

The Institution of Engineers (India)

A Century of Service to the Nation

37th National Convention of Environmental Engineers

on

"Eco-friendly & Sustainable Approaches for Erosion, Landslide and Land Subsidence Management in Hilly Regions"



Organized by:

The Institution of Engineers (India)

Himachal Pradesh State Centre, Shimla

Under the Aegis of

Environmental Engineering Division Board, IEI

In association with

Bureau of Indian Standards (BIS)

University Institute of Technology (UIT), HP University Shimla

Uttarakhand Landslide Mitigation and Management Centre

Venue:

The Institution of Engineers (India), HP State Centre, Engineers Bhawan, Nigam Vihar, Shimla - 171002

ABOUT THE INSTITUTION OF ENGINEERS (INDIA)

The Institution of Engineers (India) is the largest multidisciplinary professional body that encompasses 15 engineering disciplines and gives engineers a global platform for sharing professional interest. IEI has membership strength of above 0.8 million. Established in 1920, with its headquarter at 8 Gokhale Road, Kolkata-700020, IEI has served the engineering fraternity close to a century. During this period of time, IEI has been inextricably linked with the history of modern-day engineering.

In 1935, IEI was incorporated by Royal Charter and remains the only professional body in India which has been accorded this honour. Today, its quest for professional excellence has given it a place of pride in almost every prestigious and relevant organization across the globe. It provides a vast array of technical, professional and supporting services to the Government, Industries, Academia and the Engineering fraternity, operating through its 125Centres located across the country and 6 overseas chapters. Besides, IEI has bilateral agreements with about 31 international bodies and membership of another 8 international bodies of the developed nations across the globe.

Being recognized as a Scientific and Research Organisation (SIRO) by the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India, IEI promotes the cause of research and development by providing Grant-in-Aid support to undergraduate, post graduate students and PhD Research Scholars of Engineering Institutions and Universities.

IEI has been recognized as Scientific and Industrial Research Organization (SIRO) by the Ministry of Science & Technology, Government of India and besides conducting its' own research, provides Grant-in-Aid to UG/PG/PhD students of Engineering institutes and Universities.

IEI holds the International Professional Engineers (IntPE) Register for India under the global International Professional Engineers Alliance (IntPEA). The institution also awards the Professional Engineers (PE) Certification.

IEI in collaboration with Springer regularly publishes peer-reviewed international journal in five series, namely, Series A, Series B, Series C, Series D and Series E covering fifteen engineering disciplines.

ABOUT THE HP STATE CENTER

H.P. State Centre, Shimla since its inception as sub centre in the year 1974, upgraded to local centre in 1983 and as full-fledged State Centre since 18th March, 1988, great and untiring souls of revered brother engineers have continuously nourished and taken care of the mission, objectives and the goals of this great Institution of Engineers (India) at this Centre. The HP State Centre has come up with its reputation as an outstanding Centre during the recent years and is regarded as one of the best centres of IEI due to the devotion, contribution and untiring efforts of its engineering fraternity. HP State Centre is continuously playing a leading role in the knowledge dissemination and continued Professional Development of Professionals through various technical activities.

ABOUT THE BUREAU OF INDIAN STANDARDS

BIS is the National Standard Body of India established under the BIS Act.1986 for the harmonious development of the activities of standardization, marking and quality Bureau of Indian Standards Act, 2016 which was notified on 22nd March 2016, has been brought into force with effect from 12th October 2017, that reinforces the activities of BIS in respect to standardization and certification of goods, article, process, system and service.

BIS has been providing traceability and tangibility benefits to the national economy in a number of ways- providing safe reliable quality foods; minimizing health hazards to consumers; promoting exports and imports substitute; control over proliferation of varieties, etc through standardization, certification and testing.

ABOUT THE University Institute of Technology (UIT)

The University Institute of Technology (UIT), previously known as the University Institute of Information Technology (UIIT), is situated in the serene surroundings of the Himachal Pradesh University campus in Summer hill, Shimla, India. It was established on 11 September 2000 in affiliations with Himachal Pradesh University. UIT took a significant stride forward in 2019 by introducing five new streams and offering undergraduate programs in Computer Science and Engineering, Information Technology, Electronics and Communication Engineering, Electrical Engineering, and Civil Engineering.

UIT has earned widespread recognition for its significant contribution to the field of information technology, fostering the growth of skilled professionals and playing a pivotal role in the technological advancement of both the region and the nation

The institute has achieved remarkable milestones across various domains. Additionally, the UIT community has undertaken numerous initiatives aimed at fostering social progress and making a positive impact on society.

Uttarakhand Landslide Mitigation and Management Center :(ULMMC)

Uttarakhand Landslide Mitigation and Management Centre (ULMMC) has been established which is an autonomous institution; registered under Societies Registration Act 1860. The center will serve on PAN India basis as a Centre of Excellence to provide sustainable solutions for landslide mitigation and management.

ULMMC aims to identify landslide potential areas and hazard/risk assessment along with suggestive mitigation measures after getting all the required investigations done. A State of Art Laboratory with latest technology(s) and equipment is planned to be established to conduct reliable and scientific investigations (Engineering geology, Geotechnical engineering, Geophysical, Hydrological, etc.) for effective planning considering for an efficient landslide disaster management.

About the THEME

Himalayan States of India particularly Himachal Pradesh & Uttarakhand in Northeran India and North East States are prone to natural disasters such as landslides and land subsidence. Landslides and Land subsidence are significant environmental challenges facing the hilly areas of Himachal Pradesh and Uttrakhand . These events are often triggered by heavy rainfall, seismic activity, or human activities such as construction and deforestation. These events can cause significant damage to infrastructure, property, and human lives

Landslides are the rapid movement of rock, earth, or debris down a slope, and they can cause extensive damage to infrastructure, property, and human life. In contrast, land subsidence is the sinking or settling of the ground surface, which can lead to structural damage to building and other infrastructure.

In recent years, there have been reports of land subsidence in the hilly areas of Himachal Pradesh and Uttarakhand, particularly in the District Chamba in HP and Joshimath in Uttrakhand. The causes of these events are complex and can very from region to region. However, some common factors include geological factors, rainfall patterns, deforestation, and human activities such as mining and construction.

To prevent landslides and land subsidence, it is important to adopt a multi- pronged approach that includes measures such as forest conservation, proper land use planning, regulation of construction activities, and early warning systems. Proper drainage systems and slope stabilization techniques can also be used to mitigate the effects of landslides.

Restoration of the affected areas after a landslide of land subsidence event is equally important. This can include repairing damaged infrastructure, relocating people from high-risk areas, and reforestation.

The National convention will cover topics such as the causes of landslides and land subsidence in the hilly areas of country, prevention strategies, mitigation techniques, and restoration of affected areas. The convention will also include discussions on the use of early warning systems, slope stabilization techniques, and proper drainage systems to prevent and mitigate the impact of landslides and land subsidence.

Researchers, engineers, policymakers and other stakeholders are being invited to submit their research papers, case studies, and best practices on this issue for presentation at the Convention. The Convention will be an excellent opportunity to showcase innovative ideas, technologies, and strategies that can help prevent and mitigate the impact of systems to support regulatory efforts, including the use of landslides and land subsidence in the Himalayan States of the Country.

SUB TOPICS

The National Convention on "Eco- friendly & Sustainable Approaches for Erosion, Landslides and Land Subsidence in the Hilly Regions" is proposed to cover a wide range of topics related to this critical issue. Some possible topic contents for the Convention are as follows:

*Causes of landslides and land subsidence in the hilly areas of Himachal Pradesh and Uttarakhand, including geological, environmental, and human factors.

* Effects of erosion and Eco-friendly approaches for management of erosion.

*Prevention strategies for landslides and land subsidence, such as proper land use planning, regulation of construction activities, forest conservation, and early warning systems.

*Mitigation techniques for landslides and land subsidence, including slope stabilization techniques, proper drainage systems, and other measures to reduce the impact of these events.

*Environmental Effects of Land Slides- Ecofriendly and sustainable approaches for land slide and land subsidence management.

*Restoration of affected areas after a landslide or land subsidence event, including repairing damaged infrastructure, relocating people from high-risk areas, and reforestation.

*Case studies and best practices from around the world, highlighting innovative approaches to preventing and mitigating landslides and land subsidence in hilly areas.

*The role of technology in addressing this issue, including the use of remote sensing, GIS, and other tools to map and monitor landslide and land subsidence-prone areas.

The role of community participation in preventing and mitigating landslides and land subsidence, including engaging local communities in disaster risk reduction efforts and building their capacity to respond to these events.

*Policy and governance issues related to landslides and land subsidence in hilly areas, including the need for better regulation and enforcement of existing laws and regulations.

*Regulatory frameworks for landslides and land subsidence prevention and mitigation, including laws, regulations, and policies at the national, state, and local levels.

*The role of local authorities in regulating land use and construction activities in landslide and land subsidence-prone areas, including zoning and building codes.

*The need for stronger enforcement mechanisms to ensure compliance with existing laws and regulations related to landslides and land subsidence.

*The importance of monitoring and reporting systems to support regulatory efforts, including the use of geospatial data and other technologies to monitor landslide and land subsidence-prone areas.

*The importance of collaboration and coordination among different regulatory bodies and stakeholders, including government agencies, The need for public education and awareness-raising campaigns to promote compliance with regulatory frameworks and encourage community participation in prevention and mitigation efforts.

*The role of scientific research in informing regulatory frameworks and decision-making related to landslides and land subsidence, including the need for interdisciplinary approaches that bring together geologists, engineers, social scientists, and other experts.

*The importance of monitoring and reporting geospatial data and other technologies to monitor landslide and land subsidence-prone areas.

*The role of international regulations and frameworks, including the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals, in addressing landslides and land subsidence in hilly areas.

OBJECTIVE

Objectives of the National Convention on "Ecofriendly & Sustainable Approaches for Erosion, Landslides and Land Subsidence in the Hilly Regions" aims to bring together experts and stakeholders from various sectors of the Country to share their experiences and best practices related to preventing and mitigating landslides and land subsidence. Through the adoption of a declaration outlining key recommendations, the Convention seeks to provide a roadmap for policymakers and practitioners to address this critical issue in hilly areas of the Country. It is hoped that the Convention will contribute to the development of Eco-friendly & Sustainable Approaches for Land slide and land subsidence Management in Hilly Regions and also development of effective strategies for preventing and mitigating landslides and land subsidence and ultimately lead to a safer and more sustainable future for the hilly regions.

Call for Papers

All interested participants are requested to contribute technical/ research papers and case studies detailing concept, innovation, idea or practical experiences for oral as well a poster presentation. Each paper should begin with a synopsis of about 200 words and preferably within 3000 words excluding figures, tables and references. A brief bio-data (not more than half a page, affixing a photo) of the author(s) should accompany the paper. Paper to be submitted at hpsc@ieindia.org

Closing Dates for Papers

Submission of Full Paper (Oral & Poster) : 30 Sep. 2023 Communication of accepted paper :05 Oct. 2023 Three Best Papers shall be awarded

Member / Delegate Registration

Registration is based on first come first serve basis only. Prior registration is mandatory for participation in the National Convention.

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Delegate Registration Form

National Convention on

"Eco- friendly & Sustainable Approaches for Erosion, Landslides and Land Subsidence in the Hilly Regions" 26-27 October, 2023

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