

Sustainability doesn't cost the Earth

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Very few would argue against the fact that Mahatma Gandhi's lifestyle represents the best example of sustainable living. He practised a "Green lifestyle" and I am sure lived in a "Green building" and in a "sustainable community". He preached simplicity, going for the natural options, localisation, reduce, reuse, recycle, small-scale, and many such principles that are basic tenets of sustainability today. In fact, our forefathers definitely lived a more sustainable life and Gandhiji was perhaps one of the few in his generation (that was otherwise generally basking on the glory of the industrial revolution and scientific advancements) who recognised that some of our traditional approaches were more sustainable; that livelihoods were more important than mass production, scale & economy; that frugality was a virtue; etc.

If that is what sustainability is all about, why are we even thinking that sustainable living (or a Green Lifestyle) is an expensive lifestyle? OR a green building is a more expensive building? Isn't it counter-intuitive? Are we being lead to believe something that is not true?There are some truths and lies in this thought process. The truth is that mass production and synthetic products are today cheaper than many of their natural counterparts. For e.g., some kinds of ceramic tiles could be cheaper than marble while still providing a comparable aesthetic value. Food that is mass produced is often cheaper than organic food; although the cost of mass-produced food is relatively higher, it is more than made up by the yield / acre. What or where is the catch? The catch is all in the hidden costs!! - The environmental costs. If fuel was more appropriately priced, ceramic tiles wouldn't be as cheap. If water was appropriately valued and priced OR if energy for sucking ground water from beneath the earth was appropriately charged for (leave alone the water cost), mass produced food wouldn't be as cheap. Some may say – OK, that is fine....But do we have enough marble for the entire population OR could we have produced food for everyone without scientific advancements like fertilizers, pesticides, hybrid seeds and pumped irrigation? Valid questions... And I think the answer is "Yes". I again go back to Mahatma Gandhi and borrow one of his quotes – **There is a sufficiency in the world for man's need but not for man's greed.** We are all today recognising the importance of reducing our consumption OR put the other way, the pitfalls of excessive consumption and the associated generation of waste. If we can all limit our consumption to our need and not for our excesses, I am sure there is enough for everyone in nature. We just need to use it more prudently – not borrow and splurge from what really belongs to our future generations.

So, how does sustainability cost less in the context of our “Built environment”? Are sustainable homes cheaper? The answer is “Yes, they can be!!” We believe that there are a few clear drivers – (a) As more of the environmental costs start getting factored into the pricing of the conventional or mainstream options, the alternative or sustainable options will definitely become increasingly cheaper for e.g., if energy costs were to go up, the economics of sustainable choices will only keep improving further (b) the economies of scale will also benefit the sustainable options as their popularity and demand grows i.e., if solar thermal systems are mass produced, they are likely to be cheaper. (c) with volumes picking up, this is bound to catch the attention and fancy of the bigger corporates who have been more on the fringes so far – their ability to innovate and drive costs down will further make the sustainable options cheaper; like how computers and mobile phones have been growing cheaper and cheaper over the years (d) the government may incentivise the sustainable options adding positively to the cost-benefit equation.

Then there is a whole world of design approaches under what are called “passive strategies of building design” that try to make nature work for you rather than trying to fight nature and incurring costs in the process – techniques such as appropriate orientation of buildings to benefit from sun and wind during different seasons of the year; appropriate day lighting that reduces the need for artificial lighting; creating enough thermal mass that allows for a more natural temperature regulation during the 24 hour temperature cycle; using the thermal mass of the earth for annual regulation of temperature, etc. All of these can significantly reduce the cost for electro-mechanical equipment for cooling, lighting and ventilation – thereby reducing both capital and operating costs.

However, there are few things that will add to the capital cost like say a rain water harvesting system OR thicker walls for increased thermal mass. These can be balanced by being more austere in other areas of the building viz., cut out the basements and elevators (build to lower density or FSI), avoid ornamental facades, go for simple specifications in the finishes, and many more such ideas. **Spend for the right things rather than for the excesses and luxuries that vitiate the environment.**

There is no “standard solution” that can fit all circumstances – that is the beauty and the challenge in sustainable design of buildings. It is very context specific; it is very local and hence requires application of mind at every stage. The cookie cutter approach will not work (thankfully!!), but the principles are generic enough and the approach / thinking process is also generic and replicable.

Although the “right path” is often a “difficult path” and sometimes might seem like an “expensive path”, the sustainable option HAS to be the CHEAPER option ultimately. Because, if it is EXPENSIVE, then it is not SUSTAINABLE!!