International conference on Remote Sensing and GIS for applications in Geosciences – Pavanesh K. Singh, M. A. Quasim*, Asma A. Ghaznavi and Zuhi Khan, Department of Geology, Aligarh Muslim University, Aligarh - 202 002. (E-mail: *adnanquasim@gmail.com)

Remote Sensing is an art of acquiring information in the form of electromagnetic records of Earth's surface. International Training Centre (ITC), Holland defined Geographic Information System (GIS) as a computerised system that facilitates the phases of data entry, data analysis and data presentation, especially in cases when we are dealing with geo referenced data. The field of Remote Sensing and GIS has become attractive and trouble-free with rapidly expanding opportunities in the area of Geosciences. Remote Sensing and GIS have a vast area of applications viz. Geological mapping, Ground water, Mining and mineral exploration, Landslide Hazard Zonation, Earthquake studies, Geomorphology etc. To discuss the recent trends, applications and future scope of Remote Sensing and GIS, an International Conference was held at Department of Geology AMU, Aligarh on the occasion of birth anniversary of Dr Vikram A Sarabhai (Father of Indian Space Programme) also to commemorate 12th August 2017 as 'National Remote Sensing Day'. The researchers and novices were benefitted with the lucrative thoughts of distinguished workers of different Institutions across the globe.

In the inaugural session, Prof. L.A.K. Rao (Convener) welcomed the participants and Dr Yunus Ali (Organizing Secretary) highlighted the motive of the conference. The organising committee released the Abstract volume of the conference and Prof. Tariq Mansoor, Vice Chancellor, AMU and Prof. Abdul Munir, Dean Faculty of Science addressed the gathering. Finally, the session ended with the vote of thanks by Prof. Abu Talib, Chairman, Department of Geology, AMU. This report provides a brief description of the salient aspects of the conference.

The first session started with the invited talk of Prof. Vibhuti Rai, Department of Geology, University of Lucknow, who demonstrated the aspect of natural disaster mitigation through the Remote Sensing tools. He discussed earthquakes, landslides, volcanoes, tsunamis, cyclones, floods, forest fires and mining related environmental hazards for monitoring and consideration of disaster mitigation by remotely sensed data. GIS data for the same area can additionally provide significant information in assessing the extent of affected area and help in calculating the quantum of relief measures for the same. Prior planning of such affected areas (based on the previous history) can help in quick response to relief measures as the time becomes most crucial in all such disaster events.

Dr Chen Chi-Wen, NCDR, Taiwan and Dr Uttam Paudal, University of Tokyo also gave an invited talk on Landslide Studies in Taiwan and Landslide Susceptibility Mapping respectively. Dr Mushtaq Ahmad Wani focused upon the Flash Flood Effect on Soil Fertility Status of Cold Arid Region-Ladakh. He stated that the flash flood removes the top fertile soil making it poor in micro constituents. Mr B.C. Yadav shed the light on fractional snow cover mapping through the incorporation of thermal band in snow index design. He used MODIS (Moderate Resolution Imaging Spectroradiometer) images

to work upon Landsat 8 images under multivariate polynomial regression schemes utilizing corresponding count of pixels in a test region of Himachal Pradesh. Mr. Mohammad Alam (Atomic Minerals Directorate for Exploration and Research, Hyderabad) gave an interesting account of coastline changes on the southwest coast of India at Thottappally (Alappuzha, Kerala) and Periyakad (Kanyakumari, Tamil Nadu) based on Google Earth historical imageries and extrapolated the morpho-dynamics of these beaches to assess the possible effect of a proposed breakwater at Veli (Thiruvananthapuram, Kerala). Dr Droupati Yadav presented her work on Remote Sensing and GIS Techniques - A Boon in Landslide Hazard Zonation Mapping and Damage Assessment. She discussed different aspects of Remote Sensing which helps in identifying the unsafe sites in the landslide prone areas.

Parallel sessions for oral presentation were conducted in various halls. Some of the excellent talk given by Mr Sachin Mishra, who had shown that water quality index integrating with GIS was quite useful to assess of groundwater quality; Mr Debabrata Nandi investigated the role of Hydrogeomorphic lobby group and lineament in the storage of Ground water from Bamanghaty Subdivision of Mayurbhanj District, Odisha using IRSID, LISS III data; Dr Umair Ali used geomorphic indices to compute relative tectonic activity (Iat) with an aim to highlight the more influenced sub-watersheds in Sukhnag catchment of seismogenic compressional Kashmir basin; Mr Karung Boboy Kom publicized the Quantitative drainage basin morphometry analysis of 3rd order watersheds using GIS; Ms Tanzeel Khatoon attempted to monitor landcover dynamics in Shahzad river basin, a rainfed basin in Lalitpur district of U.P using remote sensing and GIS technique; Dr Ram Avtar, University of Tokyo articulated the REDD++ activities; Mr Pratik Deb made an effort to demonstrate effective modern techniques in mapping, identifying and accessing the land use land cover changes in the Subarnarekha river basin located in the eastern part of India. Ms Aimon Bushra predicted the bird richness using IRS LISS IV and Landsat 8 OLI datasets and observed that Bird richness is positively related to greenness and elevation whereas negatively related with percentage of built-ups, habitat heterogeneity and impervious surface cover; Mr Bikas Singh worked out for the estimation of land surface temperature of Vidarbha Region, Maharashtra using Landsat 8 data; Mr M. Ali illustrated the reservoir modelling with ArcGIS for all the petrophysical properties derived from well log data and presented it in 3D visualization theme.

Poster presentation of young researchers and other invitees were also organised simultaneously with the oral presentation. Finally, in the valedictory session Prof. M.E.A. Mondal, thanked all the participants and expected that it might have been a great experience for sharing the knowledge of their respective works with each other. Prof. Vibhuti Rai, Dr. Ram Avatar, Dr. Chen, Dr Uttam Kumar also expressed their views regarding the success of this conference.