

## Deriving Framework for Slum Rehabilitation through Environmental Perspective: Case of Mumbai

**Authors :** Ashwini Bhosale, Yogesh Patil

**Abstract :** Urban areas are extremely complicated environmental settings, where health and well-being of an individual and population are governed by a large number of bio-physical, socio-economical, and inclusive aspects. Although poverty and slums are the prime issues under UN-HABITAT agenda of environmental sustainability, slums, the inevitable part of urban environment, have not accounted for inclusive city planning. Developing nations, where about 60 % of world slum population resides, are increasingly under pressure to uplift the urban poor, particularly slum dwellers. From a point of advantage, these new slum redevelopment projects have succeeded in providing legitimized and more permanent and stable shelter for the low income people, as well as individualized sanitation and water supply. However, they unfortunately follow the "one type fits all" approach and exhibit no response to the climatic design needs on Mumbai. The thesis focuses on the study of environmental perspectives in the context of Daylight, natural ventilation and social aspects in the design process of Slum-Rehabilitation schemes (SRS) - case of Mumbai. It attempts to investigate into Indian approaches about SRS and concludes upon strategies to be incorporated in SRS to improve the overall SRS environment. The main objectives of this work have been to identify and study the spatial configuration and possibilities of daylight and natural ventilation in Slum Rehabilitated buildings. The performance of the proposed method was evaluated by comparison with the daylight luminance simulated by lighting software, namely ECOTECT, and with measurements under real skies whereas for the ventilation study purpose, software named FLOW DESIGN was used.

**Keywords :** urban environment, slum-rehabilitation, daylight, natural-ventilation, architectural consequences

**Conference Title :** ICSI 2017 : International Conference on Sustainable Infrastructure

**Conference Location :** Prague, Czechia

**Conference Dates :** March 23-24, 2017