



# **Environmental Sustainability - Trends & Opportunities**

**K S Venkatagiri**  
**Executive Director, CII – Godrej GBC**

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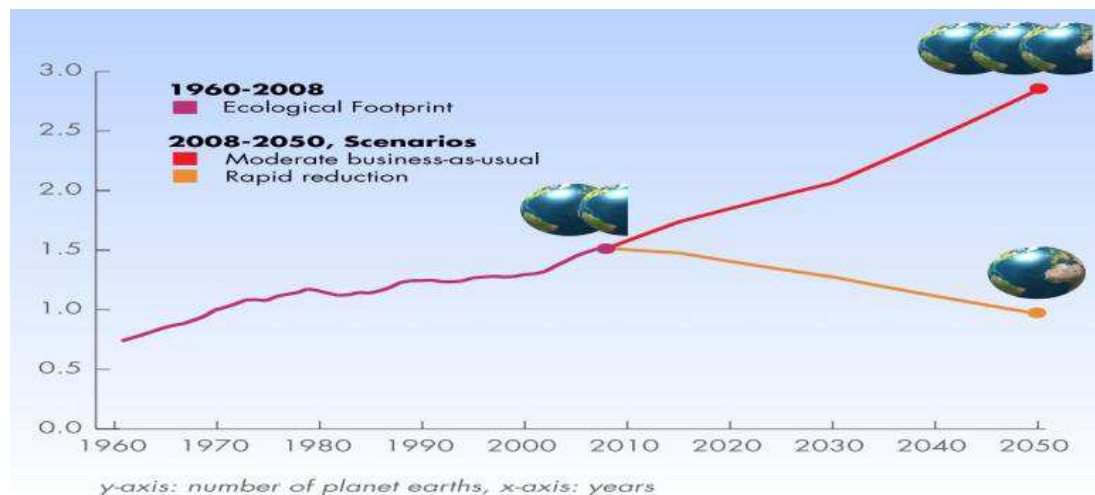
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# Global Ecological Footprint



Year	Earth Overshoot Day
1987	19 <sup>th</sup> December
1995	21 <sup>st</sup> November
2005	20 <sup>th</sup> October
2009	25 <sup>th</sup> September
2013	20 <sup>th</sup> August
2015	13 <sup>th</sup> August
2016	8 <sup>th</sup> August



## Amory Lovins in Natural Capitalism

- 1. Businesses which do not consider “Climate change” in their strategy & operations – will disappear**
- 2. Climate change problem can be solved only if ‘Business’ is involved in a major way**





## Trend # 1. 'Green' - Business Strategy

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❖ **Good & Green Vision - by 2020**

➤ **Creating Greener India**

- ❑ **Energy Efficient Business, zero waste, carbon neutrality, positive water balance & 30% renewable energy source**

➤ **Innovating for Good & Green Products**

- ❑ **Third of portfolio revenues comprising good and/or green products and services**

**Saving achieved by 2 Godrej & Boyce units: Rs. 3.5 Crore**



## **Trend # 2 . Green - Data, Data, Data...**



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## Example #1

### CISCO - A New Business Opportunity

- ❖ CISCO - Identified travel as a major source of GHG emissions
- ❖ Developed 'Tele-presence' - A video- conferencing device as a tool to reduce travel
- ❖ Converted into a market opportunity

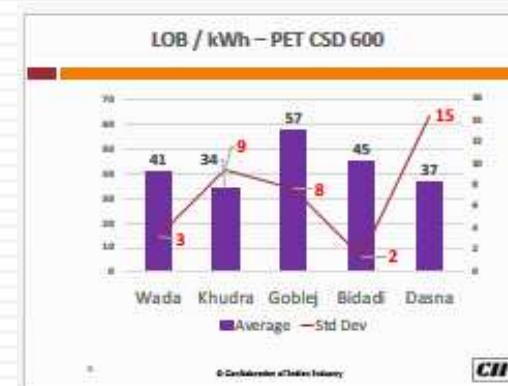


**Telepresence - 5 billion \$ / year**

## Example # 2

### Cement Industry - Data Analytics

- Reviewing available data for analysis
  - ▣ Sectoral, Group-wise, Equipment-wise
- Efforts undertaken :
  - ▣ Standard deviation of SEC data
  - ▣ Identifying SEC variation with higher SD
  - ▣ Reasons & Analysis
- Opportunities – 1.5 % reduction !





## Example #3

### Replaceable cartridge for Lipsticks

- ❖ Canadian Lipstick maker - Environment Impact study done
  - 50 - 75 % of weight - Cover
- ❖ Researched and developed a lipstick with replaceable cartridge
  - Reduced environmental impact
  - A new business opportunity



## Example #4

### Life Cycle Analysis - Unlock the Potential !

- ❖ Normal Perception - LCA is Theoretical
- ❖ LCA by Godrej Locks - Safe Deposit Lock
  - Material - major environmental impact
  - Brass to Coated Steel
  - Benefits

Environment impact



Material Cost - 10%



Base Plate  
Sub  
Assembly



Cover  
Plate



Bolt

LCA Approach - A Mega Opportunity for Companies





**Trend # 3 . 'Green'**  
**-Collaborate, Collaborate, Collaborate...**

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## Collaborate..

### ❖ Collaborate with whom ?

- Sister organisations ?
- Suppliers / clients ?
- Similar Supply Chain ?
- Competitors ?

## Example #1

### Collaboration with Suppliers - Walmart

- ❖ Sustainability Index developed for suppliers - 2009
  - Energy, GHG, Water, Waste, Packaging
- ❖ Excellent results
  - 148 factories China improve energy efficiency by 20 % in 2011



**Walmart saved 150 million \$ in 2012**

## Example #2

### PepsiCo - Collaboration in Logistics

#### ❖ GHG footprint done for transportation of Chips

- Highest emissions per ton of chips per km



#### ❖ Collaborated with tiles for Logistics

- Lower environment impact
- Lower costs



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## Example #3

### Collaboration with Competitor

- ❖ Ocean Spray - Cranberry Juice
  - Transporting New Jersey to Florida thro road
- ❖ Tropicana, juice manufacturer
  - Transporting thro rail orange juice in the opposite direction
- ❖ Tropicana & Ocean Spray collaborated
- ❖ Saving:
  - 40% Transportation Cost
  - 65% of GHG emissions





**Trend # 4 . 'Green'**  
**-Collaborate, Collaborate, Collaborate...**

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# Green Buildings

## ❖ Re-defining the way buildings are constructed

### ➤ Tangible benefits

- ❑ 30-40 % of energy savings
- ❑ 40-50% of water savings

### ➤ Intangible benefits

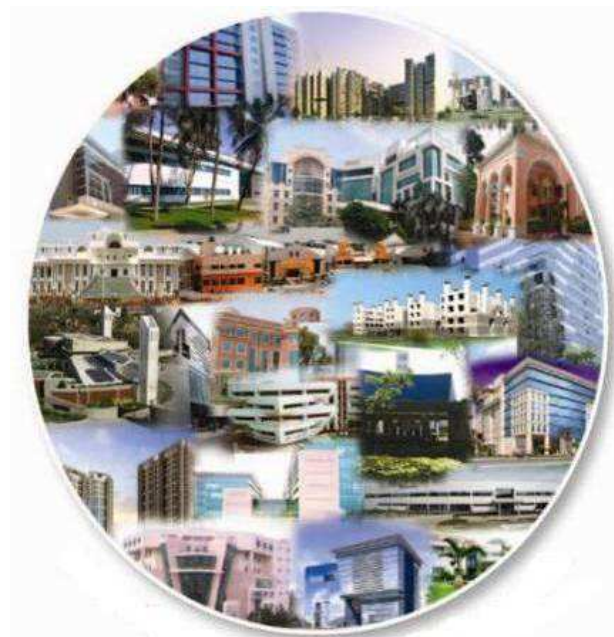
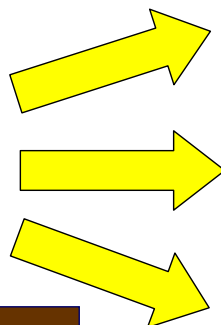
- ❑ Improved air quality
- ❑ Improved productivity
- ❑ Enhanced daylight



## Green Building Movement in India



In 2001,  
1 Green Building  
20,000 sq.ft.



> 3600 Green Buildings, 3.6 billion sq. ft.

## Green Buildings - Infosys

- ❖ All Infosys buildings are green buildings
  - 50% more efficient at no extra capital costs
  - 35% reduction in per capita electricity consumption
  - 25% reduction in per capita water consumption
- ❖ Rs 250 crores / year saved in operation costs
- ❖ Rs 300 crores saved by frugal engineering





## Trend # 5 . 'Green' -Carbon / Water Positive

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## Example # 1

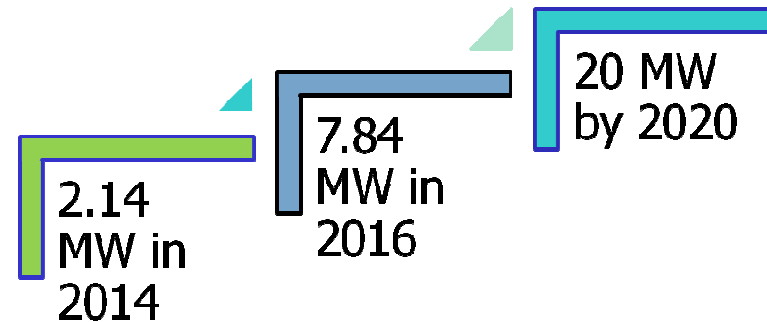
### Delhi International Airport Limited

Objective of becoming the Greenest Airport in the  
Country – 20 MW by 2020



**Space Constraint**

**Safety/Reflection/  
Glare/Noise Study**



## Example #2

### ITC Limited - Carbon, Water positive

- ❖ 'Carbon Positive' - 8 years
  - Sequestering twice the amount of CO<sub>2</sub>, ITC emits
  - 1,42,000 hectares Greened
- ❖ 'Water Positive' - 11 years
  - Two times more Rainwater Harvesting than ITC's net consumption
- ❖ 'Solid Waste Recycling Positive' - 6 years in a row
  - Reusing/Recycling more solid waste than generated

41.2% Energy consumed from renewable sources



58.3% Reduction in specific fresh water intake over 1998-99 in the Specialty Papers Unit at Tribeni



99.80% of waste was recycled in 2012-13

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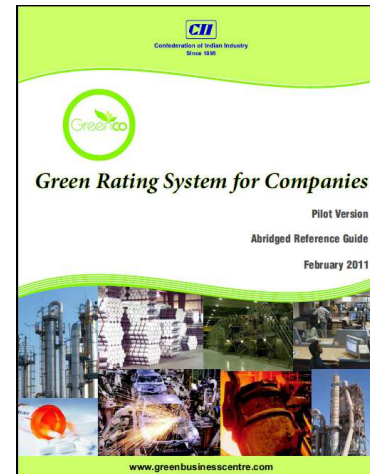
# GreenCo Rating System

## ❖ The system is a framework to

- Define and assess the performance on the green front
  - ❑ How green is the company?
- Holistic
- Monitor and sustain “Green” initiatives
- Guide phased growth

## ❖ Scope

- Manufacturing & Service sector
- Unit / Facility level rating



**First of its kind in the world**

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## 85 GreenCo Rated Companies & More than 200 Companies working on GreenCo



**GreenCo – First 27 companies save Rs 60 crores / year**



# GreenCo

## Intended Nationally Determined Contribution to UNFCCC



**India announces GHG emission intensity reduction target of 33 – 35% of 2005 levels by 2030**

### INDIA'S INTENDED NATIONALLY DETERMINED CONTRIBUTION: WORKING TOWARDS CLIMATE JUSTICE

ॐ द्यौः शान्तिस्तन्माशिशं शान्तिः  
पृथिवी शान्तिरापः शान्तिरोपधपः शान्तिः ।

"Om dyauh shanti asturikam shanti pithivi shanti upadh shanti upadhaya shanti"  
— *Tajvir Vaid 16.17*

*[[Unto Heaven be Peace, Unto the Sky and the Earth be Peace, Peace be unto the  
Water, Unto the Herbs and Trees be Peace]]*

### INTRODUCTION

India has a long history and tradition of harmonious co-existence between man and nature. Shansu beings have regarded Shansu and Bees as part of their family. This is part of our heritage and manifest in our lifestyle and traditional practices. We represent a culture that calls our planet Mother Earth. As our ancient text says, "Keep pure! For the Earth is our mother! And we are her children!" The ancient Indian practice of Yoga, for example, is a system that is aimed at balancing consentment and modify desires, that helps pursue a path of moderation and a sustainable lifestyle. Environmental sustainability, which involves both intra-generational and inter-generational equity, has been the approach of Indians for very long. Much before the climate change debate began, Mahatma Gandhi, regarded as the father of our nation, had said that we should act as "trustees" and use natural resources wisely as it is our moral responsibility to ensure that we bequeath to the future generations a healthy planet.

The desire to improve one's lot has been the primary driving force behind human progress.

- 6) **GreenCo Rating System** is first of its kind in the world which assesses companies on their environmental performance across 10 different parameters to help them develop a roadmap to improve further.



## GreenCo - UNIDO



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## Greening of Supply Chain (SMEs) – Godrej Appliances Division, Shirwal

❖ **20 – 25% Reduction in Resource  
Cost (Energy, Material, Water, etc.)**

❑ **GreenCo Platinum**

- **Shree Ashtavinayak Glass**
- **Khutale Industries**

❑ **GreenCo Gold**

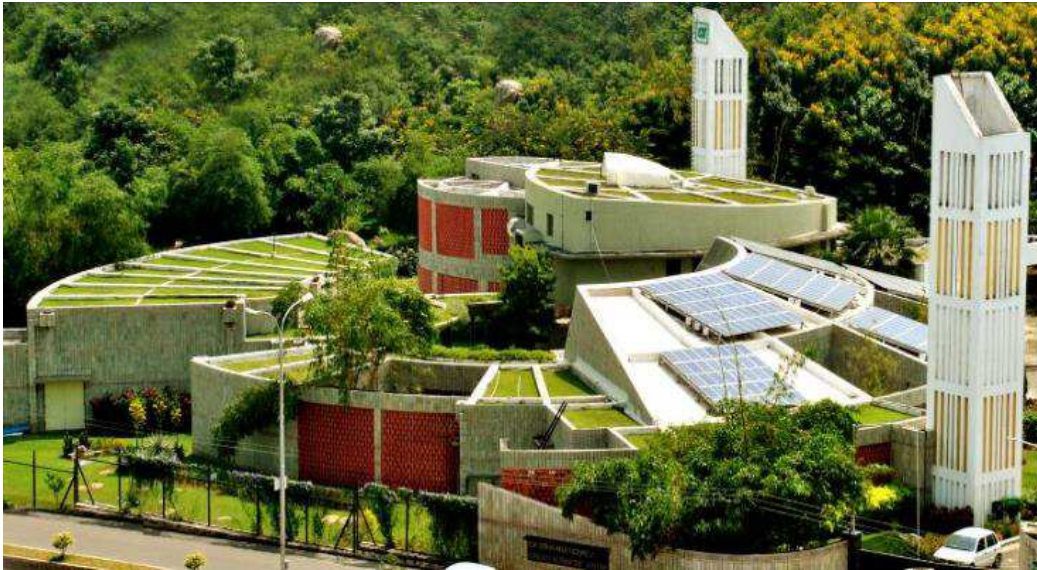
- **Ajay Poly Pvt. Ltd.**



**Saving by SMEs – Rs. 52 Lakhs  
per Annum**



## CII - Sohrabji Godrej Green Business Centre, Hyderabad



### ❖ Vision of CII – Godrej GBC

- Make India one of the Global Leaders in Green Businesses

**Facilitating the Green Business movement in the country**



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*Pycnonotus cafer*



*Euploea core*



*Merops orientalis*



**Thank you**

*Flora & Fauna of CII-Godrej GBC*

*Caralluma fimbriata*



*Rauwolfia serpentina*



*Hybanthus enneaspermus*



*Andrographis paniculata*

