# Three Days Workshop on

# "Collaborative Temporary Shelters Planning in Crisis: A Hands on Approach Using 3D Models and Lego"

## 28th to 30th January, 2025

A three-day workshop on modern shelter construction for disaster-affected communities commenced on 28th to 30th January 2025 at Hotel Hamir in Hamirpur. This workshop is organized by the Department of Environmental Science, Central University of Himachal Pradesh (CUHP) in collaboration with the Aston University (UK), and the District Disaster Management Authority (DDMA). In the first day of the workshop, officials from key government departments, including Disaster Management, Public Works Department, Rural Development, and Urban Development joined in the inauguration session.

The event aims to equip participants with advanced knowledge of cost-effective, sustainable, and disaster-resilient shelter construction techniques. Experts are providing insights into innovative building designs using eco-friendly materials to withstand earthquakes, floods, and landslides. Notably, Dr. Komal Aryal and Dr. Gloria Liu, professors from Aston University, delivered insightful seminars on sustainable disaster management strategies and actively assisted in hands-on training sessions.


Supporting the initiative, CUHP Vice Chancellor Sat Prakash Bansal emphasized the need for integrating modern technology with traditional wisdom to create long-lasting, disaster-resistant shelters. Professor Deepak Pant, Head of the Environmental Sciences Department at CUHP, played a crucial role in the workshop, educating officials on disaster risk assessment, site selection for shelters, and rapid yet effective construction techniques.

The workshop features interactive sessions where participants discuss real-world challenges in disaster management and explore innovative, practical solutions. A team of dedicated facilitators, including Ananya Sharma (M.Sc, 4th Semester), Nakita, Nancy, Raghav Rana, and Abhay (2nd Semester) from Department of Environmental Science, Central University of Himachal Pradesh (CUHP), contributed significantly by providing technical expertise and assisting in training sessions. The total no of participants on this day is 24.

On the second day, experts shared insights into low-cost, eco-friendly, and disaster-resistant shelter construction techniques. The event received strong support from Vice Chancellor Prof. Sat Prakash Bansal (CUHP) and Head of the Department of Environmental Sciences, Prof. Deepak Pant, who emphasized the need for disaster-resilient shelters through sustainable development and modern technology. Meanwhile, Aston University professors Dr. Komal Aryal and Dr. Gloria Liu delivered special lectures on sustainable disaster management strategies and guided participants through hands-on activities.


One of the highlights of the second day was **the creation of maps and models of temporary shelters by the participants. In this activity, students from Department of Environmental Science, Central University of Himachal Pradesh (CUHP)– Ananya Sharma (M.Sc., 4th Semester), Nakita,

Nancy, Raghav Rana, and Abhay (2nd Semester) played a key role by providing technical assistance and training support. Using LEGO bricks, participants built indoor temporary shelter models, allowing them to better understand the planning and design aspects of shelter construction in disaster-affected areas.

This day of the workshop marks an important step towards strengthening disaster management and rehabilitation efforts. By integrating sustainable materials and modern engineering techniques, the program aims to equip government officials with practical knowledge for efficient and resilient shelter construction. The total no of participants on this day is 21.

The third day of the workshop was graced by Mr. Rahul Chauhan (ADM Hamirpur) and Sanjeet (SDM Hamirpur) as the Guests of Honor. This day was focused on post-disaster outdoor settlement planning and strategies to mitigate heat wave challenges. The experts Dr. Komal Raj Aryal and Dr. Gloria Liu delivered insightful lectures on post-disaster rehabilitation strategies, highlighting the importance of environmentally sustainable and heat-resistant settlement designs.

One of the key activities of the day involved participants building models for outdoor post-disaster settlements, focusing on layout planning, resource allocation, and sustainable infrastructure. The session also included discussions on difficulties faced during heat waves, with experts and participants brainstorming practical solutions to enhance thermal comfort and reduce heat-related risks in temporary settlements. The total no of participants on this day is 24.

As the three-day workshop concluded, participants expressed gratitude to CUHP, Aston University, and DDMA for organizing such an informative and practical training program. They appreciated the hands-on learning experience and the opportunity to gain valuable insights into modern disaster management techniques.

**Field Visit after Hands on Training**

On January 31, 2025 a team of Environmental Sciences students from the Central University of Himachal Pradesh (CUHP), Shahpur Campus along with the Professors of Aston University (United Kingdom) Dr. Komal Raj Aryal and Dr. Gloria conducted a field survey in Bhagotu village, Dharamshala, Kangra district. The survey focused on disaster risks and the concerns of local villagers.

The team engaged with villagers to understand their experiences with disasters, assess vulnerabilities, and discuss potential mitigation strategies. The visit was aimed at bridging academic research with on-ground realities to develop sustainable disaster management practices. Dr. Aryal and Dr. Gloria emphasized the importance of integrating scientific knowledge with local perspectives to create more effective disaster resilience strategies. Students also gained practical insights into real-world environmental challenges. This collaborative effort is expected to contribute to future research and policy recommendations for disaster management in Himachal Pradesh.

This workshop is a milestone step toward enhancing disaster preparedness and response strategies. By integrating modern engineering, sustainable materials, and scientific research, the event aims to empower government officials with the skills needed to ensure resilient shelter construction and effective disaster relief in the future.