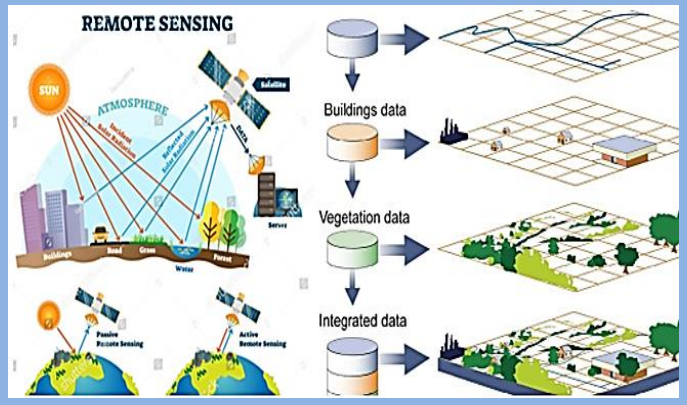
TRAINING COURSE

on

RS & GIS using QGIS for Natural Resource Management

(February 26 to March 1, 2024)



Jointly Organized By

NATIONAL INSTITUTE OF HYDROLOGY
NORTH WESTERN REGIONAL CENTRE
&
MBM UNIVERSITY
JODHPUR - 342003, RAJASTHAN, INDIA

INTRODUCTION

The management of natural resources is crucial for ensuring sustainable development and environmental protection. It involves the management of land, water, and biological resources to meet human needs while preserving ecosystem health and biodiversity. Effective natural resources management helps in mitigating climate change, conserving water, ensuring food security, and maintaining the ecological balance. It is essential for the well-being of current and future generations, facilitating a harmonious coexistence between humans and nature.

Remote Sensing (RS) is indispensable for natural resources management, offering unparalleled capabilities in observing, assessing, and monitoring the Earth's resources from a distance. By capturing data through satellite and aerial imagery, RS enables the identification of land use and land cover changes, assessment of vegetation health, and monitoring of water bodies, among others. This technology facilitates efficient mapping and analysis of vast and inaccessible areas, providing crucial information for decision-making in agriculture, forestry, water management, and environmental conservation. Remote sensing techniques plays a crucial role ensuring an effective and sustainable management of natural resources.

Geographic Information Systems (GIS) plays a pivotal role in water resources management, offering a powerful tool for the collection, analysis, and visualization of spatial data. Its application spans various aspects of water resources, including hydrological modeling, water quality analysis, and watershed management. GIS enables the integration of different data types and sources, facilitating a comprehensive understanding of water systems. The technology is instrumental in managing water-resources efficiently, optimizing irrigation systems, and ensuring safe drinking water supplies. The application of GIS in water resource management demonstrates a multidisciplinary approach, combining engineering, environmental science, and geography to address the complex challenges of managing one of the most vital natural resources.

COURSE CONTENTS

The training course will consist of lectures by experts on widely used open source RS & GIS tools like QGIS and its applications in natural resources management. In this training program, various aspects of hydrology and water resources will be discussed by Scientists and Professors with a wide range of experience in the subject. Lectures will be followed by hands-on sessions and exercises, tutorials in physical mode.

Broadly, the course shall be devoted to the demonstration of RS & GIS using open-source tools and techniques related to natural resources management, watershed management, and hydrological modelling. The training will deliver a basic to advanced level of knowledge pertaining to RS & GIS applications in various practical problems related to Natural resource management. This course is intended to be interactive so that problems being experienced by the participants could be shared and discussed.

WHO CAN PARTICIPATE?

The course is intended for students/professionals of various governments, and private organizations actively working in the domain of natural resources management. The UG/PG students and research scholars are encouraged to attend this course.

REGISTRATION

There is **no registration fee** for the participation. However, the candidate needs to be sponsored by their Institution.

The course material, high tea and working lunch for the session will be provided to the registered participants. **The participants will have to arrange for TA/DA and any other expenditure to participate in the course from their own organization/ institute**. A certificate will be given to all participants. Also, the **participants are encouraged to carry laptops for doing hands-on exercises** during the course.

It is intended to register only a limited number of participants (20) for this training program. The selection of participants will be done NWRC, Jodhpur based on education, qualification, experience and area of interest of the candidates. The prospective participants are requested to register themselves by filling and mailing the attached registration form latest by 21st February 2024.

Registration Link:

https://forms.gle/wwmgEajsw6sZ9Rx37

(Last date of registration: **21st February 2024**)

VENUE

The training course is to be held at the MBM University, Jodhpur – 342003, Rajasthan, jointly organized by North Western Regional Centre (NWRC), Jodhpur, and MBM University, Jodhpur, Rajasthan from 26th February to 1st March 2024.

ABOUT THE INSTITUTIONS

National Institute of Hydrology (NIH) is a premier Research and Development organization under the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India. It was established as an autonomous society in 1978 with its headquarters at Roorkee, Uttarakhand. The main objectives of NIH are to undertake, aid, promote, and coordinate systematic and scientific work in all aspects of hydrology and water resources management. The Institute was declared a Science and Technology (S&T) organization in 1987**.**

The North Western Regional Centre (NWRC) is the 7th Regional Centre of NIH and has been established recently in Jodhpur, Rajasthan, on January 01, 2023. The area of jurisdiction of NWRC covers the north-western states of Rajasthan, Gujarat, Haryana, and Punjab. The Centre has its main focus to carry out field-oriented hydrological studies through close interaction with various State and Central Government departments.

A State University established by the Government of Rajasthan in September 2021. MBM is known for its pioneering academic programmes and high technical standards. The university offers a gamut of courses both at PG and UG levels. The university is committed to providing its students with an education that combines rigorous academic study and developing a far more ambitious, integrated and influential environment that will best serve our nation.

PATRON

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All correspondence related to the course should be made with the mentioned course coordinators