



# MIRSAC Newsletter

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

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

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## HIGHLIGHTS OF HAZARD, RISK & VULNERABILITY ANALYSIS (HRVA) WORKSHOP AT DST, AIZAWL

Disaster management and its relevance to present day need in emergency situations and plan strategies has solicited scientific based studies on prominent hazards and their implications. Analysis based on the potential risks of the natural hazards to human life and property has also gained importance due to the fact that such information can suffice the need for formulating mitigation measures and rehabilitation plans. It was on these conceptual ideas that the Hazard, Risk and Vulnerability Analysis (HRVA) project for eight district headquarters of Mizoram has been initiated by the Centre. As the project also focuses on the societal aspects and interlinks with the extent of vulnerability of different sections of the community, a collective amalgamation of ideas & techniques can go a long way in preparation of reliable outputs for disaster management in the state.

Keeping this in view, a workshop on HRVA was organized on 13th January, 2017 at the Conference room of Directorate of Science & Technology, Govt. of Mizoram. The workshop was chaired by Dr. R.K.Lallianthanga, Chief Scientific Officer & Member Secretary, MIRSAC. A presentation on the on-going HRVA project was given by Pu Z.D.Laltanpuia, Sr.Scientist in which various aspects of the project execution, methodology adopted and data generated for Aizawl city was elaborated.



HRVA Workshop organised at Dte. of Science & Technology

The workshop had participants from various walks of academic, departmental & professional background and related with disaster management field. The discussion segment of the workshop had a lot of contribution on the part of effective approaches for disaster based studies and suggestions for inclusion of practically relevant methodologies in the context of Mizoram state. The workshop in itself opened up a wider scope of collaboration with the participants and a continued cooperation during the course of project execution was envisaged. As a whole, the workshop got positive feedbacks from the participants and was also a great success in bridging the gap between different spectrum of socio-scientific communities converging for the cause of better disaster management in the state. The workshop concluded with a vote of thanks from Dr. Lalnunsiamia Colney, Principal Scientist, MIRSAC.

## From Editor's desk



As Conventional means of information acquisition slowly gives way to the technology based means, the awareness required at grassroot levels is the quintessential component. This will enable the process of technology transfer to transcend at the local level and avoid complications during the initiation steps. Space technology in many of its derived forms have penetrated our governance setup and even social lives, owing to the fact that the technology has been broken down into valuable-acceptable inputs and considered the importance of inclusive growth. The paradigm shift from what was before a high end rocket science technology to an everyday decision support system has enabled development in all aspects of life. \ As we venture into a more people-centric solution provider platform, the technologies we use will find additional uses in many more allied spectrum. Adaptation and calculated acceptance of such technologies will be necessary to bring about improvements and innovations for the betterment of our society. For it is a human mind that gives birth to a plethora of new age technologies.

## Upcoming Projects

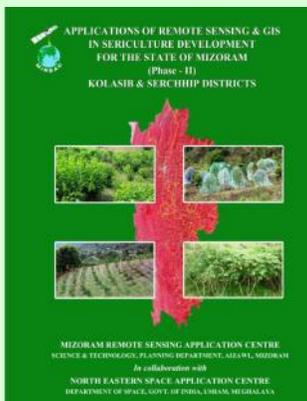
## North East Spatial Data Repository (NESDR)

A project initiated and funded by NESAC, Dept. of Space for creation of Spatial data storehouse and providing a platform-Geoportal for remote sensing & GIS data sharing with state level stakeholders. The MoU for this project has been signed on 9th June, 2017 and training will be imparted at Bhaskaracharya Institute for Space Applications & Geo-informatics (BISAG), Ahmedabad.

## Monitoring of IWMP watersheds using Geospatial Technologies

The project aims to assist in monitoring of works executed under the Integrated Watershed Management Programme through space based technology inputs. The project is being coordinated by NESAC, Dept. of Space and sensitization workshop for this project was also organized during January, 2017. The MoU for the project with reference to Mizoram state will be processed shortly.

## HAND-OVER PROGRAMME OF REPORT PREPARED UNDER SERICULTURE DEVELOPMENT PROJECT (2<sup>nd</sup> PHASE)



Sericulture constitutes an important component for sustainable land based development and its impact on the growth of the economy as well as its contribution to sustained resource utilization is being recognised worldwide. In view of these aspects and in continuation of the first phase of the Sericulture Development project, the 2<sup>nd</sup> phase of this project for remaining two districts - Kolasib & Serchhip was executed by the Centre in collaboration with North Eastern Space Applications Centre (NESAC), Dept. of Space, Umiam. The project aims to identify and map potential areas for sericulture development in these two districts from available wastelands, bamboo and degraded forests using an integrated approach of geospatial techniques and ground based information. Analysis was done in terms of suitable areas for silkworm rearing and plantation of its food plants. A range of spatial layers were analyzed and integrated to bring out the final maps and statistics for mulberry, eri & muga rearing and cultivation of food plants.

A report containing maps and statistics of the analysis done under this project was prepared for use by concerned department and planners involved in sericulture development schemes. A short function for handing over the reports to Sericulture Department, Govt. of Mizoram was organized by the Centre on 7th June, 2017 at the Conference room of Dte. Science & Technology, Govt. of Mizoram. The report hand-over programme was attended by Secretary, Sericulture Department, Director & staff of Sericulture Department, and Scientists & staff of Dte. of Science & Technology.

The programme was chaired by Dr. Lalnunsiana Colney, Principal Scientist, MIRSAC and a technical report on the project was presented by Pi Vanlalmuansangi, Scientist. The copies of the Sericulture project report was handed over to Pu Lalthlamuana, Secretary, Sericulture Department by Dr. R.K.Lallianthanga, Chief Scientific Officer & Member Secretary, MIRSAC.

The project got positive feedbacks from the officials of Sericulture Department and its effective use for sericulture development in the two districts was envisaged. The success stories achieved from previous phase was also shared and appreciated by the Department.



Report on Sericulture Development (2<sup>nd</sup> Phase) handed to Secretary, Sericulture Department, Govt. of Mizoram



## RECENT COMPLETED PROJECTS

### *Sericulture Development Project - 2nd Phase*

The second phase of this project which covers two districts - Kolasib & Serchhip has mapped potential areas for sericulture development. The project is coordinated and funded by North Eastern Space Applications Centre (NESAC), Dept. of Space, Umiam. The mapping was done at 1:50,000 scale and analysis done for suitable areas for mulberry, muga and eri based sericulture development. Deliverables of the project include report, maps and statistics of potential areas for sericulture based initiatives. The spatial data will be later uploaded into SILKS portal for wider dissemination and use.

### *Coordinated programme for Horticulture Assessment & Management using Geoinformatics (CHAMAN) Project*

The CHAMAN project is a collaborative initiative with SAC, Ahmedabad; NESAC, Umiam and MNCFC, New Delhi, Govt. of India, to bring about tangible developments under the Horticulture Sector. The project for Mizoram focuses on site suitability analysis for Grape crop in Champhai district using Remote sensing & GIS technology along with ground based observations. The mapping was done at 1:10,000 scale and analysis for suitable sites within jhum lands was executed based on GIS models developed for grape crop. The deliverables consisting of spatial data, maps & report was submitted to NESAC, Umiam & MNCFC, New Delhi.

## ON-GOING PROJECTS

### *1. Digital 3D Terrain Mapping & Modeling*

The project is progressing smoothly with generation of 3D models for 4 districts completed, including village wise 3D models for Kolasib, Mamit, Champhai & Serchhip districts. DGPS ground survey and data collection has been done for 3 districts, namely- Aizawl, Lunglei & Lawngtlai. 3D model generation and processing will be initiated for these districts.

### *2. Hazard, Risk & Vulnerability Analysis for 8 district Hqs 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. Hazard maps of Landslide, Earthquake, Flood, Wind & Cyclone for Aizawl, Serchhip & Mamit district has been prepared. Socio-economic data collection for Aizawl district is also completed.

### *3. Empowering Panchayati Raj Institutions Spatially (EPRIS) project*

The project is funded by NRSC, Dept. of Space and aims at providing space technology with reference to GIS to the grassroot level administrators for policy planning and decision making at a higher level. Mobile based spatial data collection for Aizawl district is being executed by Village Level Assistants (VLAs) under Rural Development Department, Govt. of Mizoram and these data are uploaded onto the EPRIS portal.

### *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 during 2015-16 using 2008-2009 layers as reference. The GIS data was evaluated and has undergone final stage of EQC at ARSAC, Guwahati during June, 2017. Necessary data corrections were made and submitted to NRSC, Dept. of Space for final approval.

### *5. Land Degradation Mapping (LDM) Project - 2nd Cycle*

The project is a nationwide project executed in parallel with National Wasteland Change Analysis (NWCA) and Land Use Land Cover - 3rd Cycle mapping projects. The data was subjected for External quality check and necessary corrections are being made. The mapping of degraded lands for the state is being done in offline mode and change analysis will be done at the final stage of project.

## Employees Space

\* The Centre welcomes a new member into the scientific community, Pu Malsawmdawngliana who joins in the capacity of Scientist. We look forward to his contributions towards achieving the endeavor and goals of MIRSAC.

\* A heartfelt congratulations to Pu R.Lalfamkima (Scientist) on ushering in a new born baby to the family. May the new family member bring happiness into the lives of the couple.



## NEWS & ACTIVITIES

\* **Pu H.Lalmachhuana, Scientist** attended the 'Sensitization Workshop on Monitoring of IWMP through Geospatial technology' organized at NESAC, Umiam from 10th - 11th January, 2017.

\* A workshop on Hazard, Risk & Vulnerability Analysis (HRVA) was organised by the Centre on 13th January, 2017 at the Conference room of Dte. of Science & Technology, Govt. of Mizoram .

\* **Pi Ngurliantluangi, Cartographer II & Pu H.Lalthazuala, Cartographer III** were detailed for ground data collection within Champhai district under the CHAMAN project from 2nd - 10th February, 2017.

\* **Pu H.Lalmachhuana, Scientist & Pu Lalfakawma Royte, Field Assistant** were detailed to attend the EQC programme under National Wasteland Change Analysis (NWCA) & Land Degradation mapping (LDM) projects at NESAC, Umiam from 20th - 24th February, 2017.

\* **Pu H.Lalthazuala, Cartographer III & Pu Lalhriatpuia, MR** were detailed for ground data collection within Serchhip & Kolasib Districts under the Sericulture Development Project - 2nd Phase from 27th February - 7th March, 2017.

\* **Pu ZD Laltanpuia, Sr.Scientist** was detailed to attend for project work at NRSC, Balanagar under Groundwater Quality mapping project of National Rural Drinking Water Programme from 1st - 4th March, 2017, and for final EQC from 24th - 29th April, 2017.

\* **Pu C.Vanlalengkima, Scientist & Pu David Vanlalafela Pachuau, Field Assistant** were detailed for DGPS ground survey within Aizawl district under the Digital 3D Terrain modeling project from 10th March - 4th April, 2017.

\* **Pi Vanlalmuansangi, Scientist** was detailed to attend EQC programme under Sericulture Development Project - 2nd Phase at NESAC, Umiam from 20th - 24th March, 2017.

\* **Pu Robert Lalchhanhima Sailo, Scientist** was detailed to attend EQC for CHAMAN project at NESAC, Umiam from 21st - 24th March, 2017.

\* **NeDRP portal systems** were handed over to Officials of Deputy Commissioner of Kolasib, Serchhip & Saiha Districts by **Dr. Lalnunsiamia Colney, Principal Scientist** at his office chamber on 23rd March, 2017.

\* **Pu R.Lalfamkima, Scientist & Pu Lalfakawma Royte, Field Assistant** were detailed for DGPS ground survey under Digital 3D Terrain modeling project within Lunglei district from 11th April - 1st May, 2017.

\* **Pu C.Vanlalengkima, Scientist** attended a training course on UAV-Remote Sensing Applications organised by Nagaland GIS & Remote Sensing Centre, Kohima & NESAC, Umiam from 1st May - 12th May, 2017.

\* **Pu R.Lalfamkima, Scientist & Pu C.Lalzawngliana, Field Assistant** were detailed for DGPS ground survey under Digital 3D Terrain modeling project within Lawngtlai district from 29th May - 20th June, 2017.

\* **The Governing Body Meeting of the Centre** was held on 1st June, 2017 at Chief Secretary's Conference room.



HRVA Workshop at Science & Technology Conference room.



Ground truthing at Champhai for CHAMAN project



NeDRP systems hand-over to DC Officials



UAV Training at Kohima, Nagaland