



# MIRSAC Newsletter

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

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Pu Lalnunmawia Chuaungo  
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, Finance,  
Environment Forest &  
Climate Change, PWD,  
PHED, P&E, DM&R, Irrigation  
& Water Resources, UD&PA,  
Agriculture (Crop Husbandry),  
Horticulture, Rural Dev.,  
Land Resources, Soil &  
Water Conservation,  
Land Revenue & Settlement,  
Geology & Mineral  
Resources, & Sericulture.

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## MIRSAC RECEIVES CHIEF MINISTER'S AWARD 2019

The Mizoram Remote Sensing Application Centre (MIRSAC), Directorate of Science & Technology, Govt. of Mizoram received the 2<sup>nd</sup> Prize- Chief Minister's Award for Excellence in Public Administration under the Organization category at an Award function held at Assembly Annexe Conference Hall, Aizawl on 29<sup>th</sup> April, 2019.

The Chief Minister's Award was conferred to Departments, Organizations & agencies that performed exceptionally well towards delivering services to the public and assisting in the process of good governance in the state through innovative approaches and ideas. The awardees were selected by a panel of Expert committee and Empowered Committee formed by the State Government. The selection was done after each of the nominated Departments, Organizations and agencies gave brief presentation about their respective initiatives/projects at a screening programme for the Award on 12 April, 2019.



The Centre was conferred the award for its project on "Mizoram Infrastructure Information & Monitoring System (MIIMS)" which represents a GIS based spatial database and online portal for deriving location and detailed information of Government infrastructures in Mizoram. On behalf of the project team, the award was received by Dr. R.K.Lallianthanga, Chief Scientific Officer & Member Secretary, MIRSAC, from Pu Zoramthanga, the Hon'ble Chief Minister of Mizoram.

The award function was organized by Department of Personnel & Administrative Reforms, Government of Mizoram on the occasion of Civil Services day and was attended by Government officials from various Government Departments and organizations.





## From Editor's desk



Accolades and recognition for our contributions towards building a better and well sustained system of society and governance might bring us to the forefront in the race for technological developments in state. Yet the implications we make and the tangible products require constant refinement as we are dealing with an ecosystem where demand is high and not always stable. A consensus is yet to be arrived at what will be the most effective & efficient way of meeting these demands in a non-destructive and that which has far-fetched amplification.

In the quest for answers, we have been exploring the technological intervention aspects ranging from the root natural resources to man-made infrastructures. Attached to many of these components are the underlying phenomenons that are sole-controlling agents of these components that require stringent investigations. With Geospatial and Space science evolving, there will be opportunities opening up to deal with our impending aspirations to solve today's challenging tasks. It may sound like a dream, yet realities are often shaped by dreams and visions for a better cause.

## Sensitization Workshop on District Level Planning in Mizoram



The Centre participated at the Sensitization Workshop on District Level Planning organized by Planning & Programme Implementation Dept., Govt. of Mizoram on 29th January, 2019. The workshop was organized in the context of sensitizing, initiating & strategizing the United Nation's 17 Sustainable Goals in different social and governance sectors for District Level planning in Mizoram. Dr. R.K.Lallianthanga CSO & Member Secy. MIRSAC presented the various Applications of Remote Sensing & GIS for District level planning at the launching programme of this workshop.

## HRVA & 3D-DTM PROJECTS & WORKSHOPS

The Hazard Risk & Vulnerability Analysis (HRVA) project & 3D Digital Terrain Mapping & Modelling (3D-DTM) project are two major projects of MIRSAC which is funded by NEC, Shillong with a purview to assist the concerned state departments in their respective line of activities. While the HRVA project has its main objective to enable decision makers to make appropriate assessments and plan under the purview of disaster management in towns/city area, the 3D-DTM project, on the other hand, addresses to the use of GIS 3D technology in various plan and implementation activities where terrain constitutes an important aspect of consideration. Both the projects have vital role in the formulation of scientific based plans and their effectiveness in solving various challenges in hilly terrains lies in the robust and flexible nature of Geospatial technology from which they were built.

The HRVA project covers all 8 district headquarters (towns) of the state including Aizawl city, wherein hazard, risk and vulnerability analysis for natural disasters occurring in the state (Landslides, Earthquakes, Wind and cyclone) was carried out using Remote sensing and GIS technology. The mapping in each of the district headquarters was done at larger scales to generate data that will be pragmatic for use at operational level and assist in preparation of effective mitigation plans. The analysis part constitutes the core of the resultant output from this project, wherein appropriate classification methodology was adopted to identify various levels of hazard, risk and vulnerability aspect and also includes the demographic component.

The 3D-DTM project was executed to cover eight districts of Mizoram and has its concept for extensively using visual and operational capacity of Remote sensing & GIS technology for a number of allied terrain planning applications in development works of the state. It also envisages to offer pragmatic solutions to problems faced in planning activities



Workshop at DC Conference hall, Siaha



Workshop at DC Conference hall, Lawngtlai



## HRVA & 3D-DTM PROJECTS & WORKSHOPS (Contd.)

of hilly terrains due to eminent inaccessibility posed by the natural geographic features. The core component in this project includes the generation of Digital Elevation Models (DEMs) for each of the districts, from which further modelling was done upto the Village levels. The data has provided ample amount of visual perceptibility for users to initiate a synoptic planning exercise and also to formulate better terrain plans using the application system developed in this project.

With the concept of grass-root level planning which is gaining importance in today's development initiatives, both the projects have proved their vital intervention in development strides of the state.



Workshop at Convention Centre, Lunglei

The vital part of project awareness and showcasing the effectiveness of data generated in the projects were done through Workshops conducted in three district headquarters of Mizoram. Workshops about the projects were organized at DC Conference hall, Siaha on 14th March, 2019; DC Conference hall, Lawngtlai on 15th March, 2019; and at Convention Centre, Lunglei on 25th June, 2019. The workshop at Siaha was chaired by Shri Bhupesh Chaudhary, IAS, Deputy Commissioners, Siaha District; At Lawngtlai by Smt. Shashanka Ala, IAS, Deputy Commissioners, Lawngtlai District; and at Lunglei by Pu K.Lalrinzuali, Deputy Commissioners, Lunglei District. Presentations about the projects were given by Pu Z.D. Laltanpuia, Sr.Scientists, Pu R.Lalfamkima, Scientist & Pu Lalramdina, Scientist. The Workshop at Lunglei was also addressed by Dr. R.K.Lallianthanga, Chief Scientific Officer & Member Secretary, MIRSAC. The workshops further enabled the Centre to reach out to line Departments and public through live discussions and feedbacks from the participants at the workshop. The workshop had good attendance from representatives of various line Departments, NGOs and Media agencies from the respective districts.

### ON-GOING PROJECTS

#### 1. Monitoring of IWMP activities using Geospatial tools

The project involves mapping and monitoring of land changes due to implementation of IWMP activities. Geo-tag Report for selected districts are prepared and at the verge of completion. Land Use / Land cover mapping withing selected project areas of watersheds are being done for incorporation into the Summary Report of identified districts.

#### 2. CHAMAN Project - Site Suitability study for Dragon fruit in Aizawl & Serchhip District

The base layer preparation and site suitability analysis for selected crop - Dragonfruit in two districts i.e, Aizawl & Serchhip has been completed. Ground data collection and verification of wasteland areas in selected district is also completed. The analysis/mapping will be subjected to statistical data extraction and report preparations.

#### 3. North East Spatial Data Repository (NeSDR)

The project is progressing with data corrections and standardizations. Inclusion of additional spatial data pertaining to census data for the state is being carried out and will be incorporated in the system. State portals will be prepared and the main NeSDR portal is tentatively scheduled for launch by September, 2019 for use by Line departments and agencies.

#### 4. Fostering Climate resilient Upland farming System (FOCUS) project

The Land use / Land cover & Crop suitability Atlas for Kolasib district, and Land use/Land cover maps for Serchhip district was completed and handed over to SCRAM. Soil sample collection in all the selected project districts have been completed. Land use/land cover mapping for remaining two districts - Mamit & Champhai is in progress.

#### 5. National Wetland Inventory Assessment (NWIA) project - Mizoram

The project is taken up in collaboration with SAC, Ahmedabad and NESAC, Umiam to assess and map the wetland areas in the state. Hands-On training was organized at SAC, Ahmedabad for mapping of wetlands using remote sensing techniques. Interpretation and mapping of wetlands using LISS III imagery is being carried out at present.

### Upcoming Project

\* **Use of Geo-Informatics in Rural Road Projects under PMGSY Project** : A project to map and monitor the existing and on-going developments in road infrastructure within the state using location based geospatial technology. An initiative to be carried out in collaboration with NESAC, Dept. of Space.



## NEWS & ACTIVITIES

\* **Pu C.Lalzawngliana, Pu David Vanlalfela & Pu Lalhriatpuia, FAs** were detailed for soil sample collection within Champhai & Mamit districts under FOCUS project during January & February, 2019.

\* **Dr. R.K.Lallianthanga, Chief Scientific Officer & Member Secretary** gave a presentation on “Application of Remote Sensing & GIS for District Level Planning” at the launching programme of Sensitization Workshop for District Level Planning at Assembly Annexe Conference hall, Aizawl on 29<sup>th</sup> January, 2019.

\* **Pu R.Lalfamkima, Pu C.Vanlalengkima, Pi Vanlalmuansangi & Pu Vanlalnghaka, Scientists** were detailed to give presentation at the “Sensitization Workshop on District Level Planning” at respective 7 district headquarters of Mizoram on 30<sup>th</sup> January, 2019. The Workshop was organized by the Planning & Programme Implementation Dept.

\* **Pi Vanlalmuansangi, Scientist & Pu Lalhriatpuia, FA** were detailed for soil sample collection within Mamit district under FOCUS project from 11<sup>th</sup> February - 1<sup>st</sup> March, 2019.

\* **Pi Hmingthanpuii, Principal Scientist, Pu Robert Lalchhanhima Sailo, Sr.Scientist; Pu C.Vanlalengkima & Pi Vanlalmuansangi, Scientists** attended the Inaugural function of FOCUS project at Assembly Annexe Conference hall and subsequently the Start-Up Workshop for FOCUS at Aijal Club on 6<sup>th</sup> March, 2019. **Pu Robert Lalchhanhima Sailo, Sr.Scientist** gave presentation on Land use Mapping & Suitability Analysis for FOCUS project.

\* **Hands-on Training for the newly procured DGPS** was given by technician from Trimble Co. and was attended by Scientists & Field Assistants at MIRSAC on 11<sup>th</sup> March, 2019.

\* **An Online Training for Site Suitability analysis using CommunityViz Scenario 360 software** was attended by **Pu Robert Lalchhanhima Sailo, Sr.Scientist, Pu C.Vanlalengkima & Pi Vanlalmuansangi, Scientists** at MIRSAC on 12<sup>th</sup> & 14<sup>th</sup> March, 2019. The training was conducted by trainers from City Explained Inc., USA.

\* **Pu Robert Lalchhanhima Sailo, Sr.Scientist** attended the meeting and EQC programme for CHAMAN Phase II project at NESAC, Umiam from 27<sup>th</sup> - 29<sup>th</sup> March, 2019.

\* **Pu Vanlalnghaka, Scientist & Pu Lalfakawma Royte, FA** were detailed for soil sample collection within Serchhip district under FOCUS project from 22<sup>nd</sup> April - 13<sup>th</sup> May, 2019.

\* **Pu H.Lalhmachhuana, Scientist** attended a meeting and Hands-on training for National Wetland Inventory Project at SAC, Ahmedabad from 30<sup>th</sup> April - 3<sup>rd</sup> May, 2019.

\* **Pi Ngurliantluangi, Cartographer III & Pu David Vanlalfela, FA** were detailed for ground data collection within Aizawl district under CHAMAN Phase II project from 7<sup>th</sup> - 25<sup>th</sup> June, 2019.

\* **Pu Malsawmdawngliana, Scientist** attended the Multi-Stakeholder Consultation Workshop under NE Lightening Safe India Campaign 2019-2021 on 22<sup>nd</sup> June, 2019 at NESAC, Umiam.



Participation at Sensitization Workshop for District level Planning, Aizawl.



Presentation at FOCUS Workshop



DGPS Training @ MIRSAC



Soil sample collection under FOCUS