

Proceedings of the Meeting held under the Chairmanship of Sh. Prabodh Saxena, Chief Secretary, Govt. of Himachal Pradesh on 21st May, 2024, 3:30 PM at CS Committee Room, Ellerslie Building, HP Secretariat, Shimla regarding “Safe Construction Practices, need of Regulation, Effective Techno-Legal Regime in Himachal Pradesh”.

The list of Participants is at Annexure – A.

2. Considering the impact of the recent disaster on the housing sector that has affected a total of 24885 houses comprising pucca, semi-pucca, kutcha houses, huts and cattle sheds and the impending threat in the event of an earthquake leading to widespread damage and destruction to this sector, the Government felt the need to take concrete steps in this sector to make the houses as disaster resilient. To move ahead in this direction, a meeting was organised under the Chairmanship of Sh. Prabodh Saxena, Chief Secretary, Government of Himachal Pradesh to have discussions on this issue of vital importance so as to make to the housing sector in all types of construction especially the rural constructions to be disaster resilient adopting safe construction practices. The meeting was organised on 21st May 2024 in the CS Committee Room from 3.30 PM onwards in hybrid mode.

3. At the outset of the meeting, Director-cum-Ex Officio Special Secretary (Revenue-DM), Sh. D.C. Rana, formally welcomed the Chairman, Sh. Prabodh Saxena, Chief Secretary of Himachal Pradesh, and the other participants from various stakeholder departments. Sh. D.C. Rana in his opening remarks, briefed the Chair about the major objectives of the discussions considering the multi-hazard vulnerability of the State especially the increasing threat of earthquakes due to large seismic gap in terms of the major earthquakes like that of Kangra 1905 and to work on the lines to develop earthquake resilient infrastructure by way of having safe construction practices and regulations across the State especially the rural constructions.

4. Further Sh. D.C. Rana presented an overview on the hazard vulnerability of the State with special reference to the High Seismic Vulnerability of the State. He also apprised the Chair that about 32% of the total geographical area of the State falls in Very High Damage Risk Zone (Zone V) and the remaining in the High Damage Risk Zone (Zone IV) of the Seismic Map of India. He explained that the northward movement of the Indian Plate and its subduction beneath the Eurasian Plate which is moving south wards, as a result which lot of earthquakes have occurred along the plate boundary margin in the Himalayan region. He highlighted that 297 earthquakes of magnitude 3+ have occurred in and around Himachal Pradesh from April 1905 to the present. He discussed the Kangra Earthquake of 1905, showing pre- and post-impact examples, and emphasized that current construction practices have significantly increased the vulnerability. He was of the opinion that that has happened because of the non-compliance with Indian Standard codal provisions in both RCC and masonry constructions, incorrect slab reinforcement practices, and inadequate training of construction workers. He also pointed out issues with retaining wall construction lacking proper drainage/weep holes, etc.

5. He further said that in view of the projections made by different scientist for the occurrence of high magnitude earthquakes along the Himalayan range by virtue of the large seismic gap for major

earthquakes, there is great need to enhance and built the capacity of local masons, and bar binders and Junior Engineers or Technical Assistants involved in the construction activities at the Block level. He highlighted findings from the Post-Disaster Needs Assessment (PDNA) of the monsoon of 2023, which revealed that there was a significant damage in the housing sector, affecting 22,897 households. The major cause for this damage was mainly the non-compliance with building norms, lack of building bye-laws in rural areas, unsafe construction practices, and ignorance about hazard profiles. He explained his view about the extent of damage in case of the earthquakes that happened in 1819 and then 2001 in Gujarat vis-a-vis the effectiveness of the EWS in case of Cyclones at the nation level.

6. The meeting was also apprised about the initiatives by the State Executive Committee (SEC). In 2012, a SEC Sub-Committee, chaired by the Principal Secretary of TCP & UD, was formed to finalize Model Building Bye-Laws and propose amendments to the TCP Act. The Committee's report led to the amendment of the TCP Act and proposal of the adoption of new Model Building Bye-Laws by all Urban Local Bodies (ULBs). But UD Department has not reported any compliance ever since, despite numerous reminders. The DMC has engaged the Central Building Research Institute (CBRI) Roorkee to develop guidelines for safe construction practices and has initiated regular training and capacity building for engineers and architects.

7. It was also highlighted that the State Disaster Management Authority's (SDMA) scheme, was launched on October 13th, 2018, to train masons, bar binders, carpenters, and other construction workers. The scheme, targeting 16,130 masons across 3,226 panchayats, had an estimated cost of 9.10 crore, with an initial instalment of Rs. 1.83 crore already released. As of now, 1,491 masons have been trained, though activities were disrupted by the COVID-19 pandemic. Training has resumed but is not progressing as anticipated.

8. Thereafter, Ar. S. K. Negi & Dr. Ajay Chourasia Chief Scientists from the Structural Engineering Division at CBRI Roorkee, presented "Aapda Kavach," an initiative aimed at enhancing disaster resilience and promoting safe construction practices in Himachal Pradesh. SDMA with the technical collaboration of CBRI Roorkee is developing Guidelines for the Safe Construction Practices. These guidelines will exclusively for the houses being constructed in rural areas and separately for the constructions being governed by RDD Department at the Panchayat level.

9. After the brief overview to the Chair and the participants, the discussions were held addressing various issues with reference to the safe construction practices: -

- a) Implementation of a techno-legal regime, including Model Building Bye-Laws and Risk Sensitive Land Use Planning.
- b) Strengthening and enforcing building bye-laws.
- c) Addressing gaps in existing building regulations for hill towns.
- d) Establishing robust monitoring mechanisms for government construction projects.
- e) Incorporating water management, landslide, and slope stability in town planning.

- f) Implementing flood zonation regulations.
- g) Promoting and building capacity for non-engineering constructions, including confined masonry.
- h) Encouraging institutions to promote safe, earthquake-resistant construction practices at the grassroots level.
- i) Establishing demonstration units to showcase safe construction techniques.
- j) Promoting safe construction practices through Information, Education, and Communication (IEC) efforts.
- k) Training and capacity building for masons, carpenters, and bar binders.
- l) Developing a Technical Demonstration Centre at the Government Engineer College and ATC Shahpur.
- m) Establishing Housing Facilitation Centres in all districts.
- n) Coordinating with cement and steel companies to promote safe construction practices.

Discussion and Decisions

10. Chief Secretary, Govt of Himachal Pradesh had very detailed discussions with the stakeholders on this important issue. In order to have effective measures to ensure safe construction practises across the State, the following decisions were taken and directions were issued by the Chair for its immediate compliance: -

- a) The SEC may consider to issue an order by **July 2024** under the DM Act 2005 mandating multi-hazard resistant construction as per the National Building Codes in the State.

(Action by DM Cell, Department of Revenue)

- b) The TCP and UD Departments shall ensure alignment of their Regulations and Bye-Laws as per the latest National Buildings Codes. Both the Departments shall also ensure that the structural aspects of the contractions are also regulated. In addition, there is need to ensure effective monitoring mechanism to ensure compliance with safety norms in all constructions. This exercise may be completed by **October 2024**.

(Action by TCP and UD Departments)

- c) There is urgent need to regulate all major and commercial contractions activities in the rural areas too. TCP Department to take steps in this direction by **October 2024**.

(Action by TCP Department)

- d) In order to educate masses about safe construction practices, the DMC may carry out focused IEC campaign involving stakeholder Departments and organisations such as DDMA, IPR,

Departments of UD, RD, TCP, Technical Education, IIT, NIT, IAG Networks of SDMA and DDMA's during celebration of IDDR/Samarth in **October 2024**.

(Action by DM Cell, Department of Revenue, TCP, UD, RD, I&PR, DDMA's, Technical Education)

- e) The UD Department shall share list of ULBs which have adopted Model Building Bye Laws approved by SEC/TCP regulations, indicating date of adoption by **June 2024**.

(Action by UD Department)

- f) The Department of Urban Development and RDD is directed to start registration contractors in urban areas and rural areas who are engaged in construction of houses in order to build their capacity to implement the National Building Codes. This exercise may be completed by **October 2024**.

(Action by UD & RDD)

- g) HPSDMA will organise training of Technical Assistants and Junior Engineers from RDD & PR Department, UD and SSA (Education) on Safe Constructions Practices. Similar trainings be organised for Architects (**June to December 2024**).

(Action by DM Cell, Department of Revenue, RDD &PR, UD, SSA, TCP)

- h) RDD & PR Department to forward the guidelines being framed by them for rural constructions to HPSDMA for comments and suggestions by 15th **June 2024**. The Department shall also implement the guidelines being developed by the HP SDMA in collaboration with CBRI Roorkee, as and when finalised (**October 2024**).

(Action by RDD & PR)

- i) The Department of Technical Education, Urban Development, Rural Development, and the Skill Development Corporation will take the lead in the training and capacity building of engineers and masons in safe construction techniques and collaborate with the HPSDMA for implementation of scheme for capacity building of masons, carpenters, and bar binders in the state (**September 2024**).

(Action by DM Cell, Department of Revenue, Technical Education, Skill Development Corporation)

- j) Director Technical Education will expedite for issuing NOC in favour of ATC Shahpur for building a Demonstration Structure Park on Safe Constructions which would have the joint ownership in public interest by **June 2024**. To develop this park, a MoU has been signed by HIMCOSTE with CBRI Roorkee.

(Action by Technical Education Department)

- k) Director Technical Education will also expedite the matter of establishing Housing Facilitation Centre (HFC) for which SDMA has already requested Technical Education department. These facilitation Centre would help in promoting safe construction culture in the State and in implementing the SDMA's scheme of training of masons, carpenters and bar binders. The Director Technical Education to provide information by **June 2024**.

(Action by Technical Education Department)

- l) Urban Development Department will also ensure to utilise the services of Geologist and Structural Engineers in the constructions works in urban areas of the State (**October 2024**).

(Action by UD and TCP Departments)

- m) Short type courses may be started in IIT Mandi, NIT Hamirpur, Govt. Engineering and Polytechnic Colleges on safe constructions in the State (**December 2024**).

(Action by IIT Mandi, NIT Hamirpur, Director Technical Education)

- n) The local cement & steel companies will be asked to collaborate with State Govt. to promote safe construction practices (**July 2024**).

(Action by HP SDMA & DDMA's)

- o) Flood Zonation Mapping of all river basins will be conducted by the Jal Shakti Department in association with HIMCOSTE in a phased manner (**December 2024**).

(Action by JSV & HIMCOSTE)

The meeting concluded with a vote of thanks to the Chair

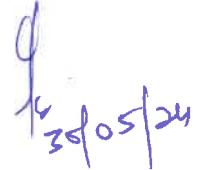
Approved By

Prabodh Saxena, IAS
Chief Secretary,

Endst. No. Rev. (DMC) (F) 11-01/2022-SEC Dated: Shimla the May, 2024

Copy for the information & necessary action to:

1. All the concerned Administrative Secretaries.
2. The Director, Town & Country Planning SDA Complex, Shimla-9
3. The Director, Rural Development, SDA Complex, Shimla-9
4. The Director, Urban Development, Tolland Shimla
5. The Engineer-in-Chief, PWD, Nigan Vihar, Shimla-2
6. The Engineer-in-Chief, IPH, Jal Shakti Bhawan, Shimla-4
7. The Member Secretary, HIMCOSTE, Shimla-9
8. The Director, Technical Education, Sundernagar, District Mandi
9. The Director, Higher Education, Lal Pani, Shimla-1
10. The Director, Elementary Education, Lal Pani, Shimla-1
11. The Managing Director, HP Kaushal Vikas Nigam, Shimla-9
12. The Project Director, Samagra Shiksha, Shimla-1
13. The Director, IIT-Mandi, Kamand, Mandi, HP
14. The Director, CSIR – CBRI Roorkee – 247 667 Uttarakhand
15. The Director, NIT-Hamirpur, Himachal Pradesh
16. The Chairman, Institute of Engineers, Shimla-2



D.C. Rana, IAS
Director cum Ex Officio
Special Secretary (Revenue – DM) to the
Government of Himachal Pradesh

Annexure - A

The following officers and officials from different departments participated in the meeting:-

1. Sh. Kamal Kant Saroch, IAS, Director, Town and Country Planning
2. Sh. D.C. Rana, IAS, Director-cum-Ex Officio Spl. Secretary (Rev-DM) to GoHP
3. Sh. Akshay Sood, Director, Technical Education
4. Sh. Jagan Thakur, Additional Director, Urban Development
5. Sh. Keval Sharma, Additional Director, Panchayati Raj
6. Sh. Sanjeev Sood, Additional Director, Higher Education
7. Er. Ajay Soni, S.E., HPPWD Shimla
8. Er. Mukesh Hira, SE, P & I-I, JSV
9. Dr. Pardeep Kumar, Associate Professor, NIT Hamirpur
10. Sh. Naresh Kumar, GM, HP Kaushal Vikas Nigam
11. Dr. S. C. Attri, Joint Member Secretary, ATC HIMCOSTE
12. Sh. K.C. Nanta, TCP (Headquarter)
13. Sh. Rajesh Chandel, Executive Engineer, RD & PR
14. Dr. D. Swami, Dean (I&S), IIT Mandi
15. Sh. Chaman Thakur, State Nodal Officer-DM, Elementary Education
16. Dr. Sumesh Thakur, State Nodal Officer PMSHRI, Samagra Shiksha
17. Dr. S.S.Randhawa, Principal Scientific Officer, DMC-HPSDMA
18. Sh. Parveen Bhardwaj, Disaster Management Specialist, DMC-HPSDMA
19. Dr. Krishan Chand, Training & Capacity Building Specialist, DMC-HPSDMA

Participants who joined virtually:-

1. Ar. S.K.Negi, Chief Scientist ,CBRI Roorkee
2. Dr. Ajay Chaurasia, Chief Scientist, CBRI Roorkee
3. Sh. Ashish Pipal, Scientist, CBRI Roorkee
4. Sh. H.K.Jain, Retd. Technical Officer, CBRI Roorkee