SUMMER SCHOOL

ON

Application of Remote Sensing and GIS in Natural Resource Management

24th July, 2015 — 14th August, 2015

Sponsored by NRDMS, Department of Science and Technology (DST), Government of India, New Delhi

Organized by: Department of Geography, Aligarh Muslim University, Aligarh

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Natural resources are components of the natural environment, which fulfil functions in ecosystem processes, which are also beneficial for humans. Many Asian developing countries including India have not only experienced rapid economic growth in the recent past but also have rapidly lost or degraded their valuable natural resource base. As a result, today there are several environmental problems and natural resource management related issues that need immediate concerns for sustainable development of the region. The new technologies, like Remote sensing, Geographic Information Systems (GIS) and Global Positioning Systems (GPS), can serve as valuable tools for NRM-related operations, viz. Assessment, Analysis and Development.

In spite of the strength and utility of these technologies in the resource planning and management, the full potential cannot be exploited because of the scarcity of trained personals coupled with costly hardware and software which is also a significant limiting factor for dissemination of this technology. Though the Government agencies are trying their best but still the technology could not reach up to the desired grass root level.

The main objectives of the workshop are:

- Appraisal of the principles of remote sensing with an introduction to the sensors, platforms and principles of image processing.
- Have an understanding of GIS concepts, tools and techniques
- Understanding the data, analysis & management of spatial and non-spatial data and its integration
✓ Provide an exposure to the digital image processing techniques for the analysis and classification of satellite data
✓ Outline the applications of RS technology in different discipline
✓ Application of RS/GIS/GPS for natural resource management in land, water, forest, agriculture and environmental management
✓ Provide an opportunity to share experiences of the participants related to their specific work and to use RS/GIS for more productive and systematic spatial analysis.

Keeping these aspects in view, this Three week training programme is organized for the university/college teachers particularly deriving from the rural areas of the country to provide practical training to use open (freely available) Geographic Information System (GIS) and Remote Sensing (RS) software. This training programme focuses on enhancing the knowledge and skills of the participants through practical exercises on Integrated Land and Water Information system (ILWIS), SAGA, Quantam GIS (open access softwares) as well as more specialized softwares such as ARCGIS, ERDAS etc. The idea to use open access software for this training programme is that after the completion of the course, all the participants can have these integrated (GIS & RS) software with them so that they can continue further the use and application of remote sensing and GIS technique in their respective organizations. Also after completing the training program, the participants will be in a position to establish their GIS lab with nominal investments.

The training programme is designed with focus on enhancing the knowledge and skills of the participants through practical exercises on basic mapping as well as of application of Geospatial technology. The first week of the program will be devoted to develop theoretical understanding of technology. Second week will focus on practical aspects of technology and its application using spatial information. The third week will be exclusively on user specific data generation and application of Geospatial technology. The participants are also expected to prepare a concise project on the specified theme.

The Department of Geography, Aligarh Muslim University, Aligarh

The Department of Geography, one of the oldest in the subcontinent, established in 1924 initially offered undergraduate courses in Geography. Gradually postgraduate courses were also started and in 1931 the Department produced its first batch of postgraduate students and later the Department produced its first Ph.D in 1941. In view of the departments notable contributions in the field of teaching and research, Prof. Sir L. Dudley Stamp, a renowned Geographer, remarked on his visit to India that, 'Aligarh is the Mecca of Indian Geography'.
The Department is assisted by UGC under SAP programs since 1978 and currently passing through DRS IIIrd phase (2015–2020), where the department has made notable contributions with researches on land utilization, land transformation studies, food productivity, wastelands, dry land farming, issues and challenges in agriculture, changing agricultural practices; and population geography namely, population growth, population and resource nexus, population structure, problem of food security, Environmental issues, Regional Development and Planning etc.

The Department also possess a very rich collection of Books and Journals of Geography in its library. At present it has nearly 15,000 Books (reference and Texts Books) and prescribes 39 Journals (26 International and 13 national journals). The Department also owns fully equipped GIS Lab, Cartography Lab, Computer Lab, Remote Sensing lab and Survey Lab. The faculty is well trained and actively involved in teaching and research blending new and conventional techniques. The Department of Geography also publishes a bi-annual research journal since 1926 - The Geographer (ISSN: 0072-0909), which is a refereed journal of International repute.

**Boarding and Lodging:**

A total of 25 seats are open for university / college teachers, which are offered on *first come first serve basis*. There is no registration fee. The program is fully funded by the Department of Science and Technology (DST) New Delhi. Accommodation will be made available in the University guest house on sharing basis. AC III tier fare will be paid on the production of railway tickets. For travel by road, the fare will be paid as per the norms of DST.

Interested candidates are required to send duly filled form and forwarded applications to the *Course Coordinator* through email/post latest by 10th July, 2015. *Kindly bring relieving letter with you.*

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**For Details Contact:**

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Application Form

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Application of Remote Sensing and GIS in Natural Resource Management
Training Program on Geo Spatial Technologies,
Sponsored by NRDMS, Department of Science and Technology (DST), Government of India, New Delhi

24th July, 2015 — 14th August, 2015

Name: -----------------------------------------------------------------------------------------------

Designation: -------------------------------------------------------------------------------------------

Date of Birth: ------------------------------------------------------------------------------------------

Affiliation: ---------------------------------------------------------------------------------------------

Year of joining: ----------------------------------------------------------------------------------------

Highest Qualification: ------------------------------------------------------------------------------------------------

Computer Skill: ------------------------------------------------------------------------------------------------

Have you attended any workshop on RS/GIS/GPS: ----------------------------------------------------------

If yes: Year: Duration: Place:

Address for Correspondence: -----------------------------------------------------------------------------

Contact no. -------------------(R) ---------------------------------------- (O)

Signature: 

Signature and Seal of the Forwarding Authority

E mail: Place and Date: