

## National Level Training Programme on Control Measures for Landslides (July 18 – 22, 2016)

### BACKGROUND

Landslides occur in all hilly terrains in response to a wide variety of terrain conditions and triggering processes like heavy rainstorms, cloudbursts, earthquakes, floods and haphazard human activities. More than 5000 people are buried alive under landslides and economic losses of >4 bn USD are suffered every year globally. In India, >15% of its territory is prone to various degrees of landslide hazard, frequently affecting the human life, livelihood, livestock, living places, structures, infrastructure, and natural resources in a big way. In addition to direct and indirect losses, landslides cause significant environmental damage, societal disruption and strategic concern. Landslides are spread over 22 States and 2 UTs including J&K, Himachal, Uttarakhand, Arunachal, Assam, Meghalaya, Mizoram, Manipur, Nagaland, Sikkim, Tripura, Kerala, Karnataka, Tamilnadu, Andhra Pradesh, Goa, Maharashtra and Puducherry. The most sensitive areas are Himalayan belt, Western and Eastern Ghats. Landslides constitute a serious hazard that causes substantial human and financial losses in the country. It is estimated that on an average about hundreds of lives and approximately hundreds of crores of rupees annually are lost directly or indirectly.

### INTRODUCTION

Landslides can happen not only in isolation but also along with or as a consequence of other disasters like earthquakes, floods, lightning, cloudburst, forest fires, dam / lake bursts etc. In such cases, landslide losses are normally included with the primary disaster and are not dealt separately. Hence, most of the reported estimates on landslides losses are found to be quite lower than the actual impacts of landslides on the society as a whole.

With growing population and human interventions in terms of developmental activities over unstable slopes, landslides pose increasing risk to human life, buildings, structures, infra-structures and environment. Large scale deforestation along with faulty management practices have led to high vulnerability to landslides in many regions of the country. Human activities relating to expansion on unsafe locations, unscientific mining, haphazard construction of roads, dams and river training works ignoring natural features contribute to increased intensity of landslides. The absence of large scale landslide hazard maps leads to people being caught unaware especially when the first time landslides strike.

As individual landslides usually affect limited local areas and residents, damage resulting from landslide hazards has not

generally been recognized as a problem of national importance and has not been addressed on a national basis. The absence of coordinated national approach to mitigate the detrimental effects of landslides has resulted in a reduced ability of the States and Local Government agencies to apply the important lessons learnt, often at considerable expense, in other parts of the country.

As a result, the need for a national strategy has been strongly felt and worked upon now by the National Disaster Management Authority through National Disaster Policy and Guidelines on Landslide. Being cognizant of the diversity of issues associated with national landslides problem that arise from both the regional considerations and of the considerable variations in the institutional capability and responsibility at regional and local levels, inputs from a wide variety of stakeholders are essential. Strengthening the process of landslide assessment, investigation, mapping and management will have far reaching effects in reducing landslide losses. In this direction, several institutions like NIDM, CSIR-CBRI, CSIR-CRRI, WIHG, IITs and other organizations in the country have been conducting landslides studies for stabilization of landslide prone areas. NIDM, the nodal institute dealing with disasters is planning to undertake such projects in order to stimulate necessary activities across the country and create a nodal platform to deliver trainings on various aspects of landslides risk management and also create a network of resources persons / experts who can contribute in this activity. It would pave way for effective decision making and planning micro level mapping for various developmental and regulatory activities in hilly terrains.

NIDM and institutions like CSIR-CBRI, thus, aim to work in the following directions to make the hilly terrains and coastal areas free of landslide disasters.

- ❖ To promote the use of landslide risk analysis techniques to guide loss reduction efforts at the State and Local Levels.
- ❖ To play a vital role in evaluating methods, setting standards, and advancing procedures and guidelines for landslide hazard maps and assessments.
- ❖ To provide tools for landslide hazards mitigation and promote basic research on monitoring techniques and on aspects of landslide process mechanics.
- ❖ To improve education, training and awareness of landslide hazards and mitigation options for decision makers, professionals, and the general public.
- ❖ To produce the implementation and management plans that will provide the practical basis for an effective national strategy that can be applied at local levels.
- ❖ To develop workable partnerships with States, District and Local Level Governments and Non-Governmental Organizations as well as professional and other stakeholders.

### OBJECTIVES

At the end of the training program, the participants will be able to

- To define the terms and concepts in landslides risk management
- To identify the causes and factors of landslides

- To assess the consequences of landslides in terms of damages and losses
- To enlist and discuss Indian Standards and Codes related to landslides
- To describe application of technology, local resources/skills, and traditional wisdom in landslides management
- To demonstrate through an exercise the process of landslide risk management
- To adopt the landslide control measures developed and implemented at active landslide areas

### TARGET GROUP

The target group for this programme would be senior and middle level functionaries of the central and state governments representing various departments and organizations including Revenue and Disaster Management, ATIs, SIRDs, PWD, NHAI, GSI, DGM, PRIs, Rural Development, ULBs / Municipalities, Town Planning, Mining, Hydel and Power Sectors, Researchers, Academicians and other stakeholders working in this area.

### WHY THIS TRAINING?

Lack of adequate knowledge, skills and information about disasters have aggravated the losses and prolonged the recovery process. Informed, skilled and trained human resources can play a significant role in disaster risk management and loss reduction. The training aims to fill this gap in a proactive mode through such courses.

### ABOUT NIDM

National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Government of India is a premium institute and a Statutory Body (under Disaster Management Act 2005) for training, research, documentation, awareness and human resources and capacity development in the field of disaster mitigation and management. The institute lays emphasis on multistakeholder interdisciplinary cross-sectoral approach for an effective and efficient proactive continuum disaster risk management based on participatory integrated multi-risk management concept. It aims towards a disaster free India.

### ABOUT CSIR-CBRI

The CSIR-Central Building Research Institute, Roorkee has been actively involved in generating, cultivating and promoting building science and technology in the service of the country since more than six decades. The institute has been assisting the building construction and building material industries, rural and urban housing, energy conservation, efficiency, fire hazards, structural and foundation problems and disaster mitigation. The institute has also provide training/demonstration/hands on practice on building technologies to different level functionaries for building the sustainable built environment.



**VENUE AND DURATION**

The programme will be held at CSIR-Central Building Research Institute, Roorkee. It will commence from Monday, July 18, 2016 and will conclude on Friday, July 22, 2016. The duration of the training programme will be 5 days.

**REGISTRATION**

The participants of the programme will assemble in CSIR-CBRI at 9:30 a.m. and will register themselves on Monday, 18 July 2016. CSIR-CBRI staff will assist them in Registration.

**PROGRAMME DETAILS**

The programme details including the Work Schedule and List of Resource Persons along with their contact details are given in the leaf on Tentative Schedule of the programme.

**EVALUATION OF THE PROGRAMME**

The final session of the programme will be devoted to evaluation and valediction. The participants will be supplied with an evaluation Proforma, which may be completed and handed over to the Programme staff.

**CERTIFICATE**

A Certificate will be awarded to each participant on the successful completion of the programme.

**HOW TO REACH CSIR-CBRI?**

Roorkee is located on Delhi Haridwar National Highway. CSIR-CBRI lies at about 2 km from Bus Stand of Roorkee and at about 5 km from Railway Station.

**ORGANIZING TEAM**

- Overall Supervision & Guidance: Prof. Santosh Kumar  
Executive Director, NIDM, New Delhi  
Dr. N. Gopalakrishnan  
Director, CSIR-CBRI, Roorkee  
Er Y. Pandey  
Chief Scientist, CSIR-CBRI, Roorkee
- Course Directors : Dr. Surya Parkash  
Head, KMC Division, NIDM, New Delhi  
Dr. R. Dharmaraju  
Sr. Principal Scientist, CSIR-CBRI, Roorkee  
Ar S.K. Negi  
Sr Principal Scientist & Group Leader (DC&E), CSIR-CBRI, Roorkee
- Logistic Support : CSIR-CBRI, Roorkee
- Technical Assistance : CSIR-CBRI Staff

**FOR FURTHER DETAILS, PLEASE CONTACT**

**Dr. Surya Parkash**  
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Course Director, Landslides Trainings  
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**National Training Programme  
on  
CONTROL MEASURES FOR LANDSLIDES**

**(July 18 – 22, 2016 at CSIR-CBRI, Roorkee)**



**Landslides and their Impacts on Society**

Jointly Organized by



Towards a disaster free India

**National Institute of Disaster Management**  
(Ministry of Home Affairs, Govt. of India)

[www.nidm.gov.in](http://www.nidm.gov.in)

and



**CSIR-Central Building Research Institute**

Roorkee – 247 667 (UK)

[www.cbri.res.in](http://www.cbri.res.in)

**National Institute of Disaster Management, New Delhi  
&  
CSIR-Central Building Research Institute, Roorkee**

**NOMINATION FORM**

Training Programme on  
**Control Measures for Landslides**  
July 18-22, 2016 (at CSIR-CBRI, Roorkee)

Name	
Designation	
Age	
Name & Address of the Organization	
Address for Communication	
Phone & Fax	
E-mail	
Educational Background	
Professional Background	
Expectation from the training	

Weather accommodation required : Yes/No

**Signature**

Date:

**Signature & Seal  
of the Nominating Authority**

Nomination (individual) should be sent to the following address on or before July 08, 2016 and the confirmation of the same will be communicated

**Dr. R. Dharmaraju**  
Sr. Principal Scientist  
DC & E Group  
CSIR-Central Building Research Institute  
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