

## Sustainability of the Built Environment of Ranchi District

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**Abstract :** A city is an expression of coexistence between its users and built environment. The way in which its spaces are animated signify the quality of this coexistence. Urban sustainability is the ability of a city to respond efficiently towards its people, culture, environment, visual image, history, visions and identity. The quality of built environment determines the quality of our lifestyles, but poor ability of the built environment to adapt and sustain itself through the changes leads to degradation of cities. Ranchi was created in November 2000, as the capital of the newly formed state Jharkhand, located on eastern side of India. Before this Ranchi was known as summer capital of Bihar and was a little larger than a town in terms of development. But since then it has been vigorously expanding in size, infrastructure as well as population. This sudden expansion has created a stress on existing built environment. The large forest covers, agricultural land, diverse culture and pleasant climatic conditions have degraded and decreased to a large extent. Narrow roads and old buildings are unable to bear the load of the changing requirements, fast improving technology and growing population. The built environment has hence been rendered unsustainable and unadaptable through fastidious changes of present era. Some of the common hazards that can be easily spotted in the built environment are half-finished built forms, pedestrians and vehicles moving on the same part of the road. Unpaved areas on street edges. Over-sized, bright and randomly placed hoardings. Negligible trees or green spaces. The old buildings have been poorly maintained and the new ones are being constructed over them. Roads are too narrow to cater to the increasing traffic, both pedestrian and vehicular. The streets have a large variety of activities taking place on them, but haphazardly. Trees are being cut down for road widening and new constructions. There is no space for greenery in the commercial as well as old residential areas. The old infrastructure is deteriorating because of poor maintenance and the economic limitations. Pseudo understanding of functionality as well as aesthetics drive the new infrastructure. It is hence necessary to evaluate the extent of sustainability of existing built environment of the city and create or regenerate the existing built environment into a more sustainable and adaptable one. For this purpose, research titled "Sustainability of the Built Environment of Ranchi District" has been carried out. In this research the condition of the built environment of Ranchi are explored so as to figure out the problems and shortcomings existing in the city and provide for design strategies that can make the existing built-environment sustainable. The built environment of Ranchi that include its outdoor spaces like streets, parks, other open areas, its built forms as well as its users, has been analyzed in terms of various urban design parameters. Based on which strategies have been suggested to make the city environmentally, socially, culturally and economically sustainable.

**Keywords :** adaptable, built-environment, sustainability, urban

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