



MIRSAC Newsletter

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

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Pi L. Tochhong
Chief Secretary, Govt. of Mizoram
& Chairman, MIRSAC Gov. Body

Governing Body of MIRSAC

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Minor Irrigation,
Agriculture (Crop Husbandry),
Horticulture,
Soil & Water Conservation,
Rural Development,
Land Revenue & Settlement,
DM&R, UD&PA, & Sericulture

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VISION FOR SPACE APPLICATIONS IN MIZORAM

Dr. R.K.Lallianthanga

Technologies have been evolving with change in time and the advancement in various fields of technologies have immensely helped in solving most of life's critical problems. In this race to adopt the most recent and advanced technology, space applications have contributed a large portion in various fields of natural resource monitoring, management, communication, and the allied developmental fields. Space application centres and its allied Regional Remote Sensing Centres have also sprung up in every corner of the country to cater to the needs of utilizing this technologies. MIRSAC is also one of them and is not lagging behind in the advancement of space technology and its applications.

At present, however, the utilization of space technology is somewhat limited and confined to only a fraction of its full potential in the state. Maximum utilization of space application is yet to be tapped and harnessed. The process to utilize its full potential requires the enthusiastic involvement and support of the State Government and user departments alike. Unless participation of the end-user is not evoked for its application to various state development schemes, the visions for space application in the state cannot be progressive. The potentials of space application in the context of resource management has been realised to some extent by certain line departments of the State and they have been using this technology in many of their projects as valuable inputs. An enhanced level of application is still solicited to bring out the true capabilities of space technology.

There are many areas where the full potential of space application can still be implemented. Such fields include, telecommunications, meteorology, education, resource management, rural development, e-governance, etc. These are important fields where space application can play



*Project Director, MIRSAC with Dr.K Radhakrishnan,
Secretary, DOS and Chairman, Space Commission, Govt. of India*

an important role to simplify and enhance the operations even at grassroot levels. The fulfillment of this vision requires that the State Government recognises its potential and scope for improving many of today's conventional technologies. Beyond this, the infrastructure and manpower of institutions and organisations involved with space application has also to be strengthened. Research oriented schemes and projects to solve today's impending scientific and socio-economic problems can be encouraged and supported by Department of Space, besides infrastructure and manpower support. In a nutshell, space application still has a long way to go and many more achievements yet to acquire in our endeavour to build a future where technology simplifies our lives.



✍ From Editor's desk

Another year is yet awaiting to pass by, heralding hopes and aspirations for a future where more advance geospatial technologies will emerge and fill up the gaps left by technologies of the past. In such hopes and aspirations, it is on our part to be prepared for such changes. Adaptation to current technologies is the prime focal factor which will propell us to be more efficient and versatile in our endeavour to solve today's socio-economic and environmental problems.

MIRSAC newsletter has been an integral part in the process of dessemintating Remote Sensing and GIS knowledge by highlighting the project works executed by the centre. From basic regional planning to grassroot level operations, these initiatives have been well acknowledged by individuals and state governments. I am sure that this information platform will continue to bring about innovative and milestone achievements of MIRSAC.

As a last note, on behalf of the editorial team, I would like to wish all our readers a Merry Christmas and a prosperous New year.

Minor activities taken up for User Depts.

1) State Disaster Management Plan (SDMP)

A concise plan report for state level disaster management, prepared for DM&R Dept.

2) Green India Mission (Mizoram)

An initiative of Ministry of Environment & Forest to combat climate change and increase/improve the forest cover in the country. Data prepared at the centre for Environement & Forest Dept, Govt. of Mizoram.

3) Minor Irrigation Project

Mapping and base data preparation for Micro/Mini watershed management and planning of various water resources in Champhai, Lunglei, Kolasib and Aizawl divisions under Minor Irrigation Dept., Govt. of Mizoram.

4) Forest Fire Vulnerability Mapping

An activity undertaken to identify forest fire vulnerable areas in different forest divisions of Mizoram. Ground data collected by Environment & Forest Dept. has been incorporated into GIS maps at a scale of 1:50,000.

During the period June to December, data has also been provided to different user departments/institutes of the state like - PWD, PHED, Mizoram State Co-operative Union, Mizoram University, Pachhhunga University College, Dir. of Elections, Horticulture Dept., Central YMA, Godrej Agrovet Pvt., Rural Development Dept., etc.

Visitors at MIRSAC

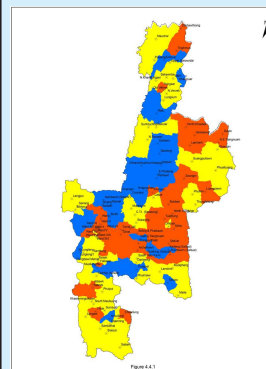


19 July, 2012: Dr. Ajai, Chairman, RESPOND, Mr. RP Dubey, Director PPG & Mr. Vikas Patel, Head RRCDD, SAC Ahmedabad visits the Centre and interact with scientists.

Hazard Risk & Vulnerability Analysis of Aizawl District

The project on Hazard Risk and Vulnerability Analysis of Aizawl District was initiated following the request made to the Centre by Disaster Management & Rehabilitation Dept., Govt. of Mizoram during 2010. The main concept of the project lies in the preparation and systematic analysis of data for hazard zonation of natural disasters occuring in Aizawl district. These data were generated using Remote Sensing and GIS technique for its effective use in disaster management activities and allied planning purposes. Natural disasters comprising of Landslide, Cyclone, Earthquake and Flood has been studied for Aizawl district.

An important part of this analysis takes into consideration the socio-economic profile and critical facilities available in the district. According to the analysis, villages or wards which are having high degree of vulnerability in terms of physical and socio-economic conditions are considered to be the worst hit if and when natural disasters strike. On the other hand, areas which are having stable socio-economic structure will have the coping capability towards disasters.



The report prepared following the analysis of Hazard Risk and Vulnerability contains illustrated maps and statistics of Aizawl district. Village-wise Multi-Hazard maps are also included in this report.



PROJECTS COMPLETED

The following projects were completed during July to December 2012

1. Hazard Risk & Vulnerability Analysis of Aizawl District project

The project is funded by DM&R Dept., Government of Mizoram. The various parameters of Disaster management are studied for Aizawl District in this project. A total of 4 natural hazards in Aizawl district are analyzed and hazard zones were prepared with corresponding analysis for risk and vulnerability factors. The report was previewed at a meeting held on 10th December 2012 at New Secretariat Conference room, New Secretariat complex. The meeting was attended by officials from other line departments as well. The final report is expected to be submitted by December 2012.

2. Watershed Management Model

This project work is funded by Environment & Forest Dept., Government of Mizoram. As part of additional data requirement of Working plan project, this management model is prepared for selected 6 Forest Divisions of Mizoram. Printed maps in the scale of 1:50,000 was prepared, depicting thematic layers required for management of forest resources in a watershed wise manner.

ON-GOING PROJECTS

1. Groundwater Prospect Mapping under RGNDWM

The project on groundwater prospect mapping which covers entire Mizoram had been initiated under the Rajiv Gandhi National Drinking Water Mission (RGNDWM) early this year. The project involves digitization and demarcation of potential groundwater extraction points in Mizoram and the quality of drinking water at these points. Maps showing groundwater potential zones are generated at the scale of 1:50,000. Groundwater prospecting maps are yet to be finalized

2. Space Based Information Support for Decentralized Planning (SIS-DP)

Under this project initial image interpretation and land use mapping of Aizawl district has been initiated. On a priority basis, land use mapping of Aibawk block, Aizawl district has been completed. Consequently, mapping of roads, settlements, drainage and generation of slope of the district is also being carried out. A workshop on this project is yet to be organised in Aizawl to highlight the functionalities and importance of this project for different development programmes in the state. SIS-DP is a nationwide project funded by ISRO under NNRMS.

3. Land Use / Land Cover Mapping (LULC50K) 2nd Cycle

The project has been initiated on May 2012 and is being funded by NRSC, Hyderabad. This project is a continuation of the first cycle of nationwide LULC mapping which was done using multi-temporal satellite data of 2005-2006. The second cycle of mapping is now being taken up to quantify and identify the present changes in LULC during 2011-2012. Mapping and ground truth collection for the two priority districts - Kolasib and Serchhip has been completed.

Employees Space



Obituary

Our long-serving colleague, Mr. H. Lalchandama - age 41, passed away on 25th November 2012 from a stroke. The news of his death came as a shock to all of us. Pu Dama (as he is called by us) was a versatile and experienced employee of MIRSAC, upholding the traditions and values of the centre. We have lost a dear friend, a major player in the cartographic unit of MIRSAC and a key person in most of our project works. We will miss him sorely.

Born and brought up in his home town - Lunglei, Mizoram, he joined the Science & Technology in 2001 as Field Assistant and then went on to be an integral part of the centre serving under this post till his last breath. He is survived by his wife, Mrs. Lalmuanpuii and three children.



NEWS & ACTIVITIES

* An Interest Exploration Meeting on RESPOND (for Universities in the North East) was organised by SAC, Ahmedabad and MIRSAC on 18th July 2012 at I&PR Conference Hall. Dr.R.K.Lallianthanga, Project Director, MIRSAC addressed the meeting with a welcome speech. The meeting was also addressed by officials from SAC, Ahmedabad, with speeches from Dr. Ajai, Chairman, RESPOND Review Committee, Mr. R.P. Dubey, Group Director PPG and Mr. Vikas Patel, Head RRCD, SAC Ahmedabad.



Meeting with RESPOND team at I&PR Conference room.

* Dr. RK Lallianthanga, Project Director attended the NUIS meeting on 30th July 2012 at NRSC, Hyderabad.

* Dr. RK Lallianthanga, Project Director attended a 2 day Project review meeting of RGNDWM held on 5th August 2012 at NRSC, Hyderabad.

* Dr. RK Lallianthanga, Project Director and Pu Lalnunsiana Colney, Senior Scientist attended the meeting on Spatial data management, NESDI (North Eastern Spatial Data Infrastructure) which was held at Chief Secretary's Conference room on 7th August 2012.

* Pu Robert Lalchhanhima Sailo, Scientist attended the LULC 50K (2nd Cycle) review meeting and Quality check programme on 16th October 2012 at NESAC, Umiam.

* Pi Hmingthanpuui and Pi Rosy Vanlalzarzovi, Scientists and Pi Ngurliantluangi, Cartographer were detailed for ground truth collection at Aibawk town on 2nd November 2012 for LULC mapping under SIS-DP project.

* Dr. RK Lallianthanga, Project Director attended a Project discussion meeting (Mizoram Infrastructure & Monitoring System project) at NEC Secretariat, Shillong on 7th November 2012.

* Pu Robert Lalchhanhima Sailo and Pu H.Lalhmachhuana, Scientists were detailed for ground truth data collection of Serchhip and Kolasib districts under LULC 50K (2nd Cycle) project from 4th to 6th December 2012.

Scientists venture out for ground data collection - SIS DP project

* Pu ZD Laltanpuia and Pu F.Lalbiakmawia, Scientists were detailed to attend the EQC programme of RGNDWM project at NRSC, Hyderabad from 5th-6th December 2012.

* A preview meeting on Hazard Risk & Vulnerability Analysis project was held at New Secretariat conference room, New Secretariat Complex on 10th December 2012. A brief presentation was given by Dr. RK Lallianthanga, Project Director and Pu F.Lalramchuana, Senior Scientist. The final report will be handed over to Disaster Management & Rehabilitation Dept. by the end of December.

* Dr. RK Lallianthanga, Project Director attended the NESAC Governing Body meeting at Kolkata on 11th December 2012.

* Pu F.Lalramchuana, Senior Scientist attended the review meeting of RGNDWM at Guwahati on 14th December 2012.

* Pu H.Lalhmachhuana was detailed for the progress review meeting of LULC50K (2nd Cycle) and EQC of the database at Assam Remote Sensing Application Centre (ARSAC), Guwahati on 15th December 2012.

LULC 50K (2nd Cycle) review meeting at NESAC, Barapani.