

REPORT

on

Geophysical Investigations at IUST Campus-II

Organised by

Centre for Disaster Risk Reduction

in collaboration with

Dean of Students



Islamic University of Science and Technology

(IUST)

Location: Campus-II, IUST,

Awantipora, Kashmir-192122 (J&K)

September 16, 2024



1. Introduction

This report details the geophysical investigations conducted at Campus-II of the Islamic University of Science and Technology (IUST) on September 16, 2024. The initiative, organized by the Centre for Disaster Risk Reduction (CDRR) in collaboration with the Dean of Students, aimed to explore and implement strategies for mitigating the impact of flash floods, managing water flow from the Wastoorwan Mountain to the Jhelum River, enhancing underground water recharge, and ensuring sustainable water management. The event involved the inauguration of geophysical surveys by the Hon'ble Vice Chancellor, Prof. Shakil Ahmad Romshoo, demonstrations by experts from the National Geophysical Research Institute (NGRI), Hyderabad, and participation from faculty, staff, and students.

2. Objectives:

The main aim of the investigations was:

1. To conduct geophysical investigations to understand subsurface geological formations at Campus-II.
2. To develop strategies for mitigating flash flood risks emanating from the Wastoorwan Mountain.
3. To identify suitable locations for recharge pits to enhance groundwater recharge.
4. To promote sustainable water resource management practices within the university campus and surrounding communities.

3. Event Proceedings:

The geophysical investigation was officially inaugurated by the Hon'ble Vice Chancellor IUST, Prof. Shakil Ahmad Romshoo, at 2:30 PM. The event was graced by the presence of Registrar Prof. Abdul Wahid Makdoomi, Prof. Shakeel Ahmad (visiting professor at CDRR), Mr. Sameer Wazir, Finance Officer, IUST, Ghulam Nabi Bhat, Ex. En., Dr. Irfan Maqbool Bhat, Coordinator CDRR, Dr. Asifa Mehraj Baba, Dean Students, IUST, Deputy Registrars, Deans, and Heads of various departments.



Official inauguration of the survey by the Hon'ble Vice Chancellor, Prof. Shakil Ahmad Romshoo

Prof. Romshoo emphasized the critical importance of developing disaster mitigation strategies, particularly in the context of flash floods. He highlighted the significance of geophysical investigations in providing valuable data for effective water resource management and informed decision-making. He stressed the university's commitment to addressing local environmental challenges through research and practical applications.

Mr. Shahwaz Khan, an expert from the National Geophysical Research Institute (NGRI), Hyderabad, conducted demonstrations of geophysical survey methods for students from the Electrical Engineering Department. The demonstrations provided insights into the techniques used to map subsurface geological formations up to a depth of 50 meters. The data obtained from the geophysical surveys will be analyzed to identify suitable locations for

constructing recharge pits. These pits will play a crucial role in enhancing groundwater recharge and mitigating the impact of surface runoff.

Prof. Shakeel Ahmad, visiting professor at CDRR, also demonstrated the geophysical investigations. Drawing upon his extensive experience in groundwater hydrology and geophysics, he not only contributed to the overall understanding of the subsurface geological formations at Campus II, but also provided valuable demonstrations regarding the practical application of geophysical survey methods. His deep knowledge of watershed management and recharge systems allowed him to give detailed explanations of how the collected data would be used to plan and implement effective recharge pits. His input was invaluable to the students and faculty present, bridging the gap between theoretical knowledge and practical application.



Prof. Shakeel Ahmad, visiting professor, CDRR, demonstrating the geophysical investigations

4. Significance

The geophysical investigations provided valuable data on the subsurface geological formations at Campus-II, which will be instrumental in developing effective water management and disaster mitigation strategies. The event provided practical training to Electrical Engineering students, enhancing their knowledge and skills in geophysical survey methods. The initiative contributes to the university's commitment to sustainable water resource management by exploring techniques for groundwater recharge and surface runoff control. The findings will aid in developing strategies to mitigate the impact of flash floods,

thereby enhancing the safety and resilience of the campus and surrounding communities. The research and development done by the CDRR, and IUST as a whole, will have a positive impact on the broader community by providing solutions to local environmental challenges.



Prof. Shakeel Ahmad, visiting professor, CDRR, demonstrating the geophysical investigations

6. Conclusion:

The geophysical investigations conducted at IUST Campus-II represent a significant step towards enhancing disaster risk reduction and sustainable water management. The initiative demonstrates the university's commitment to addressing local environmental challenges through research, practical training, and community engagement. The data obtained from the investigations will serve as a valuable resource for developing effective strategies to mitigate flash flood risks and ensure sustainable water resource management. The collaboration with NGRI, Hyderabad, further strengthens the university's capacity in this critical area.