

# Intervention of Geo-Tagging and National Mobile Monitoring System in MGNREGA: A Study

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**Abstract:- Geo-tagging is the activity of adding geographical information (longitude and latitude) to photographs.**

**A mobile application is developed by NRSC of ISRO. Geo-MGNREGA portal is a user-friendly mobile and server based solution. It enables data to systematically record generated assets with Longitude, Latitude, Time stamped with geo-tagged photographs.**

**National Mobile Monitoring System (NMMS) allows real time monitoring of works, it allows capturing attendance of workers on worksite through its Android Mobile Application.**

## I. INTRODUCTION TO GEO TAGGING

Geo-tagging is the task of adding geographical information to photos such as longitude and latitude. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) aims at empowerment and enhancement of the social security of the people in rural areas by guaranteeing 100 days of unskilled wage employment in a financial year to a rural household, whose adult members volunteer to do unskilled manual work.

Towards this, a location based service Android mobile device application is launched by National Remote Sensing Centre of India Space Research Organization, Govt. of India. Geo-MGNREGA website is a user-friendly mobile and server based solution which enables data collect or to systematically record generated assets under MGNREGA with spatial position (Longitude, Latitude), Time stamped with geo-tagged photographs. BHUVAN mobile application provides a platform to control crowdsourcing to build spatial databases on Geo-MGNREGA platform.

Linking ISRO – Bhuvan portal with "NREGA-Soft" interface operated under MoRD by National Informatics Center (NIC) is a national level initiative. This portal was established in a very limited time-line, which will enable access to all state projects implementing agencies. Database of assets residing on "NREGA-Soft" were pushed to Bhuvan, which in turn was served to each data collector under Gram Panchayats. The data which is collected from Gram Panchayat level is to be moderated for quality levels through approved authorities at block level to ensure the precise information for online visualization. Bhuvan facilitates a complete geographic data storage, analysis and reporting of assets, with a high resolution backdrop of Indian Remote sensing Satellite (IRS) natural color images. MoRD and NRSC are working out together for the methods of design, implementation and roll

out based on meticulous schedules seeking compliance of high rigor.

## II. HOW GEO TAGGING WORKS

Geo Tagging of assets is done through BHUVAN which is an Android mobile Application. GPS location of the asset along with two photographs is captured and sent by MSE (MGNREGA Spatial Enumerator) to BHUVAN portal.

Usually Gram Rozgar Sahayak (GRS) is designated as MSE at Gram Panchayat Level. The process of registration of MSE is available in BHUVAN mobile App.

The data collected by MSE is validated by an Officer at the Block Level known as GIS Asset Supervisor (GAS). The registered MSE is also approved by GAS.

## III. ADVANTAGES OF GEO-TAGGING

- Online record keeping and observing of assets to check leakages and for effective mapping of resources and their location information for future development works in rural areas.
- Geo tagging will not only ease the implementation and regular monitoring of assets but it can also be implemented to perform additional development works which may be needed on existing assets.
- The use of Geo-tagging space technology at the grassroots level is very helpful in poverty eradication & can ensure development and empowerment.

## IV. INTRODUCTION TO NATIONAL MOBILE MONITORING SYSTEM (NMMS)

National Mobile Monitoring System (NMMS) Application is introduced by Ministry of Rural Development, Government of India for MGNREGA.

NMMS allows real time monitoring and capturing of workers' attendance at worksite where 20 or more than 20 workers are engaged for work. This Step of the Ministry is expected to plug leakages in the MGNREGA Scheme.

## V. HOW NMMS WORKS

- Install the .apk file of the NMMS Android App which is downloaded from the MGNREGA website.
- If Android Version is Below Android 10 then Note IMEI number/numbers by dialing \*#06# or from the "About Phone" option.  
If Android Version is 10 or Above 10. Then Note Mac ID. MacID can be traced from the NMMS App homepage OR from Phone Settings.
- Register Mobile device on NREGAsoft using above credentials and personal details of Field Executive, who has to capture attendance at worksite.
- Clear Cache of Mobile Device on Regular basis for smooth working of NMMS application.

## VI. BENEFITS OF NMMS

- To plug leakages in implementation of MGNREGA by eliminating bogus muster rolls.
- Real time updating of MGNREGA workers attendance for complete transparency.
- NMMS also captures Longitude and Latitude of the worksite. It helps in finding the location of the worksite.
- The NMMS Mobile Application is empowering Gram Panchayats/Implementing agencies and Block Officers with live data from the worksites with real time updation
- NMMS app does not required any external internet connection. It works on existing mobile data and uses the existing GSM/GPRS/EDGE/VOLTE connectivity and links it with NREGA soft central server, thereby providing access to data at the village level.
- It works only on registered devices. User id and passwords cannot be used on another device.
- This app also has a GPS tracking facility and worksite photo uploading features

## VII. DRAWBACKS IN GEO-TAGGING IMPLEMENTATION AND NMMS

- Sloe internet connectivity in rural areas.
- Lack of knowledge on the ground level is big hurdle in implementation of NMMS
- Shortage of ground functionaries.

## VIII. CONCLUSION

Geo-tagging has helped to streamline the implementation of schemes, monitor them efficiently and planning for the future development works.

Geo-tagging is a very effective monitoring tool and there is no doubt it helps in good governance Essentially Geo-tagging provides us a sense of what we are doing and what we need to do differently. For instance, there have been a lot of learning's through this process which have helped us improve the implementation of MGNREGA scheme effectively .

The NMMS App was developed by the Ministry of Rural Development. This app is aimed at bringing more transparency and ensuring proper monitoring of the

MGNREGA Scheme. The NMMS App is applicable for MGNREGA workers for all states and UTs

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