ISRO-DMSP

ISRO's Disaster Management Support (DMS) programme has been actively supporting the central and state governments by providing operational services during pre-disaster, post-disaster time frames, including experimental forecasts, using space systems. Capacity Building (CB) in space technology for disaster management under ISRO DMS programme has been identified as a key element to motivate the participants to develop innovative method, tools, data products, and services in the field of disaster management using space technology. DMS-CB programme is one such unique effort funded by ISRO initiated to fulfill the CB requirements in the country.

System for Unprecedented Rainfall-inducEd lAndslide Early waRning Techniques (SURE-ALERT)

I I S E R M O H A L I

Core Committee

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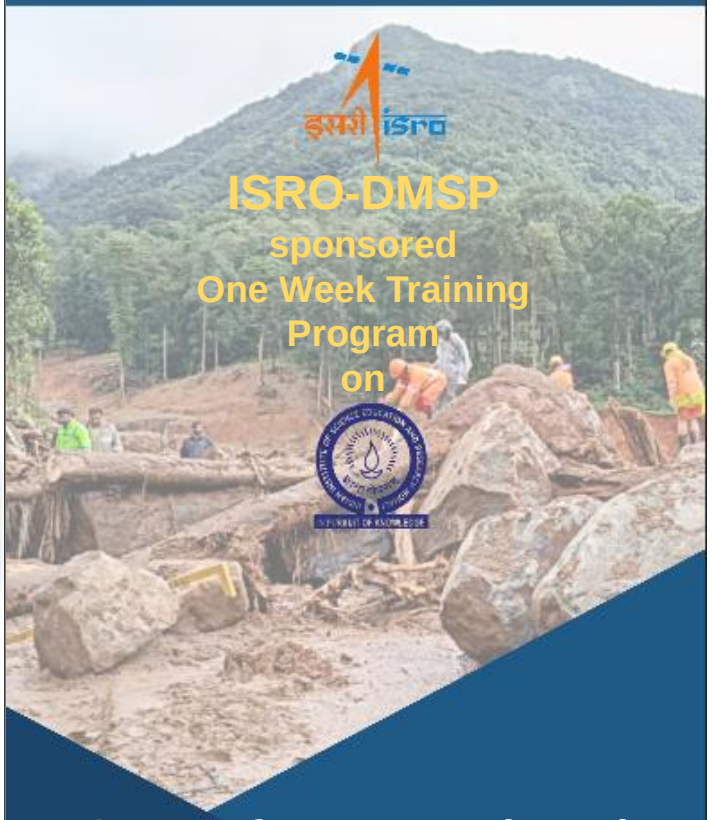
Registration Link

https://forms.gle/SBzqBdcygNFXfJa86

ISRO Disaster Management Support (DMS) - Capacity Building Programme



System for Unprecedented Rainfall-inducEd lAndslide Early waRning Techniques (SURE-ALERT)

14 – 20, October 2024

Department of Earth and Environmental Sciences
IISER Mohali

ABOUT IISER MOHALI

As a centre of academic excellence, IISER Mohali has as its mission the imparting of quality science education and the inculcating of the spirit of research through innovative teaching and research methodologies. This unique combination renders IISER Mohali one of the premier science research institutes in the country. It fosters a group of young aspiring minds driven by curiosity and a potential for cutting-edge research. For spearheading robust scientific research, academic freedom is of utmost importance, and IISER Mohali is the fitting place in this regard. Promoting diversity, IISER Mohali welcomes a wide spectrum of disciplines, cutting across disciplinary boundaries.

ABOUT EES Department

Earth and Environmental Sciences Department (EES) is a hub of interdisciplinary research aimed at understanding and addressing Earth's complexities and environmental challenges pertinent to sustainability development goals. The multidisciplinary faculty team of EES department translates into teaching possibilities spanning diverse subjects within Earth and Environmental Sciences. Key areas of our research include analyzing regional climate and atmospheric dynamics, employing satellite remote sensing for diverse earth observation, interpreting paleoclimatic sedimentary (such as lake sediments) records, and predicting landslides and erosion patterns.

About the Program

In recent years, a significant increase in landslide-related fatalities has been observed during the monsoon months of June to August in India, primarily attributed to extreme weather events. While the spatial occurrence of landslides can be forecasted in advance through a combination of regional and local early warnings in specific locations, given our understanding of the interactions between precursors and drivers. Nevertheless, accurately predicting the exact initiation area remains a challenging task, specially over the most complex mountainous regions, and is a priority area still remain difficult to address. This workshop indent to gather experts in the fields of rainfall induced landslides, meteorology, hydrology and early warning systems (EWS) to share experiences and knowledge on operational regional early warning systems to train MSc, PhD, Post-doctoral students and Early Career Researchers, and to discuss further the need for prioritized research goals in this field.

Who can apply

Govt. officials engaged in related activity, Early career researchers, Post-Doctoral Fellows and Ph.D students actively engaged in research on landslides and meteorology enrolled in public and private universities, research institutions and policy agencies are encouraged to apply. Limited seats for MS students will be offered depending on the level of exposure in the study domain.

Limited Seats

Seats are limited. TA (as per institute norms) will be paid to the selected participants.

Registration Link
https://forms.gle/SBzqBdcygNFXfJa86

Program Agenda

This program has been prepared to detail best practices in landslide early warning system (EWS) in near real time to optimize scalability and performance by leveraging Weather Research and Forecasting (WRF) models. Following are the agenda of the proposed program:

- ❑ Overview of operational EWS at international/ national/regional level for rainfall-induced landslides.
- ❑ High-resolution global and regional Weather Research Forecast models and their applications.
- ❑ Basics of Numerical Weather Prediction models.
- ❑ Landslide early warning systems by integrating NWP data.
- ❑ Perform case studies on simulating extreme weather conditions and landslides.
- ❑ Landslide susceptibility modelling using AI/ML.
- ❑ Comprehensive Hands-on training on WRF, Automated landslide mapping, intensity-duration threshold models for landslide prediction etc.

Important Dates

Registration Start Date: 15 August 2024
Registration Deadline: 20 September 2024
Dates of Program: 14 - 20, October 2024

Registration Fees: NIL
Accommodation will be provided to participants at IISER Mohali Campus on shared basis.