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UNIVERSITY OF TWENTE



Climate-resilient adaptation of built-form in hilly region through traditional wisdom and best practices

A case of Himachal Pradesh

NITH - Inderpal Singh, Puneet Sharma, Aniket Sharma
SPAV - Dr. Minakshi Jain; Dr Adinarayanane R; Dr Ayon K Tarafdar; Dr. Faiz Ahmed and Ar. Kartteek G. 2019



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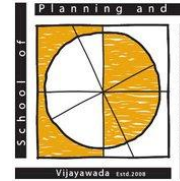
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Introduction

Settlements, which have evolved over centuries in the form of organic spatial pattern, has certain inherent factors that deal with externalities like disasters. In hilly terrains, we often find that unregulated modern urbanisation leading to new urban fabric that is inorganic in nature and not tolerant to environmental requirements of a hilly region resulting severe calamitic incidences of landslides, flash floods and earthquakes in the system. This calls for careful attention and study of the traditional wisdom and techniques used in design of buildings and settlements in hilly terrain.

Objective

- To explore traditional/vernacular best practices of built-form and its transformation for mitigating climate change impact in hilly region
- To assess the applicability of key design elements and concepts of traditional structures in contemporary planning and architecture



**School of Planning and
Architecture Vijayawada**
www.spav.ac.in



NIT HAMIRPUR HP
www.nith.ac.in

Case Status: The project shall take up a detailed study of traditional settlements in the hilly region of Dharamshala and shall aim to reveal the reasons why the traditional buildings and settlements have been able to survive the impacts of disasters in the long run that resulted in their heritage status. The study shall explore the new and old viewpoints of the cases of Dharamshala region with relation to design of traditional buildings and historic settlements that are sophisticated with traditional patterns, limited materials and technologies of past.

Preliminary Findings

- Changes in the lifestyle and social structure have forced people to move from old to new construction typology.
- Level of attachment with the native place and the house is lost due to the different work area locations and nuclear family system.
- There exists a strong relationship between every settlement layout and the terrain and slope orientation.
- The built form in each settlement does not hamper the natural terrain forms and hence reduces chances of landslides and instability
- Every settlement is deeply interlinked with and is in synergy with the surrounding open stepped spaces and utilises them for cropping, horticulture and fodder storage

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