Outreach & Dissemination Services Office

CSIR – Central Building Research Institute

Roorkee – 247667 (UK)

Training Program on

'Earthquake Retrofitting Techniques DPR Preparation'

27th-31st January, 2026

Organized under the aegis of CSIR Integrated Skill Initiative

The **CSIR–Central Building Research Institute (CSIR-CBRI), Roorkee**, in collaboration with the **Himachal Pradesh State Disaster Management Authority (HPSDMA)**, is conducting a five-day advanced Skill Development Training Programme on "**Earthquake Retrofitting and Disaster Preparedness Report (DPR) Preparation**" from **27–31 January 2026** under the CSIR Skill Development Initiative, the training was coordinated by **Er**. **Ashish Pippal**, Principal Scientist, CSIR-CBRI. The programme aims to strengthen professional capacity for the development of earthquake-safe and disaster-resilient infrastructure. A total of **29 participants from different districts of Himachal Pradesh** are taking part in the programme. The participants include engineers and technical professionals engaged in planning, design, and implementation of infrastructure projects in seismically vulnerable regions.

The inaugural session was attended by eminent scientists and experts, including **Prof. R. Pradeep Kumar, Director, CSIR-CBRI**; **Dr. D. P. Kanungo**, Chief Scientist; **Dr. Ajay Chaurasia**, Chief Scientist; **Dr. P. C. Thapliyal**, Chief Scientist; **Dr. Neeraj Jain**, Senior Principal Scientist and ODS Head; **Dr. Tabish Alam**, Principal Scientist and **Er. Ashish Pippal**, Principal Scientist and Training Coordinator.

Welcoming the participants, **Er. Ashish Pippal** highlighted CSIR-CBRI's mandate, advanced research facilities, and its contributions towards disaster-resilient infrastructure development. **Dr. Neeraj Jain** elaborated on the objectives of the programme under the **CSIR Skill Development Initiative**, emphasizing capacity building, sustainable development, and alignment with the national vision of "**Atmanirbhar Bharat**." **Dr. Ajay Chaurasia** outlined CSIR-CBRI's **initiatives in enhancing earthquake resilience in Himachal Pradesh through DPR preparation** and scientifically **validated retrofitting strategies**, while **Dr. D. P. Kanungo** delivered words on earthquake mechanisms, seismic hazards, and disaster mitigation approaches.

Addressing the participants, **Prof. R. Pradeep Kumar, Director,** underscored the **critical importance of evidence-based retrofitting techniques and earthquake safety measures in reducing loss of life and property in seismically vulnerable regions**. The training was designed to equip engineers and professionals with advanced technical knowledge through expert lectures, hands-on sessions, and field visits, providing comprehensive exposure to modern earthquake retrofitting practices and DPR preparation methodologies.




Day 1: The Day One of the training programme, a technical lecture was delivered by **Dr. Ajay Chourasia, Chief Scientist, CSIR-CBRI**, on **Disaster risk assessment for buildings** and **Design of**


earthquake-resistant Buildings for hills. The lecture emphasized seismic risks prevalent in hill areas, approaches for assessing building vulnerability, and essential design and construction strategies to improve the earthquake resilience and safety of buildings. The second lecture on Day One was delivered by **Ar. S. K. Negi, Retired Chief Scientist**, on **Building Bye-laws for Himachal Pradesh**. The lecture explained the provisions of state specific building bye-laws, development regulations, and approval


processes, with emphasis on hill area constraints, safety norms, and compliance requirements to ensure planned, safe, and sustainable construction in Himachal Pradesh.

Following the technical sessions, participants were taken on a technical exposure visit to the **Geotechnical Laboratory, Fire Safety Laboratory, and ACSC Laboratory**. The visit provided practical insights into CSIR-CBRI's advanced research facilities, testing capabilities, and ongoing demonstration projects. Participants gained first-hand exposure to state-of-the-art equipment, experimental procedures, and standardized testing methods adopted by the institute. The interaction with scientists and technical staff further enhanced understanding of **real-time challenges, quality control measures, and innovative solutions in the construction sector**, enabling participants to effectively correlate theoretical knowledge with real-world applications.



Participants visited diff Labs at CSIR-CBRI

DAY 2:

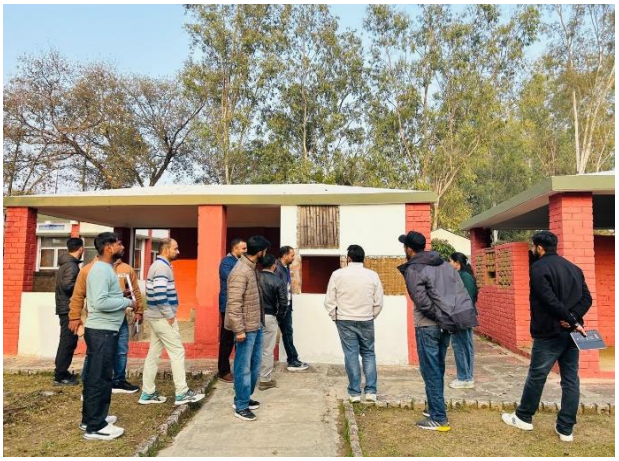
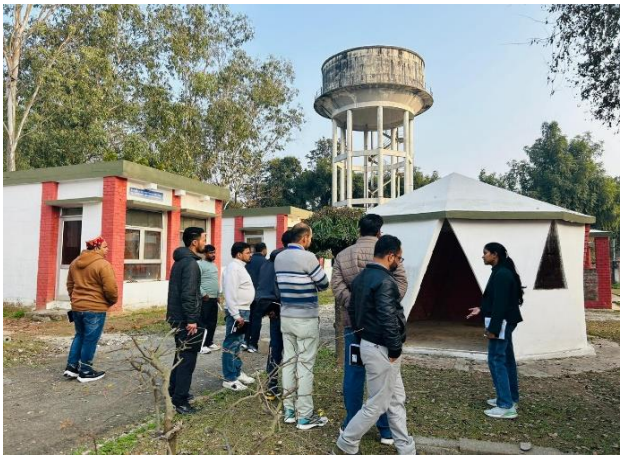
On the second day of the training programme, a technical lecture was delivered **by Dr. Anindya Pain, Senior Principal Scientist**, on **Design and Construction of Foundations in Hills.** The lecture covered site investigation techniques, slope stability considerations, and suitable foundation systems for hilly terrains, highlighting safe design practices and construction methods to address challenging geological and topographical conditions.


The second lecture on the second day of the training programme was delivered by **Er. Ashish Kapoor, Senior Scientist**, on the **Use of Non-Destructive Testing Methods in Structural Assessment.** The lecture introduced various non-destructive testing techniques for evaluating the condition and integrity of structures, explaining their application in damage detection, quality assessment, and decision-making for repair and retrofitting without causing harm to existing buildings.

The third lecture was delivered by **Er. Ashish Pippal, Principal Scientist**, on **Learning from the Recent Disasters.** The lecture discussed case studies of recent natural disasters, highlighting observed structural failures, lessons learned from post-disaster damage assessments, and the importance of adopting resilient design, construction, and preparedness measures to minimize future disaster impacts.

Following the technical sessions, participants were taken on a **technical exposure visit** to the **NEETF Laboratory, and Rural Technology Park**. The visit provided practical insights into CSIR-CBRI's research facilities, testing capabilities, and demonstration projects, enabling participants to correlate theoretical knowledge with real-world applications.




DAY 3:

On the third day of the training programme, a lecture was delivered by **Er. H. K. Jain, Retired Senior Technical Officer**, on **Aspects of Building Services**. The lecture covered essential components of building services such as water supply, sanitation, electrical systems, fire safety, and HVAC, emphasizing their proper planning, integration, and maintenance to ensure safety, functionality, and occupant comfort in buildings.


The second lecture was delivered by **Er. Ashish Kapoor, Senior Scientist**, on the **Design of Retrofitting Measures.** The lecture explained the need for retrofitting of existing structures,


methods for assessing structural deficiencies, and suitable retrofitting techniques to enhance strength, stability, and seismic performance of buildings.

The third lecture was delivered by **Er. Sugam Prajapati, Technical officer**, on the **Preparation and Understanding of Technical Drawings**. The lecture focused on the fundamentals of reading and preparing technical drawings, including plans, elevations, sections, and detailing, with emphasis on clarity, accuracy, and their role in effective design, construction, and communication on site.

The day concluded with a **visit to the Construction Technology Demonstration Park**, where participants gained practical exposure to **3-D construction technologies and region-specific building techniques** through live demonstrations and model houses representing diverse construction practices across India.


HPSDMA Team visiting Demonstration Park at CSIR-CBRI

DAY 4: On the fourth day of the training programme, a lecture was delivered by **Er. M. M. Dalbehera, Principal Scientist**, on **Construction Technologies for Hilly Regions**. The lecture highlighted suitable construction technologies and practices for hill terrains, addressing challenges related to steep slopes, difficult access, material selection, and seismic safety, with emphasis on safe, cost-effective, and sustainable construction solutions.


The second lecture was delivered by **Er. I. A. Siddiqui, Sr. Technical Officer** on **Construction Management and Recent Trends in DPR Preparation**. The lecture covered key aspects of construction planning, scheduling, quality control, and cost management, along with an overview of recent approaches and best practices in the preparation of Detailed Project Reports (DPRs) for efficient and effective project execution.

The third lecture was delivered by **Dr. Shailesh Agrawal, Former Ex. Director (BMTPC)/Rt. Sr. Principal Scientist CSIR-CBRI** on **Emerging Technologies for a Better Built Environment.** The lecture highlighted recent technological advancements in the construction sector, including smart materials, digital design tools, automation, and sustainable technologies, emphasizing their role in improving efficiency, resilience, and sustainability of the built environment.

Valediction

The training programme concluded with a **valedictory ceremony**, during which **Prof. R. Pradeep Kumar, Director, CSIR-CBRI**, **Dr. Neeraj Jain**, **Senior Principal Scientist and ODS Head**; **Dr. Shailesh Agrawal, Former Ex. Director (BMTPC)/Rt. Sr. Principal Scientist CSIR-CBRI** and **Er. Ashish Pippal**, **Principal Scientist,** distributed **certificates to the participants** in recognition of their successful completion of the training programme.









DAY 5: Field Visit

List of Participates

Sr. No.	Name	Designation
1.	Er. Hitesh	Assistant Engineer
2.	Er. Mahender Thakur	Assistant Engineer
3.	Er. Parvinder Singh	Assistant Engineer
4.	Er. Lalit Thakur	Assistant Engineer
5.	Er. Randeep Kumar	Junior Engineer
6.	Er. Vinay Dhiman	Junior Engineer
7.	Er. Anil Kumar	Junior Engineer
8.	Sh. Sachin Patial	Junior Engineer
9.	Sh. Sachin Kumar	Junior Engineer
10.	Sh. Varun	Junior Engineer
11.	Er. Birender Verma	Junior Engineer
12.	Er. Harish Chander	Junior Engineer
13.	Er. Badal Chauhan	Junior Engineer
14.	Sh. Kushal Sharma	Junior Engineer
15.	Sh. Yogesh Kumar	Junior Engineer
16.	Sh. Rajender Singh Malta	Junior Engineer
17.	Sh. Hitesh Jaswal	Junior Engineer
18.	Sh. Suresh Kumar	Junior Engineer
19.	Er. Vikrant Sharma	Junior Engineer
20.	Er. Himanshu Katoch	Junior Engineer
21.	Sh. Vikash Dhiman	Junior Engineer
22.	Sh. Rahul Koushal	Junior Engineer
23.	Sh. Puneet Kumar	Junior Engineer
24.	Er. Minas Sharma	Junior Engineer
25.	Sh. Akhil Parmar	Technical Assistant
26.	Sh. Deepak Sharma	Technical Assistant
27.	Sh. Rajender Kumar	Technical Assistant
28.	Sh. Lakhwinder	Trainer Plumber
29.	Ratanlal Dhiman	Assistant Engineer