

SNIPPETS OF LIFE

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ADOPTION OF SUSTAINABLE DESIGN PRACTICES IS THE NEED OF THE HOUR

The past year has made it clear that the actions of humans have far-reaching consequences on the entire planet. Hence, the theme chosen for this year's World Environment Day commemoration — 'Ecosystem Restoration' — is an apt one, where people are being encouraged to do everything in their power to restore the ecosystem. A practical way of doing this is by adopting sustainable design practices in the construction of personal spaces. Certain architectural firms are leading the way by making sustainability their mantra, and being conscious of the methods and materials used.

For centuries, humans have harmed the ecological balance of natural landscapes through the largescale expansion of cities and industrial centres. Now it has become necessary to override the impact of this expansion by making smarter choices. Amit Khanna, Founder and Principal Designer of the architectural design firm, AKDA explains, "our cities should be dense with efficient mobility solutions and our industrial centres need to process their waste - whether its air pollution, effluent or solid discharge. Significant areas of the landscape need to be left untouched and preserved to conserve the natural environment for other species."

It has also become necessary to use innovative materials to ensure a low carbon future. Mitu Mathur, Director of GPM Architects & Planners, asserts that sustainability can be achieved through the introduction of greenery in buildings and the promotion of less polluting technologies for construction. She believes in focusing on alternative energy generating materials like rainwater harvesting and solar power generation to ensure sustainability.

This makes it essential to be aware of local climatic and geographical conditions, and work around them. Anand Sharma, Founder & Partner, Design Forum International says, "architects and designers must be conscious of local conditions and use them well — take as little as possible from sources that are finite and maximise the use of sources that are infinite such as the sun and wind."

Sustainability is as much about the process as it is about the end product. Hence, sustainable practices need to be incorporated through the entire lifecycle of a building — from its initial design and construction, use and maintenance, to its demolition and the reuse of its building materials. Rahul Kadri, Partner & Principal Architect at IMK Architects explains that this entails strategically placing the building on the selected site in a way that integrates it with the local ecosystem instead of disrupting natural processes like the flow of water and the growth and sustenance of plants and trees. Then one must aim to maximise natural light and ventilation in the interiors and choose natural and locally available materials which have lower embodied energy and carbon over materials that have to be transported from afar.

'Net-zero energy' buildings, where the total amount of energy used by the building on an annual basis is roughly equal to the amount of renewable energy created on or around the site, is the new buzzword when one talks of sustainability. Pioneered by Zero Energy Design Lab (ZED Lab), it aims to minimise energy consumption by adopting passive design strategies such as optimal building form, materials with high thermal mass, etc., along with active design strategies i.e. the use of renewable energy systems such as solar panels. While passive tools minimise energy consumption, active tools aid in producing renewables. However, Sachin Rastogi, Founding Partner and Principal Architect of the firm cautions that net-zero can only truly be successful and appeal to the masses if it is made affordable. He believes that 'near net-zero' does not need to be expensive to construct and run.

Meena Murthy Kakkar, Design Head and Partner at Envisage Architectural firm also believes in making sustainable practices affordable. She advocates mandating certain principles so that more people can implement these solutions, bring the costs down and make the practice and goal of attaining sustainability, affordable and within reach of everyone. She sums it up by saying, "the idea of creating something that is at loggerheads with its surroundings and then finding ways to resolve it through artificial interventions is a habit that we need to get rid of. Sustainable practices need to be incorporated as a core design philosophy, to be in sync with everything our creation engages with — at all levels."