



Srujan Research and Planning Foundation

## Green Building



Urban Design | Urban Planning | Regional Planning | Environmental  
Planning & EIA | Township Planning | Green Building Certification

# Introduction

India is second largest growing economy in the world with growing population at a rate of 1.3 % and energy consumption at 4.3 % and vanishing water resources.

The construction sector in India is one of the major consumers of energy and has a significant impact on the environment in terms of leaving the carbon footprints.

## Problem area

As per the Confederation of Indian Industries (CII), the construction sector contributes to about 8-10 % of India's GDP.

The real estate comprising of housing, commercial & retail is growing at a rapid rate and is poised to emerge as one of the most preferred investment destination for the local Indians and well as the foreign investors.

The problem is how India can meet the booming construction industry needs while taking sustainability into consideration at same time.

## Need of Green Building



Energy shortage



Water scarcity



Improper waste management



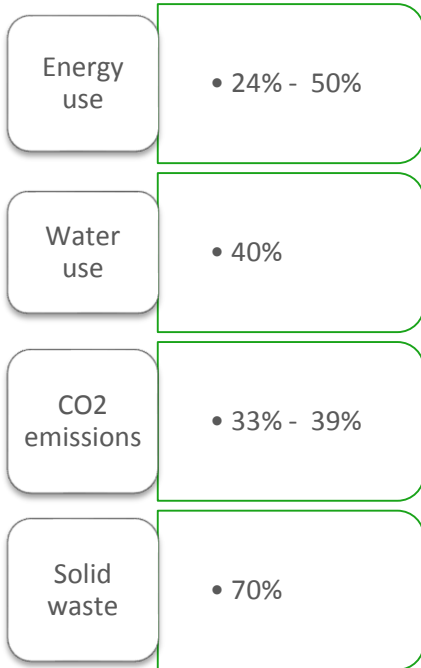
Construction waste



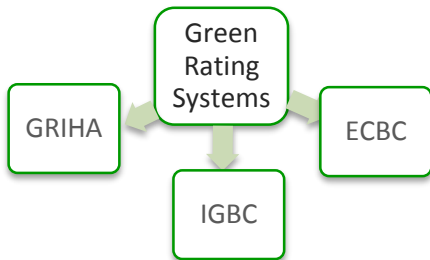
Air pollution affecting human health

# Aspects of Green Building

## Green Building can reduce . . .



## Key Initiatives in India



## Green Building Criterion's for rating



# Benefits to Developers

**1. Rebates on property premiums and taxes** - PMC & PCMC offer tax and premium rebates for buildings that meet certain minimum conditions of rating system.

## Discount in premium for developers

Points scored	Rating	Discount in premium
71-80	***	5%
81-90	****	10%
91-100	*****	15%

Under the jurisdiction of  
**PMC for GRIHA**

Points scored	Rating	Discount in premium
36-40	***	5%
41-45	****	10%
46-50	*****	15%

Under the jurisdiction of  
**PMC for SVA-GRIHA**

Points scored	Rating	Discount in premium
50-60	*	10%
61-70	**	20%
71-80	***	30%
81-90	****	40%
91-100	*****	50%

Under the jurisdiction of  
**PCMC for GRIHA**

Points scored	Rating	Discount in premium	Discount in property tax
25-30	*	10%	5%
31-35	**	20%	8%
36-40	***	30%	10%
41-45	****	40%	12%
46-50	*****	50%	15%

Under the jurisdiction of  
**PCMC for SVA-GRIHA**

- 2. Eco-housing** - PMC offer tax and premium rebates for buildings that meet certain minimum conditions of rating system.

**Discount in premium for developers**

Points scored	Rating	Discount in premium
500	*	10%
501-600	**	20%
601-700	***	30%
701-800	****	40%
>800	*****	50%

Under the jurisdiction of **PMC**

- 3. Floor space index allowances** - A portion of extra FSI is given to developers of efficient buildings for no cost, increasing the value of their properties. Ministry of Urban Development (MoUD) issues a notification for local authorities to incentivize and provide 1% to 5% extra ground coverage and FAR for projects of more than 3000 sq.m. plot size on basis of GRIHA evaluation.

- 4. Fast track environmental clearance** for GRIHA pre-certified projects > than 20,000 sq.m.

# Benefits to Stakeholders



## Building Owners

Reimbursement of 90% of registration-cum-rating fee

- For projects upto 5000 sq.m. BUA with minimum 3 star rating.
- For projects > than 5000 sq.m. BUA with minimum 4 star rating.



## Architects/Design Consultants

- Rs. 2.5 lakhs - for projects upto 5000 sq.m. BUA with minimum 3 star rating.
- Rs. 5 lakhs - for projects > 5000 sq.m. BUA with minimum 4 star rating.



## Municipal Corporations/Urban Local Bodies

- Rs. 50 lakhs to Municipal Corporations & Rs. 25 lakhs to other Urban local bodies - That announces rebate in property tax for Green buildings and make it mandatory to get new buildings under govt. & public sector rated under GRIHA.

## Potential Energy Savings

As per BEE, by adopting ECBC system  
an estimated **3,453 TWh of cumulative electricity** could be saved by 2030,

the equivalent of powering as many as  
**358 million Indian homes annually** between 2014 and 2030 based on  
the current annual consumption level for electrified households.

Additionally, **1,184 million tons of CO2 emissions** could be avoided by 2030,  
equivalent to the annual emissions from more than **17 coal-fired power plants**  
(500 megawatts each) over the same period of time.



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