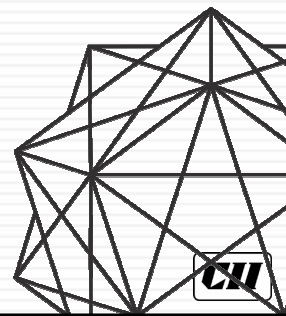


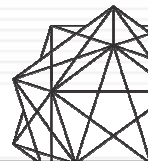
# INDIA GHG PROGRAM

Promoting profitable, sustainable  
and competitive businesses.



## India GHG Program Vision

- **The program envisages a common approach to GHG Management and thereby ensuring strategic benefit from voluntary GHG reduction**
  - **The Program is managed by**
    - World Resource Institute (WRI)
    - The Energy Research Institute (TERI)
    - Confederation of Indian Industry (CII)
- **27 Companies has joined the program as founding members**

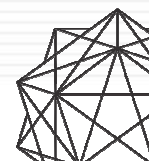




## India GHG Program-Objective

- The Program aims to create
  - GHG Movement in the country
  - Platform for information exchange, best practices, experience in GHG management, etc.
  - International experience from other similar programs globally
  - Demonstrating Business Case of GHG management

Promoting profitable, sustainable and competitive businesses.

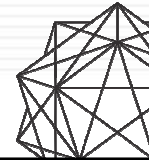


## India GHG Program -Status

Particulars	Present	Target (2017)
GHG Managed (Million Tons of CO <sub>2</sub> )	~265 <sup>1</sup>	500
Members	27	250
Members reporting in public domain	~11	-
Capacity building	110	1000

The number is calculated based on 11 members publicly reporting on various platform

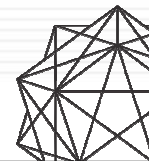
Promoting profitable, sustainable and competitive businesses.



## On-Going Activities

- **Capacity Building Programs**
  - Variety of Issues covering GHG management
  - Webinars – national & international speakers
  - In-plant Training
- **Working Groups**
  - Harmonisation and Reporting
  - Policy Engagement
  - Emission Factor Working Groups
    - Road, Rail & Air emission factors

Promoting profitable, sustainable and competitive businesses.



## TRENDS IN GHG MITIGATION



## GHG Inventorisation study

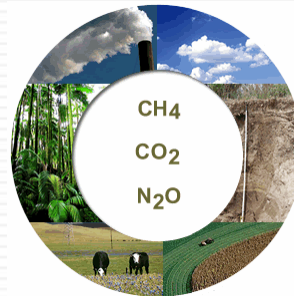
### Steps:

1. GHG Accounting
2. GHG Reporting
3. Target setting
4. Benchmarking
5. Extending sphere of influence



## GHG Accounting

- Quantification of total Green House Gas (GHG) Emissions arising from Business activity
- The six greenhouse gases covered by the Kyoto Protocol
  - Carbon Dioxide CO<sub>2</sub>
  - Methane CH<sub>4</sub>
  - Nitrous Oxide N<sub>2</sub>O
  - Perfluoro carbons PFC
  - Hydro Fluoro carbons HFC
  - Sulphur Hexa Fluoride SF<sub>6</sub>



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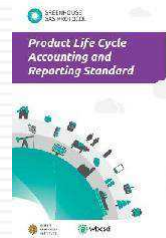
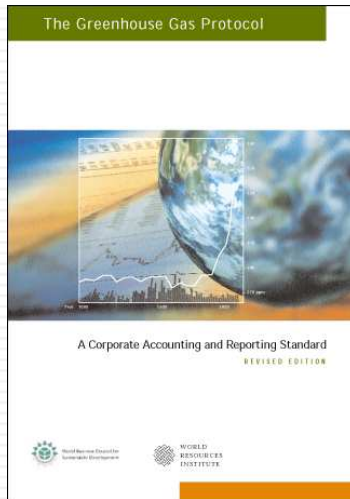
## Why GHG Accounting?

- ❖ Proactive approach to establish GHG baseline and reduction
  - Increasingly popular in several countries
  - Increased focus from businesses
  - Mandatory in a few sectors
    - Telecom, Aviation, etc
    - BSE Carbonex
  - Evaluation criteria while choosing business partners / suppliers

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# How to account GHG?

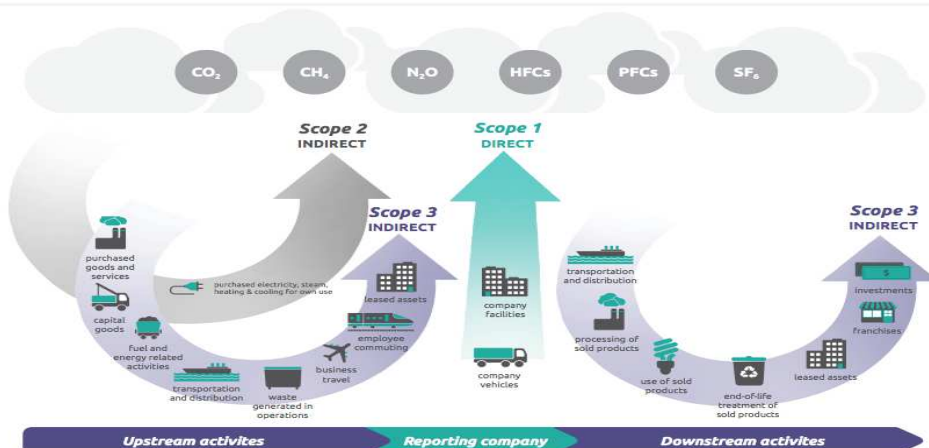


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# GHG Accounting

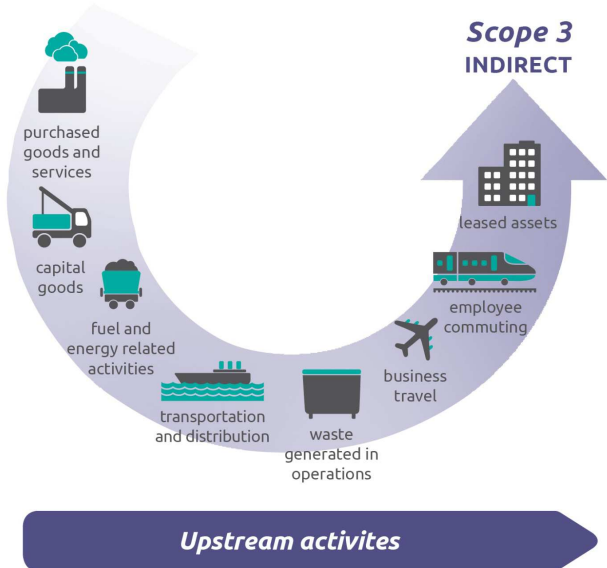
## Three Scopes – GHG Protocol



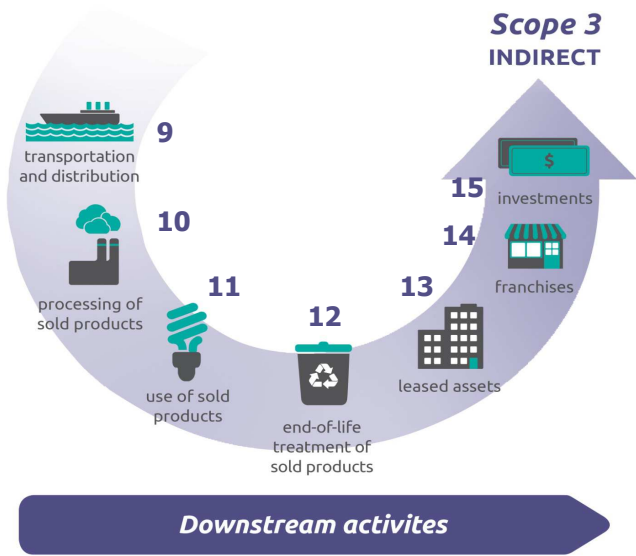
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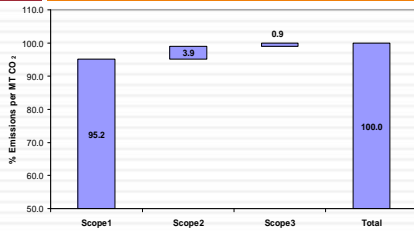
# Scope 3 Standard - Upstream



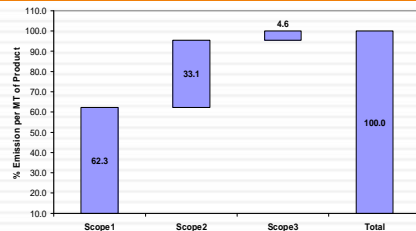
# Scope 3 Standard - Downstream



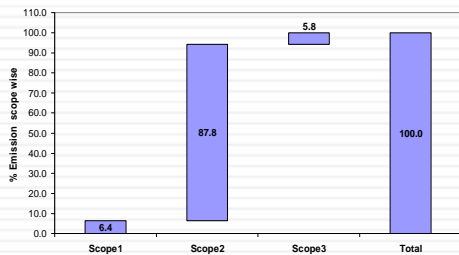
## Scope wise Emissions in Sectors



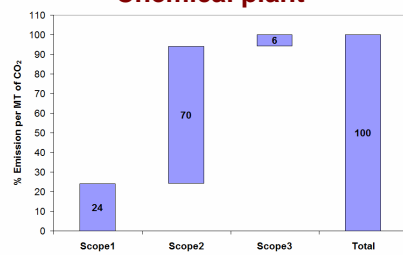
**Cement**



**Chemical plant**



**Service sector**



**Engineering**

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## Emission Analysis

□ GHG Emission intensity comparison

▣ T of CO<sub>2</sub> per T of Product (or) Rs. Revenue

Sl. No	Sector	Emission Intensity (Kg of CO <sub>2</sub> /Rs. Revenue)
1.	IT Sector	0.05 – 0.06
2.	Cement	0.14 – 0.16
3.	Steel	0.57 – 0.6
4.	Power Sector	0.15 – 0.16

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## Levels of Inventorisation

- **Corporate level**
  - ▣ Overall emission levels including all production facilities and corporate office
- **Plant level**
  - ▣ Specific plant and its associated operation
- **Product Level**
  - ▣ Emissions through the lifecycle of a manufactured product
  - ▣ Product labeling / EPD etc.

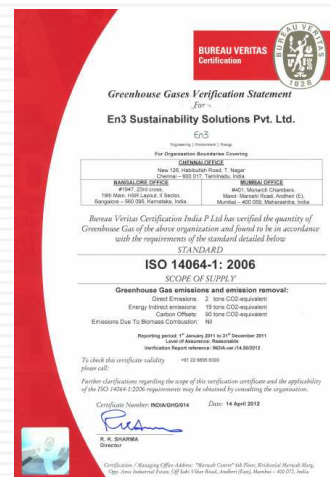
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## Carbon Footprint Reporting

### Various options of public reporting

- Internal measurement, estimation & reporting
- Validation & verification
- ISO 14064, CDP, GRI reporting



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## Target setting

### Global Companies Target Setting:

Organisation	Sector	Target Set	Status
BMW Group <sup>7</sup>	Automobile	At least 25% reduction by 2020 (baseline year 2008)	7% reduced (up to 2012)
L'oreal <sup>8</sup>	FMCG	Reduce CO <sub>2</sub> emissions at plants and distribution centers by 60 % in absolute terms (baseline year 2005).	38% by 2012
Dupont <sup>9</sup>	Multi Products	15% reduction from operations by 2015 (baseline year 2004)	25% reduced (up to 2013)

### Indian Companies Target Setting:

Organisation	Sector	Target Set	Status
Wipro <sup>10</sup>	IT service	Reduce GHG intensity to 2.5 tons per employee by 2015 (baseline year 2008-09)	Reached 2.95 tons per employee (during 2012-13)
Mahindra Group <sup>11</sup>	Multi Service	5% reduction by 2013-14 (baseline year 2008-09)	17.83% achieved (up to 2013)
Hindustan Unilever Limited <sup>12</sup>	FMCG	40% reduction in emissions by 2020, from energy used per tonne of production. (baseline year 2008)	31.5% achieved (up to 2012)

\* From fuel consumption only



## Business Case of GHG Accounting



Cisco-"Telepresence"  
5 Bn USD- 2013

ITC- Carbon positive  
Rs. 276 Mn per annum



Nokia  
5000 trucks reduced  
100 M € saving from  
material and transport



Godrej Appliances, Shirwal  
Rs 1.6 Mn per annum

Wipro - \$500 Mn revenue  
expected



## Benchmarking

- Internal & External
- National & Global
  
- New parameter for benchmarking
  - Emission intensity being used to estimate the ecological sustainability of organization compared with other business establishments

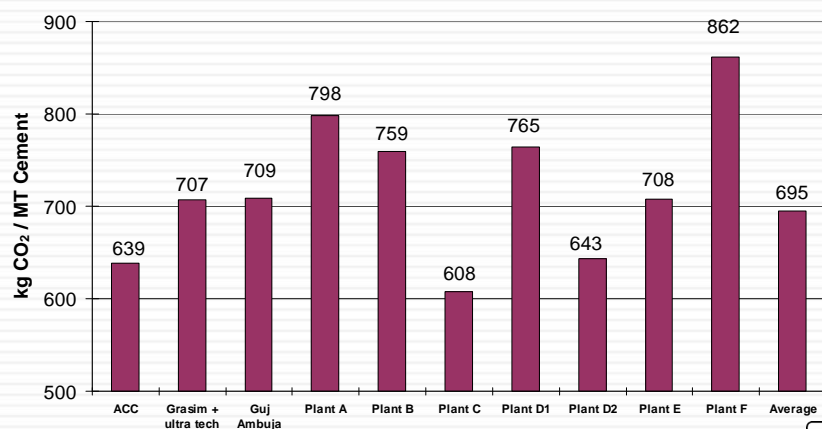
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## GHG Emission Benchmarking - National

- Cement (2011)

Emission intensity levels - Existing

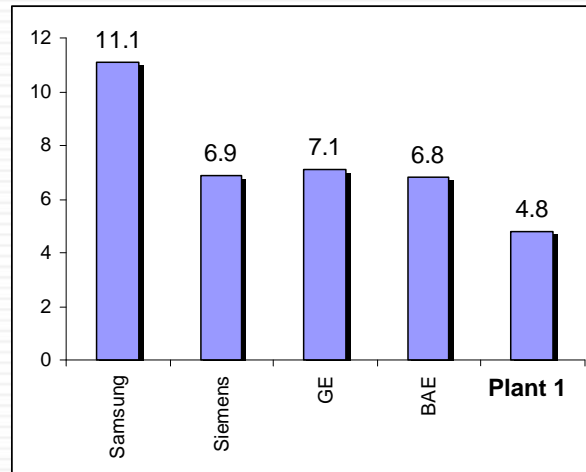


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## GHG Emission Benchmarking - Global

- Electronics : Study at Plant 1 Emission intensity in 2010-11 (MT of CO<sub>2</sub> Eq. /Crore Turnover)



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## Footprint reduction based on targets

Pool	Manufacturer	Average emissions (g CO <sub>2</sub> /km)	Target (g CO <sub>2</sub> /km)	Distance to target (g CO <sub>2</sub> /km)
	BMW Group	124	139	- 15
	Daimler AG	124	140	- 16
	Fiat Group Automobiles S.p.A	111	122	- 11
	Ford-Werke GmbH	116	128	- 11
	Mitsubishi Motors	122	135	- 13
	General Motors	120	133	- 14
	Honda Motor Europe Ltd	125	131	- 6.1
	Pool Renault	109	127	- 17
	Suzuki	116	120	- 4.5
	Toyota-Daihatsu Group	104	128	- 24
	Tata Motors Ltd, Jaguar Cars Ltd, Land Rover	163	178	- 15
	VW Group PC	120	132	- 12

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## Extending to the Supply Chain

- Expanding sphere of influence
  - Establishing Carbon footprint for suppliers
  - Supplier sustainability scorecards
- Examples
  - Hero Moto Corp - Green Vendor Development Program
  - Tata Motors - Vendor engagement
  - Hyundai Motors – Emission accounting of suppliers

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## Hyundai Motors Co.

Category	Total CO <sub>2</sub> emissions in 2008	Total CO <sub>2</sub> emissions in 2009	Total CO <sub>2</sub> emission reduction (2008-2009)
Supplier A	18,294	19,418	-1,124
Supplier B	2,218	1,722	496
Supplier C	35,483	31,652	3,831
Supplier D	100,197	91,756	8,441
Supplier E	12,820	12,334	486
Supplier F	16,286	14,613	1,673
Supplier G	19,823	18,386	1,437
Supplier H	26,858	24,502	2,356
Supplier I	13,934	12,399	1,535
Supplier J	1,619	2,243	-624
Supplier K	798	1,511	-713
Supplier L	4,075	4,396	321
Supplier M	2,858	3,275	-417
Supplier N	29,349	29,916	-567
Supplier O	3,865	4,167	-302
Total	288,477	272,290	16,187

Note: Unit, ton

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# Green Procurement Policy

recognizes that purchasing practices can have a profound impact on the environment. Purchasing environmentally will help create and sustain markets for products and technologies that reduce waste, conserve resources, prevent pollution, and protect worker health. has already established itself as a leader in purchasing, and we are committed to continued growth in this area. Please department adheres to the following policies and plan your purchases environ

- I. Purchase "environmentally friendly" products which include one of the following attributes:
- A. High recycled post-consumer content
  - B. Recyclability
  - C. Durability/re-usability
  - D. Reduced packaging
  - E. Decreased use of toxic chemicals in manufacturing (e.g., chlorine, C

include the following criteria in the selection of vendors:

- A. Commitment to supply and increase availability of environmentally sound products
- B. Willingness to urge their suppliers to improve their products and packaging to meet minimum standards
- C. Flexibility in reducing packaging
- D. Commitment to environmentally sound practices in manufacturing (pollution, toxic substances, employee safety)

that the cost of an environmentally preferred product exceeds that of a standard product, call at ext. 4-3470 for assistance, before placing an order.

Post internal communication and education about environmental purchasing practices which will include, but not be limited to:

- A. Purchasing choices, volume and pricing updates to executive management
- B. Education and information to studio employees and purchasing staff on company purchasing practices (e.g. instruction, newsletters, product labels)
- C. The inclusion of environmental criteria in all bid processes

- V. Require construction and demolition contractors to include in the bid process measures for salvaging and recycling of construction and demolition (C&D) waste, handling of solid and hazardous waste, and tonnage reports. In addition, contracts will require that recycled and non-toxic construction materials, as well as energy efficiency features, be incorporated as bid alternates in contracts for new construction and renovation projects.

printed on 20% post-consumer recycled paper



Flexibility in reducing packaging

Environmentally sound practices in manufacturing

Purchase environment friendly products which include-  
High recycled post consumer content  
Recyclability  
Reduced packaging  
Decreased use of toxic chemicals in manufacturing

Include the following criteria in the selection of vendors-  
Commitment to supply and increase availability of environment friendly products

## To Sum up

### ❖ GHG Accounting & Reporting

- ▣ Increasing national & global focus
- ▣ Voluntary / Mandatory
- ▣ Customer / stakeholder demand

### ❖ Next steps

- ▣ Completing inventory in all aspects
- ▣ Target setting
- ▣ Benchmarking
- ▣ Extending Sphere of Influence

**India GHG Program – Glad to extend all possible assistance**





## Thank you

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