

SUSTAINABILITY VIZ –A-VIZ ARCHITECTURE & CULTURE: CASE OF DIVERSE INDIA

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Anoop Kumar Sharma

**Professor (Asth.); Department of Architecture and Landscape Design, Shri Mata Vaishno Devi University, Kakryal (Distt-Reasi), Katra, India-182320
anoop.sharma@smvdu.ac.in**

Sustainability has become the essence of modern way of life in each and every aspect. Whole world is conscious in present times owing to the sustainability measures and its vitality for the future of the planet. When we talk of sustainability, the existence of future generations on the planet and their ease and ownership to use the natural resources to the same potential as we do, really matters. Hence, the optimum use of the resources and optimum shelters encouraging this very phenomenon of energy efficiency or less dependence on non-renewable/artificial means of energy (Air-conditioning, motor pumps, and electrical appliances) as micro-climate modifiers/indoor comfort are the largest elements of determining extent of sustainability. As construction sector and buildings make use of largest component of energy and this construction sector doesn't seem to stop in near future as construction shall go on co-exist as long as planet is there. Hence, Sustainability in Construction or Architecture shall in real terms determine the future of the planet or indeed actual sustainability of all of us in coming years.

India is one of the most diverse country of the world. In the 21st century, the whole world is looking towards India as the emerging global leader in all contemporary facets. The whole world is suffering from economy crisis as such many countries are on the verge of total economy shut-down. In such crisis time, India is the only country that has survived and apart from economic policies; it's the diversity and sustainability in its culture, Climate, People, style of living and hence Architecture that has kept it going despite of holding more than 125 million people with in it

India has got almost all climates of the world. It possesses one of the most beautiful coast line from its east to west coast all through the south coast. Hence, tropical climate exist in all these places. On the North, the regions like capital Delhi and nearby states possesses Composite Climate (harsh winters and harsh summers with good rainy season) due to strong influence of Himalayas nearby. On extreme North, places like Ladakh and Upper hills of Himachal are cold deserts, where temperatures go as low as -40^o c. These areas hardly receive any rains and still presence of good sustainable structures and Cultural sustainability, these areas are blessed with rich tourism. State of Rajasthan in western India is known for its magnificent deserts and bears hot & dry climate with the max. of plus 50^oc in the summers. The Culture, Climate and style of living totally regulated the architecture in Rajasthan and other parts of western India like Gujrat and Maharashtra. The corresponding Architecture and built forms are world-famous for its energy efficient scenario and sustainability features and they still inspire many new structures and contemporary Architecture for the effective sustainable methods.

The step-wells of hot & dry climate prevailing in Gujrat state of India has been used as main concept in many Buildings of the region. These step-wells are used to store the rain water which happens very seldom in this part of the world, for its effective usage. All these was done long before the formal notion of sustainability was realized all across the world.

The famous wonder of the world i.e. Taj Mahal built many hundreds of years ago is also the wonderful example of sustainability. As provisions of effective micro-climatic modifiers were utilized in and outside the main complex. There is no need of artificial comfort tools even in the hottest months of the year (May-June) and indoor comfort is achieved by natural features (addition of water pool, effective cross-ventilation, Mughal fenestrations (jail) effect) and stacking of the hot air from top).

Similarly, many buildings across the colder region of the country were designed to achieve optimum indoor comfort by natural means. The use of Solarium, Trombewall, use of alternate materials (local material) for

finishes, effective orientation and Form, understanding of local climate and culture have dominated the architecture of such places and again long before the definition of sustainability was realized in Architecture.

North-eastern part of India is richer in Bamboo and other natural materials which are effectively used in their structures. The more amazing part is most of such good structures the likes of individual houses and community shelters. The planning methods, use of materials, provisions in planning and form of the house is totally derived from local context as such these are the best sustainable structures of the region realized and tested over past so many years. Formal Architects and Architecture of today's era take inspiration from these structures to practice sustainability in the region through their architecture.

The coastal areas of India e.g. Kerala receive lots of rain-fall and bears tropical climate. Hence, Architecture that follows is mostly having more of fenestrations, sloping roofs and local materials in structural system and interior finishes, central courtyard for indoor comfort marked the architecture in very- very simpler methods rhyming with the surroundings and landscape.

The predominant architectural form of India is Temple Architecture. There are many beautiful temples all across the country in many prevailing styles and built by ancient Gods, rulers and kings. The styles, context of the temples, construction techniques of the temples have inspired many subsequent kings and policy makers for effective construction techniques. These temples along with the forts and palaces built by many kings and rules (who have ruled parts of India in different eras) are the best examples of sustainability and these are still inspiring many contemporary architects for some wonderful take-away to achieve sustainability in today's structures.

India is also known as the home of one of the world's most famous civilization (river valley civilization) i.e. Indus valley civilization. The famous towns of Harappa and Mohenjo-Daro of the civilization are some of the best examples of sustainability in architecture and Planning. These structures, town planning and judicious use of materials have inspired many future towns, town-ships and structures. e.g. the famous **Asiad games** village at New Delhi was a clear analogy of the Harappa town. The water supply and sewerage system, street sections, undulating sky-line of the community with regular use of staggered terraces (encouraging social interaction in that climatic zone) still inspire one and all for effective sustainability in architecture and planning.

India has been facing great hardships to sustain its heritage as well as its ever growing population in this era of energy conscious world which is suffering from climate change already. Still, this country's heritage is a perfect example to showcase how sustainability must be practiced and can sustain over generations. In turn, it's the source of impressive tourism to sustain the economy as well all across the length and width of the country.

My key note address shall target on most of such structures along with few contemporary buildings and concepts which have been designed and built from such inspirations and are impressive from the sustainability point of view. My target shall be mainly on covering buildings of different timelines i.e. of various rulers, Kings, colonial buildings and ultimately the ones belonging to contemporary era and yet practicing sustainability. Another prime focus shall be to cover the buildings design viz a viz the context of the place i.e. culture and climate and hence, the buildings from all the sections of the country comprising of different contexts shall be covered in the key Note Address. Further, An attempt to show-case varied building types along with judicious future course of sustainability shall also be touched upon in the address. The adverse effects of globalization on Architecture in general in the culturally rich country like India and challenges to sustain on daily basis shall also be covered in the talk.

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