

Integrated biodiversity, energy systems and environmental sustainability – Architecture and its impact on health and environment

Brishbhanlali Raghuvanshi

School of Planning and Architecture, India

Man has evolved harmony between nature and their habitat since ages through the use of local building materials, techniques, depending upon climatic conditions and cultural values. They were their own architects and designers reflecting their socio-economic status. They had no space constraint but have material and technological. They can renew or rebuilt their houses any time with the used building materials and they are always designed respecting the natural setting.

Industrialization and urbanization had different impact upon housing. Local craft or art work was lost in the urban areas. Horizontal development took place with extrovert planning. Buildings are planned as per the climatic considerations and have sufficient movement spaces inside and outside the buildings. Enclosed and semi-enclosed spaces are placed around the central courtyard or called as 'courtyard planning' and it leads to natural ventilation and air flow in all the room. In order to have faster construction factory made materials were used. After many years they slowly started having impact on health and on environment as well.

Vertical developments was the need of the hour with introvert planning, common central space such as park/garden, and other amenities and facilities were shared with the people of same community. It was more of a compact planning. Services such as heating ventilation & air-conditioning, water supply, sanitation, drainage are the prime concern. Aesthetic or façade treatment was also an important feature. Modern building materials such as glass, steel, aluminum were used in the front façade and air-conditioning is also done at the same time which results in high energy consumption in commercial, residential or recreational areas. We are fully equipped with all kind of leisure and do not wish to come out of comfortable zone which have serious affected their health on the people of all the age groups.

Due to ecological imbalance, climate change has resulted earthquakes, tsunami, and flood and we paid its cost by facing the loss the life and property. Most of us are coping techniques, design from the western culture without understanding our cultural, urban setting, heritage. The result is haphazard development. These steps created serious impact on health and environment. Current need is to understand our culture, lifestyle of the people and then to build green buildings, renewable resources, vernacular architecture which sets with the urban setting.

Biography

Brishbhanlali Raghuvanshi is currently working in School of Planning and Architecture, Bhopal as an Assistant Professor. Earlier to this was working with RITES Limited Mumbai. She completed her master's from IIT Roorkee in 2009 and graduation from NIT Bhopal in 2007.