



MIRSAC Newsletter

Mizoram Remote Sensing Application Centre
(An Autonomous Govt. Institution under Science & Technology, Planning Department, Govt. of Mizoram)

Volume: 8

July - December 2016

Issue: 2



Pu Lalmalsawma
Chairman
MIRSAC Gov. Body



Dr. C. Vanlalramsanga
Vice Chairman
MIRSAC Gov. Body

Governing Body of MIRSAC

Chairman : Chief Secretary
Govt. of Mizoram

Vice Chairman : Secretary
Planning & Prog.
Implementation Dept.
Govt. of Mizoram

Member Secretary : Chief Scientific Officer
Dte. Science & Technology

Members : 16 members from various
Depts. of the State, viz.,
Planning & Prog.
Implementation Dept.,
Finance Department,
Environment & Forest,
PWD, PHE, P&E,
Minor Irrigation,
Agriculture (Crop Husbandry),
Horticulture, Geology &
Mineral Resources,
Soil & Water Conservation,
Rural Development,
Land Revenue & Settlement,
DM&R, UD&PA, & Sericulture

MIRSAC Editors

Editor : Robert Lalchhanhima Sailo
Jt. Editor : R. Lalfamkima

Contact Address:
Mizoram Remote Sensing Application Centre
Science & Technology, Planning Dept.
Mizoram Secretariat Complex, Aizawl,
Mizoram. Pin- 796001

Office : 0389-2333240
Fax : 0389-2336139
Email : mirsac_aizawl@yahoo.com

HIGHLIGHTS OF MIZORAM INFRASTRUCTURE INFORMATION & MONITORING SYSTEM (MIIMS) OFFICIAL RELEASE FUNCTION

The MIIMS project embodies an integrated geospatial database system of various categories of infrastructures present in the state of Mizoram, which is mapped and stored in a GIS environment from where they can be accessed to enhance availability of important geo-located data and provide options to monitor existing infrastructure components during different stages of development activities occurring in the state. At the core, the main concept of the project adheres to provide a state-wide platform where reliable information of infrastructure locations in the state can be accessed and monitored by users through a user-friendly system which is built and designed to assist in the process of planning and monitoring.



Pu Lalsawta, Hon'ble Minister, Planning Dept. (Science & Technology) releases MIIMS atlas

The project has generated valuable location-based information of infrastructures in Mizoram, presented in the form of district-wise atlas and an interactive GIS system. The district-wise atlas further contains maps with village level infrastructure locations each categorised with appropriate legends & symbols. The MIIMS system is currently functional as a GIS based intranet geo-portal installed on standalone PC system.



The MIIMS atlas and system was officially released by Pu Lalsawta, Hon'ble Minister, Planning Dept. (Science & Technology) on 25th July 2016 at New Secretariat Conference hall. The short function was chaired by Dr. C. Vanlalramsanga, Secretary, Planning Dept. and was attended by Officers from Line Departments of the State. A brief introduction about the project was presented by Dr. R.K. Lallianthanga, CSO & Member Secy., MIRSAC. A live demonstration of the MIIMS geo-portal was also shown at this function.

The project & its deliverables got positive feedback and was appreciated by the Department officials present at the function. Comments & suggestions for further improvement of the MIIMS system was also noted. Copies of the district-wise atlas were distributed to all representatives of Line Departments.



From Editor's desk



The changing world of technology demands huge investment of ideas for the effective utilization of emerging new technologies in areas that require massive propulsion to meet our increasing demand for solutions and services. Man-made systems and our strive towards the evolution of better & robust gadgets has sufficed this need to some extent, yet we have to be aware and prepared for impending changes that are about to happen. Remote sensing and GIS technologies have also evolved a lot from mere photo interpretations to life saving & solution driven products that has changed the way we operate and solve current day issues. It is an undying technology that requires constant input of ideas and innovative techniques to survive in the long run. Project based findings and result-driven outputs have to be given pragmatic acceptance in real-world applications where time is a limiting factor. In our endeavour to minimize old age conventional practices and to inculcate automated procedures it is time that we keep abreast with changing technologies to enable best practices.

MIRSAC @ 1st Mizoram Science Congress



Chief Minister of Mizoram & Minister, Planning Dept. visiting MIRSAC stall at Mizoram Science Congress.



Display of projects & GIS systems at the 1st Mizoram Science Congress 2016 on 13th & 14th October 2016 at Mizoram University.

WORKSHOP ON EMPOWERING PANCHAYATI RAJ INSTITUTIONS SPATIALLY (EPRIS)



Inaugural function of EPRIS Workshop & Hands-on Training programme

The EPRIS project is initiated and funded by ISRO, Dept. of Space with a goal to empower panchayati raj institutions with space-based inputs for resource based and integrated spatial development planning of rural areas in a user-friendly technological environment. In this backdrop, the Centre has collaborated with ISRO to provide capacity building of concerned rural development departments and village level workers in mapping & geolocating existing & on-going development activities in rural areas.

Towards this aspect, a State level Workshop and hands-on training programme for achieving the goals of the project was organised on 17th November 2016 at I&PR Auditorium, Aizawl.

The workshop was chaired by Dr. R.K.Lallianthanga, CSO & Member Secretary, MIRSAC at the inaugural function. The capacity building session was chaired by Dr. Lalnunsiam Colney, Principal Scientist and hands-on training was given by the project experts - Pu R.Lalfamkima, Scientist, Pu David Vanlalfela & Pu C.Lalzawngliana, Field Assistants from the Centre.

The workshop had two sessions and was attended by Block development officers & village level assistants (VLAs) from Aizawl district, who were imparted practical knowledge on use of mobile applications for asset mapping for uploading on BHUVAN portal as well as its effective use in activity planning at village levels.



EPRIS Training programme for VLAs at I&PR Auditorium, Aizawl



RECENT COMPLETED PROJECTS

Mizoram Infrastructure Information & Monitoring System (MIIMS)

The MIIMS project was executed keeping in mind the location-based infrastructure information requirement of the state and its impending role to be a core part in allied infrastructure based projects like smart cities & urban/rural development schemes. The project is funded on a matching grant basis of 90:10 between NEC, Shillong & the Mizoram State Government. Since its initiation in April 2013, the archival and systematic capturing of infrastructure data had been the core component of the work flow. This involved various stages of interaction with ground level officials and villagers to make the database as complete & updated as possible. Various satellite data ranging from Quickbird to Cartosat was used during this process as well. The system design formed an integral end-part of the project where the database could be visualised and projected for further analysis by users. The project has generated district-wise atlas and an interactive geo-portal (intranet) system. The project deliverables were officially released on 25th July 2016.

ON-GOING PROJECTS

1. Digital 3D Terrain Mapping & Modeling

The project is in its mid stages of updating ground data and incorporation into system for content generation. Necessary image processing for generation of district wise 3D terrain models for Kolasib, Mamit, Champhai & Serchhip districts are completed. Processing and generation of village-wise 3D terrain models for these 4 districts is initiated.

2. Hazard, Risk & Vulnerability Analysis for 8 district Hqrs in Mizoram

The project is progressing with updation and creation of base GIS layers (roads, drainage, etc) for assisting in further analysis of hazard, risk & vulnerability components. Hardware procurement pertaining to workstations, satellite data and supporting backup generator has been completed. Incorporation of ground data and collected attribute is also under process.

3. Sericulture Development Project - 2nd Phase (Kolasib & Serchhip Districts)

In continuation of the previous phase of the project, two remaining district - Serchhip and Kolasib are being covered during the 2nd phase of the present project. Fresh satellite data (LISS IV) has been procured to update the base GIS layers (mainly wasteland) required for further processing. Final stage of interpretation for wasteland is being carried out.

4. Wasteland Change Analysis Project - 2nd Cycle

This is a nationwide project funded by NRSC, Dept. of Space which focuses on mapping changes in wasteland using 2008-2009 layers as reference. Initially executed using Online mapping procedures on BHUVAN, the project is now being carried out in offline mode to speed up the interpretation stage and reference data for it has been received. Change detection mapping for Kolasib district is underway.

5. Empowering Panchayati Raj Institutions Spatially (EPRIS) project

A new project which is in-part a continuation of the SISDP project is being carried out for the state of Mizoram. The project is funded by NRSC, Dept. of Space and aims at providing space technology with reference to GIS to the grassroot level administrators in a way which can affect the process of policy planning and decision making at a higher level, thus empowering the grassroot level authorities in this process. A state level workshop & training was conducted for target groups.

6. Coordinated Horticulture Assessment & Management using geoinformatics (CHAMAN) project

A collaborative project with SAC, NESAC and MNCFC, Govt. of India for which at the preliminary stage one crop for one identified district is selected. For the state of Mizoram, the project will involve study of suitable sites for grape cultivation in Champhai district. Hands-on training for this purpose has also been imparted at NESAC, Umiam.

Employees Space

* The Centre wishes all the best to its Scientists undergoing training courses at national institutes - Pu Vanlalnghaka, PG Diploma at IIRS, Dehradun; and Pi Vanlalmuansangi, Geospatial application & Technology course at NRSC, Hyderabad.

* Our prayers are with Pu Lalramdina, Scientist who had undergone surgery & further treatment at Care Hospital, Aizawl. It is our sincere wish that he attains a speedy recovery and pray that the Almighty restores him to full health.

* A heartfelt congratulations to Pi Hmingthanpuii (Sr.Scientist), Pi Rosy Vanlalzarzovi (Scientist) & Pu LH Lalnunpuia (UDC) on ushering in new born babies into their families. May the new family members bring happiness into their lives.

* The Officers & staff of the Centre wishes all its readers a Merry Christmas and a Prosperous New year 2017.



NEWS & ACTIVITIES

* **Pi Hmingthanpuii, Sr.Scientist & Pu Robert Lalchhanhima Sailo, Scientist** attended a training programme on “Online mapping using BHUVAN tools” for the nationwide projects - Land use Land cover mapping, National Wasteland Change Analysis & Land Degradation Mapping, at NESAC, Umiam on 8th July 2016.



On-site data collection & updation for Digital 3D terrain mapping project

* **Pu C.Vanlalengkima, Scientist & Pu H.Lalthazuala, Cartographer** were detailed for ground data collection at Champhai District under Digital 3D Terrain mapping project from 11th - 20th July 2016.

* **Pu Lalramdina, Scientist & Pu Lalfakawma Royte, Field Assistant** were detailed for ground data collection at Mamit district under the Digital 3D Terrain mapping project from 11th - 22nd July 2016.

* **Pu ZD Laltanpuia, Scientist & Pu David Vanlalfela, Field Assistant** were detailed for ground data collection within Aizawl district under the HRVA project from 18th - 29th July 2016.

* **The Centre in a joint venture with Geographic Association of Mizoram (GAM)** carried out a task to identify and geo-locate one of the sites where the Tropic of Cancer passes through Mizoram, i.e, Maubuang village in Aizawl district. A short function to inaugurate the benchmark stone that was constructed at the exact reference point was organised on 19th July 2016 which was attended by members of GAM, MIRSAC scientists & village representatives & NGOs.



Inauguration of site where Tropic of Cancer passes at Maubuang village, Aizawl district.

* **A brief function for the release of MIIMS atlas and system demonstration** was organised at New Secretariat Conference hall on 25th July 2016. The atlas was officially released by **Pu Lalsawta, Hon'ble Minister, Planning Dept. (Science & Technology)** which was followed by live demonstration of MIIMS portal & its functionalities. The function was attended by Heads of line Depts., official representatives and media personnel.

* **Pu H.Lalthazuala, Cartographer & Pu David Vanlalfela, Field Assistant** were detailed for ground data collection within Aizawl district under Digital 3D Terrain mapping project from 8th - 12th August 2016.



CHAMAN project hands-on training & field visit

* **Pu ZD Laltanpuia, Scientist** attended the ‘Review cum Interaction meet on Groundwater Quality Mapping’ under NDWM project at NESAC, Umiam from 27th - 29th September 2016.

* **Pu R.Lalfamkima, Scientist, Pu David Vanlalfela & Pu C.Lalzawngliana, Field Assistants** attended a training cum discussion programme under EPRIS project at NESAC, Umiam on 5th October 2016.

* **Pu Robert Lalchhanhima Sailo & Pu H.Lalhmachhuana, Scientists** attended a 4 day Hands-on training programme on ‘Site Suitability for Horticultural crops’ under CHAMAN project at NESAC, Umiam from 18th - 21st October 2016.

* **Pu C.Vanlalengkima, Scientist** attended a training course on ‘UAV Remote Sensing - Technological advances & Applications’ organised by NESAC, Umiam from 31st October - 11th November 2016.



UAV Remote sensing training at NESAC, Umiam

* **Pu H.Lalhmachhuana, Scientist & Pu Lalfakawma Royte, Field Assistant** attended a meeting on LULC-50K, NWCA & LDM project review and data distribution at NESAC, Umiam on 22nd November 2016.