tools/housingforall/admin/register_city.php

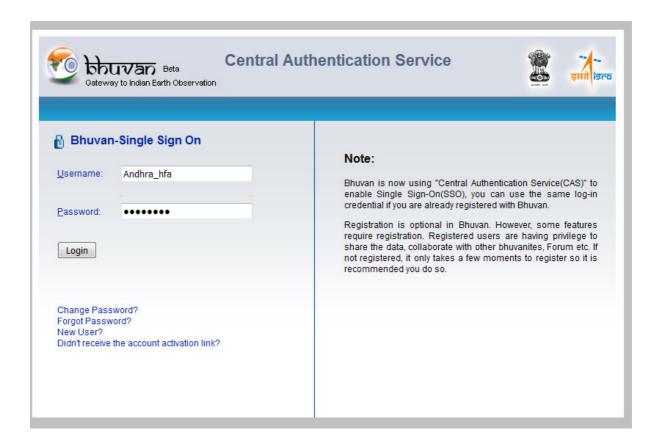State-level moderators can approve city-level Surveyors and Supervisors (Moderators)

- **Surveyors** - Those officials who are authorized to collect field data for a given city
- **Supervisors (Moderators)** - Those officials who are authorized to accept/reject field data collected for a given city

Following are the steps to authorize City level Surveyors and Supervisors.

Prerequisites are below

- **Surveyors** - Should have a Bhuvan account. And also added one sample Geo-tagged point using the Android App <u>with device id same as Bhuvan username</u>.
- **Supervisors (Moderators)** - Should have a Bhuvan account.
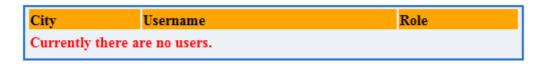
Both Surveyors and Supervisors should share their Bhuvan username and registered email id to get authorized by State Moderator.

1. Login with your State Administrator Username and password

2. You have options to authorize supervisor/surveyor or delete already authorized supervisor/surveyor
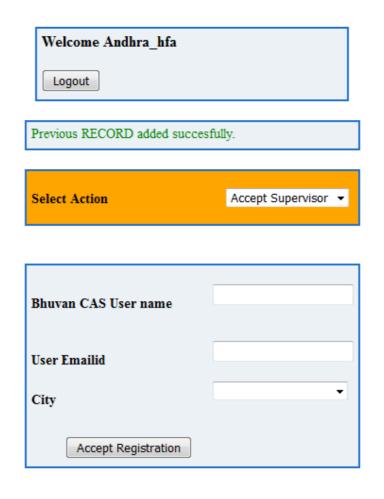

3. Currently there is no user authorized by you

Select Action   Accept Supervisor ▾

Bhuvan CAS User name   sonal

User Emailid   ıalaggarwal1@gmail.com

City   Badvel ▾

Accept Registration

4. Select Action – 'Accept Supervisor'. Give the username and Email id provided to you by your city Supervisor. Choose the city to be mapped with and click on "Accept Registration"

RECORD NOT Found in Bhuvan-Central Authentication Service. Please ask the user to register with Bhuvan and share their email id and username with you.

5. If the username and Email id entered by you is wrong you will get above message

Previous RECORD Not added as city name was empty.

6. If you have not selected any city to be mapped upon, you will get above message

Welcome Andhra_hfa

Logout

Previous RECORD added succesfully.

Select Action   Accept Supervisor ▼

Bhuvan CAS User name

User Emailid

City

Accept Registration

City	Username	Role
Amadalavalasa	sonal	supervisor

7. If correct username & Email id is given, you (State Administrator) will get above screen (eg – Andhra Pradesh Administrator). And list of users will display the authorized users with their Role (as Supervisor).
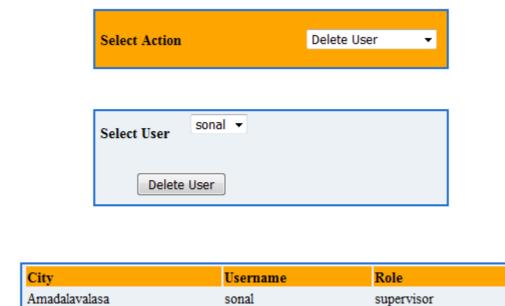
8. In order to authorize a surveyor, select action "Accept Surveyor". The moment you enter the Username automatically "Unique Mobile Id" drop-down will appear if the official has added one sample Geo-tagged point using the Android App <u>with device id same as Bhuvan username</u>. If not, list will be empty.

9. As seen above user 'sonal' has added point through mobile App, thus Unique Mobile Id is visible. Click on 'Accept registration'.

User is already linked with Amadalavalasa as supervisor

10. Since the user is already registered as Supervisor, User cannot be a Surveyor.

Select Action	Delete User ▼

Select User	sonal ▼
	Delete User

City	Username	Role
Amadalavalasa	sonal	supervisor

11. Select action 'Delete user' in order to un-authorize the user. Click on Delete user.

Previous Request for user deletion is processed succesfully.

12. The above message shows that user has been successfully unauthorized.

Note: Central and State Administrators credentials are created and shared by NRSC based on mail requests and approval.

3. Visualisation and Moderation

This web-based application allows users to visualize the geo-tagged housing locations. It also allows authorized users (central as well as state-wise) to moderate the collected geo-tagged points before it is made visible to the public. The authorized users also have the facility to view the statistics.

Following are the steps to access this web application –
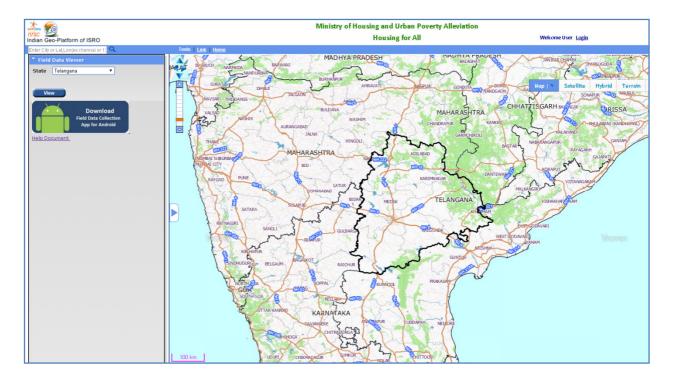
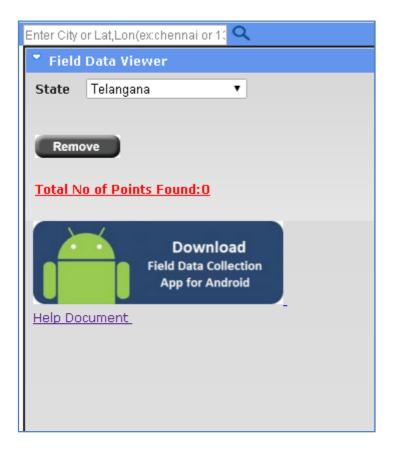### 3.1   View and Statistics

STEP:1

Visit the URL for Housing for All application -

Select the state from drop down. eg:

The map will be zoomed to Telangana state.

After selecting the state, click on view button, it will display the total number of houses geo-tagged in that state. Only points accepted by the moderators will be shown to the public. Thus in below snapshot, it shows zero points.

To see all the data, the authorized user should login. There are two types of logins - Central and State.

If we login with central login id, all states information can be moderated. If we login with state login id only particular state information can be moderated. However a state-level authorized user is allowed to view geo-tagged locations (moderated and un-moderated) for other states also.

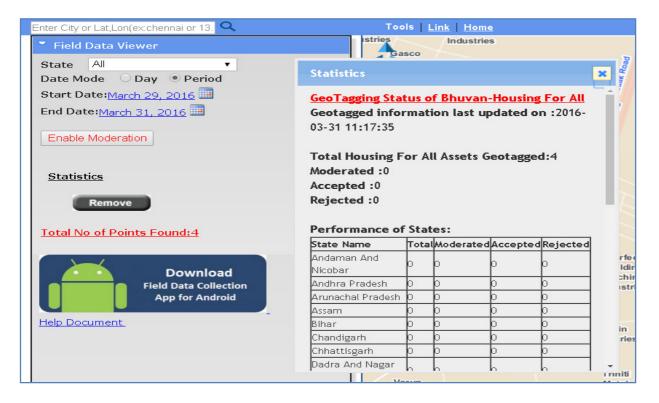Below procedure is explained for user with central login id.

After login to the page we will get a new button named 'Enable Moderation'.

Again select the state (eg:Telangana) we will get the state information. For the authorized users it displays all the geo-tagged locations (moderated and un-moderated). Thus we see in below snapshot total points found is 4.

Click on the statistics link to get the status with 'Accepted & Rejected' details.

Click on the View icon to get the points on the map.

Points can be selected either date wise or duration wise using the date filter.
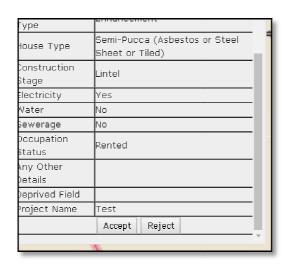
3.2   Moderation

STEP:4

To perform moderation operation click on 'Enable Moderation' icon to moderate the points.
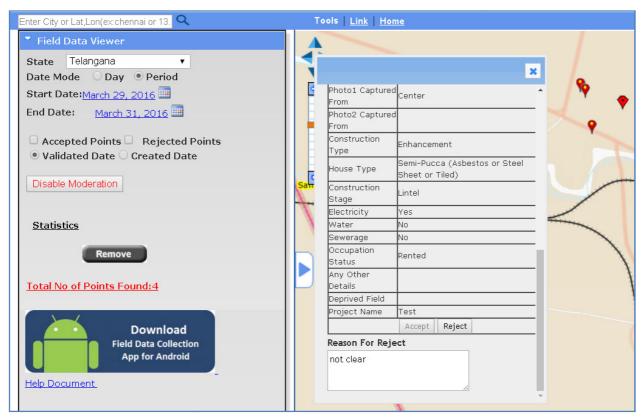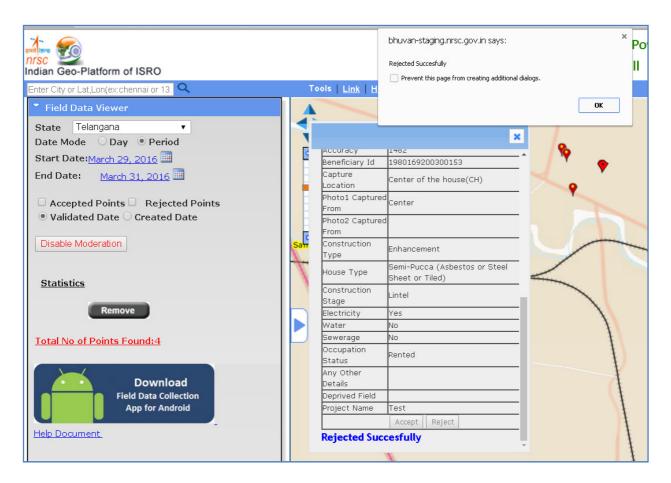

Select any point by clicking on it. After selecting the point, a pop up will display the information of house along with the photos.

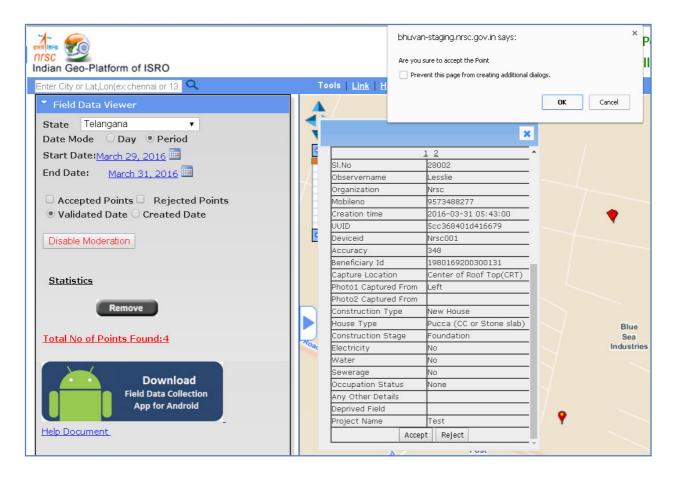User has an option to accept or reject any point.

To reject the geo-tagged house point click on reject button on bottom of pop up. After clicking on reject button a new box will open i.e 'Reason for reject'. Enter the reason for rejection and select the reject button. Point will be rejected successfully.
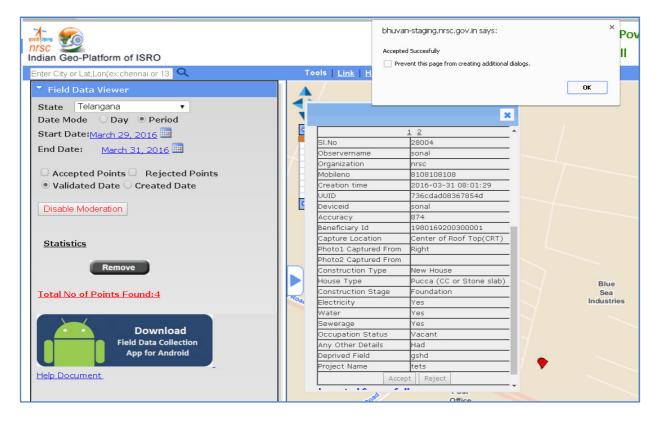
To accept the geo-tagged house point click on accept button on bottom of pop up. Another pop up will open. Click ok button to accept the point. Click cancel button if it is to be reverted.
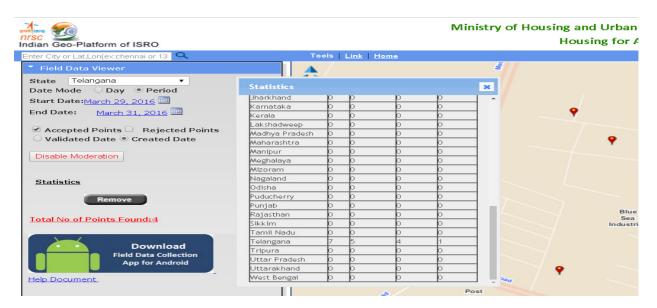
If you click on ok button the point is accepted. Another pop up will open and gives the message like accepted successfully. And the point will disappear from the map for further moderation.
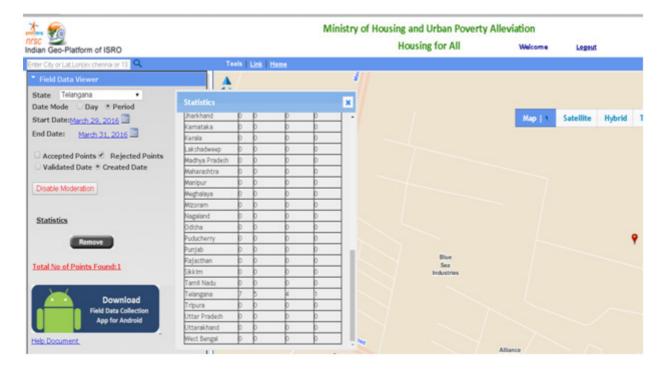
To check how many points are accepted click on accepted points icon. After selecting the accepted point button, click on view button it will give information of total accepted points.

Status will be updated in statistics popup.

To check how many points rejected, click on rejected point icon.

After selecting the rejected point button click on view button it will give information of total rejected points. Status will be updated in statistics popup.

To check how many points are accepted and rejected click on accepted points icon & rejected points icon. After selecting the icons click on view button it will give information of total accepted points & rejected points. Status will be updated in statistics popup.
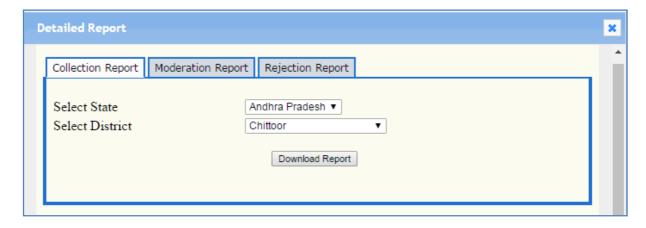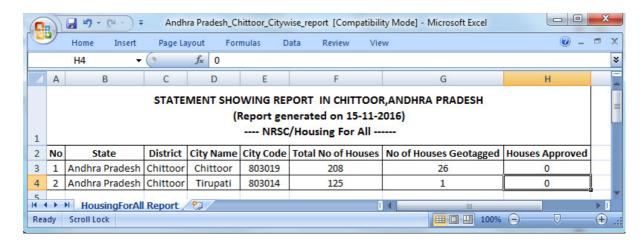

4. Report

As explained in section 3.1 and 3.2, summary/ statistics is provided in all user levels. In order to have the detailed report to download, report module is in place along with statistics option as shown below.

On click of the report, popup will open with various report options like collection, moderation and rejection.

Collection report is available district wise if the state administrators login.

No	State	District	City Name	City Code	Total No of Houses	No of Houses Geotagged	Houses Approved
1	Andhra Pradesh	Chittoor	Chittoor	803019	208	26	0
2	Andhra Pradesh	Chittoor	Tirupati	803014	125	1	0

STATEMENT SHOWING REPORT IN CHITTOOR,ANDHRA PRADESH
(Report generated on 15-11-2016)
---- NRSC/Housing For All ------

When the Moderation report is selected, report having details of the entire beneficiary with date of acceptance and moderator details will be downloaded.

When the Rejection report is selected, report having details of the entire beneficiary with date of rejection and rejection details will be downloaded.