



# 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



Pu Lalmalsawma Pachuau  
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.

## MIRSAC Editors

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## POST-COVID RECOVERY WITH GIS TECHNOLOGY (Strategies & Policies for holistic development)

The COVID-19 pandemic has caught us by surprise and has continued to inflict scars both emotionally and economically. The virus has caused unprecedented disruption and derailed work process in almost every aspects of business and social life. Amidst this mayhem and surging crisis, Technology has proven its robust and extensive usefulness that keeps evolving with time. Technology evolutions and innovations has also continued to help us mitigate the adverse affects and recover from a drastic economic breakdown by providing solutions in areas where intervention is most needed. One such advancement is Geographic Information Systems (GIS) technology. GIS technology at its core is a conglomerate of mainstream and advanced technological tools, applications and professions that allow collaboration in a space where location intelligence play an important role.



Post Covid recovery in terms of economy requires strategic planning and use of available resources at hand to bring out the best results within limited timeframe. Achieving this can be a huge challenge especially in areas with bare minimum recovery infrastructure that are hard-hit by the pandemic. Time, location and available resources are the essence to address specific recovery goals and that too within a limited time as we never know when disasters like the pandemic might strike again. This also solicits the inclusive scaling up of preparedness at every aspect of new development to cope up with potential crisis. This is where GIS technology excels with its inherent ability to provide solutions: from simple visual maps to ascertain available resources to complex time-sensitive spatial analytics that can present best scenarios for development. This technology increases both visibility and awareness of the situation at hand, which plays an important role in allowing decision-makers to understand critical observations from different angles and take appropriate actions that will lead to a more productive response.

The power of this technology also lies in its location embedded insights that enable its users to plan, execute and monitor valuable developmental assets -as it answers the vital component of 'who, why, what, where & when' in a visually comprehensible layout. Reliable insights based on this technology will be vital in the long run for Governments to measure policy interventions during the post recovery process and make necessary allocation where there is a gap. To achieve this, GIS technology has to form a core decision-making process adopted and used by governments and policy makers. As we embrace the advancement in technology in this era of 4th Industrial revolution, let us remember that GIS is an integral part of this revolution which will continue to evolve in the way we address our problems and innovate the way we live our lives. The key will be acceptance to move forward in the way we think, react and implement using this technology.



## Editor's desk



*As the second wave of the pandemic reaches out again to every nook and corner of the country, the need for technological solution arises to keep life going on and following the decorum of a stable economic growth pattern. Location intelligence coupled with valuable insights for reaching out to the masses has inevitable be the norm for every geospatial empowered agency- from simple visual maps to complex algorithm based location analytics. Never ever has this technology been felt important in these times of crisis where there is still a lot more to address and aid in the process of preparedness and recovery. The vital role contributed by GIS will continue to be realized as governance gradually inculcates basic principles of this technology and use its assistance within the scope for building a shared economy. Initiatives in this aspect can focus on convergence of existing activities with custom-made solutions designed to assist such activities wherever necessary. A momentum of continuity in terms of monitoring may also be achieved once the initiatives are taken and experiences from extended involvements can yield deeper insights and scope for replication in allied activities.*

## Proposed activities in the pipeline

1. Mapping of Wet Rice Cultivation and Establishment of Geospatial Data centre for RS & GIS networking. Concept papers & estimates were prepared and submitted to NEC, Shillong.
2. Groundwater prospect mapping. Proposal & estimates to map prospects for the state at 1:10,000 scale was prepared and submitted to PHED, Govt. of Mizoram.
3. Village-level Development planning for 6 selected villages. Estimates to cover spatial planning in the selected villages was submitted to SIRD, Aizawl.
4. Mizoram State Plan of Action for executing Remote Sensing & GIS based projects during 2021-2024. A total of 8 proposals were prepared and submitted to NESAC. (3 nos. initiated by NESAC and 5 nos. to be in collaboration mode with NESAC and concerned Depts.)
5. Construction of training room & procurement of LIDAR instrument. Proposal & estimates were prepared and submitted to the State Government.
6. Enhancing Ecosystem and Landscape Management (ELEMENT) project. Proposal & estimates to cover 400 villages in landscape mode was prepared and submitted to Planning Dept., Govt. of Mizoram.

## MIRSAC Review Meeting & Farewell Function

A review meeting of MIRSAC was held at the Conference room of Dte. Science & Technology on 12th February, 2021 to interact and have a retrospective glance on the activities and achievements of MIRSAC during the past 5 years. The meeting was chaired by Pi Hmingthanpui, Principal Scientist who addressed the need for keeping up with the pace of technology development through dedication and hardwork in the working environment. Pu Z.D Laltanpuia, Senior Scientist presented the various activities and major projects executed by MIRSAC during the past 5 years, along with a few achievements and contributions of the Centre towards development of space technology.

The meeting also took this opportunity to bid farewell to its Member Secretary & Chief Scientific Officer, Dr. R.K.Lallianthanga who was due for his superannuation on 28th February, 2021. In his speech, Dr. R.K reminisced on a few noteworthy developments and projects during his tenure as the Centre's head, and quoted several milestones that the Centre had achieved to bring out the best in serving the State Government through space technology. He expressed his gratitude for the cooperation extended by scientists and staff during his service to achieve many goals set by the Centre, and urged them to continue the legacy of MIRSAC as one of the best Remote sensing & GIS institutions in the northeast through dedication and hardwork. Dr.R.K started his professional career in Science & Technology, Govt. of Mizoram in 1988 and was attached to MIRSAC as its administrative Head since then till the end of his superannuation. His visions and endeavors for MIRSAC reaching greater heights within the scientific community will be cherished.



Glimpses of MIRSAC Review Meeting and Farewell function for Dr.R.K.Lallianthanga



## Geotechnical Survey of Proposed Hnahthial Bypass road

As per the directions and request of the Hon'ble Chief Minister of Mizoram, a joint survey of the NH-54 (Aizawl Zemabawk - Tuipang, with reference to the proposed Hnahthial Bypass road) was conducted by a team of geologists and engineers from Dte. of Geology & Mineral Resources (DG&MR), MIRSAC, PWD - NH Division-IV Lunglei and NHIDCL. The survey covered identification and mapping of landslide hazard areas along this stretch of road which was captured into GIS environment for analysis pertaining to proposed road alignment.

At the ground level, a thorough geological investigation was made along the proposed road alignment. The inspection team further suggested to conduct detailed sub-surface geotechnical investigation including Core drilling and Resistivity surveys. For this purpose, the geologists from DG&MR and MIRSAC identified 15 point locations along the proposed bypass road for conducting core drilling and rock/soil analysis. These investigations will be further carried out by NHIDCL officials as soon as the trace path is ready and their core drilling equipment is mobilized. In addition and as per suggested by the team, a resistivity survey was also conducted from 26th - 28th April, 2021 by the clients from the contractor's side. An investigative report based on the current observations of sub-surface geological & favourability condition as well as mitigation measures was prepared and submitted to the concerned project authority to decide the future course of Hnahthial Bypass alignment.



### ON-GOING PROJECTS

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

Land use interpretation within identified watersheds within the state is being carried out. Out of the total of 81 watershed, mapping and report preparation for 33 Watershed areas are completed. Reports and maps for these watersheds will be sent to NRSC for final completion.

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

Interpretation of wetlands using the new coverage of IRS LISS-IV is being done for identified location in the state. Ground verification for the second stage of mapping in the project is also completed and field data incorporated into the final geodatabase. Data will be submitted for further validation and quality assurance.

#### 3. Use of Geo-Informatics in Rural Road Projects under PMGSY Project

The finalized and corrected road data for project has been submitted to NRSC. All project work from the Centre's perspective has been completed with a total length of 3207.88 km of road data mapped. The final report preparation and compilation from NRSC is due.

#### 4. Space base Information Support for Decentralized Planning (SIS-DP)-Update

Land use / Land cover mapping to detect changes during the two phases of the project is being carried on. On the sideline, required updation of base layers like roads and settlements are also being done. The work is being executed on a Block-wise basis within each of the districts. Land use interpretations for Champhai & Kolasib districts has been completed and will be submitted for External QC at NRSC.

#### 5. COVID-19 monitoring & support - GIS based Dashboards

An in-house project initiated by the Centre from June 2020, under the ESRI's Disaster Response Program to provide GIS based monitoring and support to the State Government. Interactive dashboards prepared under this activity covers location based support and daily status monitoring for COVID-19 related services and infrastructures in the state- such as Quarantine & Isolation facilities, Trends & spatial analytics on distribution of facilities, Critical & health facilities status, etc.



## NEWS & ACTIVITIES

*\* Pu R.Lalfamkima, Scientist was detailed to attend Sensitization programme for Village level development planning project organized by Planning & Programme Implementation Dept. at Ailawng from 3rd - 5th February, 2021.*

*\* Pu Malsawmdawngliana, Scientist was detailed for Spot verification & Site inspection of Hnahthial Bypass road (under ongoing Aizawl-Tuipang NH-54 road) on 6th February, 2021 along with State Department officials and as directed from the Chief Minister's Office.*

*\* Pu C.Lalzawngliana & Pu David Vanlalfela Pachuau, Field Assistants were detailed for ground data collection during 10th - 19th March, 2021 under NEC Project Monitoring activity at various NEC project funded sites within the state.*



*Geo-tagging of NEC funded projects - NEC Projects Monitoring in Mizoram*

*\* Pu H.Lalmachhuana, Scientist was detailed for ground truthing during 28th March - 8th April, 2021 under NWIA project with various marked location in the state.*

*\* Pi Ngurliantluangi, Cartographer-III was detailed for ground data collection within Thingsulthliah & Aibawk RD Block area from 29th March - 9th April, 2021 under SIS-DP Update project.*

*\* Written examination for recruitment of LDC in MIRSAC was held at Hrangbana College on 10th April, 2021.*

*\* Pu Lalmalsawma Pachuau, Secretary, Planning Dept. visited Dte. of Science & Technology on 15th April, 2021. A short programme on this occasion was organized at the Conference room, Dte. of Science & Technology where all Centre Heads under Dte. of Science & Technology presented the activities and brief mandates of their respective centres. The Secretary was accompanied by officers and staff from Planning Department.*



*Secretary, Planning Dept. visits Dte. of Science & Technology Office*