

# Sustainability In Building Design

We hear this word in terms of material, life pattern, fitness, apparel, construction, govt. Plans, but did you ever think why is this important? What does it mean?

"Sustainability" means meeting our own needs without compromising the ability of future generations to meet their own needs.

- Building Design & Construction

Sustainable building design and construction is the practice of creating structures and using processes that are environmentally responsible throughout life cycle of a building— from selecting the site. Green building, sustainable green construction are other terms used. promoting the efficiency of buildings w.r.t the use of water, energy & material while reducing the building's impact on individual's health and the environment through better design, construction, operation, maintenance and removal.

## Why to worry, what does it have to do with the society, lives?

It included municipal solid waste , CFC, CO<sub>2</sub> production, air emissions, water discharge. It not only applies to construction and architectural world .Pandemic design should be adopted by health care industry that support a healthy environment in their facilities as well as communities.

- How Buildings Affect Health

It affects public health on three levels (adapted from the Green Health Care Construction Guidance Statement of the ASHE Green Building Committee):

1. The immediate health of building occupants.
2. The health of the surrounding community is affected .
3. The production of building materials can cause harm

lets look at the benefits-

- Environmental Benefits

1. Enhancement & protection of ecosystems and biodiversity,
2. Improved air & water quality
3. Reduced solid waste
4. Conservation of natural resources

- Economic Benefits

1. Reduced operating costs
2. Enhanced asset value and profits

3. Improvements in employee productivity
4. Optimized economic performance
5. Increased resiliency against unstable energy markets

- Health and Community Benefits

1. Improved air, thermal, and acoustic environments
2. Enhanced occupant comfort and health
3. Contributions to overall quality of Life

## Methods-

1. BIM is used to help enable sustainable design by allowing architects and engineers to integrate and analyze building performance.
2. The study of Permaculture, can also greatly help in proper building placement especially in rural and forested zones.
3. focusing on the on-site use of waste management, incorporating grey water systems for use on garden beds, and composting toilets to reduce sewage.

## Sustainable Building Materials

Recycled denim, sustainably harvested wood, sheep wool, panels made from paper flakes, baked earth, rammed earth, clay, seagrass, coconut, calcium sandstone, locally obtained stone, rock, bamboo, non-toxic low-VOC glues and paints.

### Goals:-

Energy efficiency over the entire life cycle of a building is the most important goal of sustainable architecture .

Thanx

Regards

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