

Green Rating Project

**Benchmarking environment
performance of Indian industry**



**Chandra Bhushan,
Associate Director**

**Centre for Science and Environment
New Delhi**



Background

- **Environmental performance benchmarking + Public disclosure**
- **Create reputational incentive for good environment performance**
- **Push poor performers to improve through public pressure**



GRP's approach

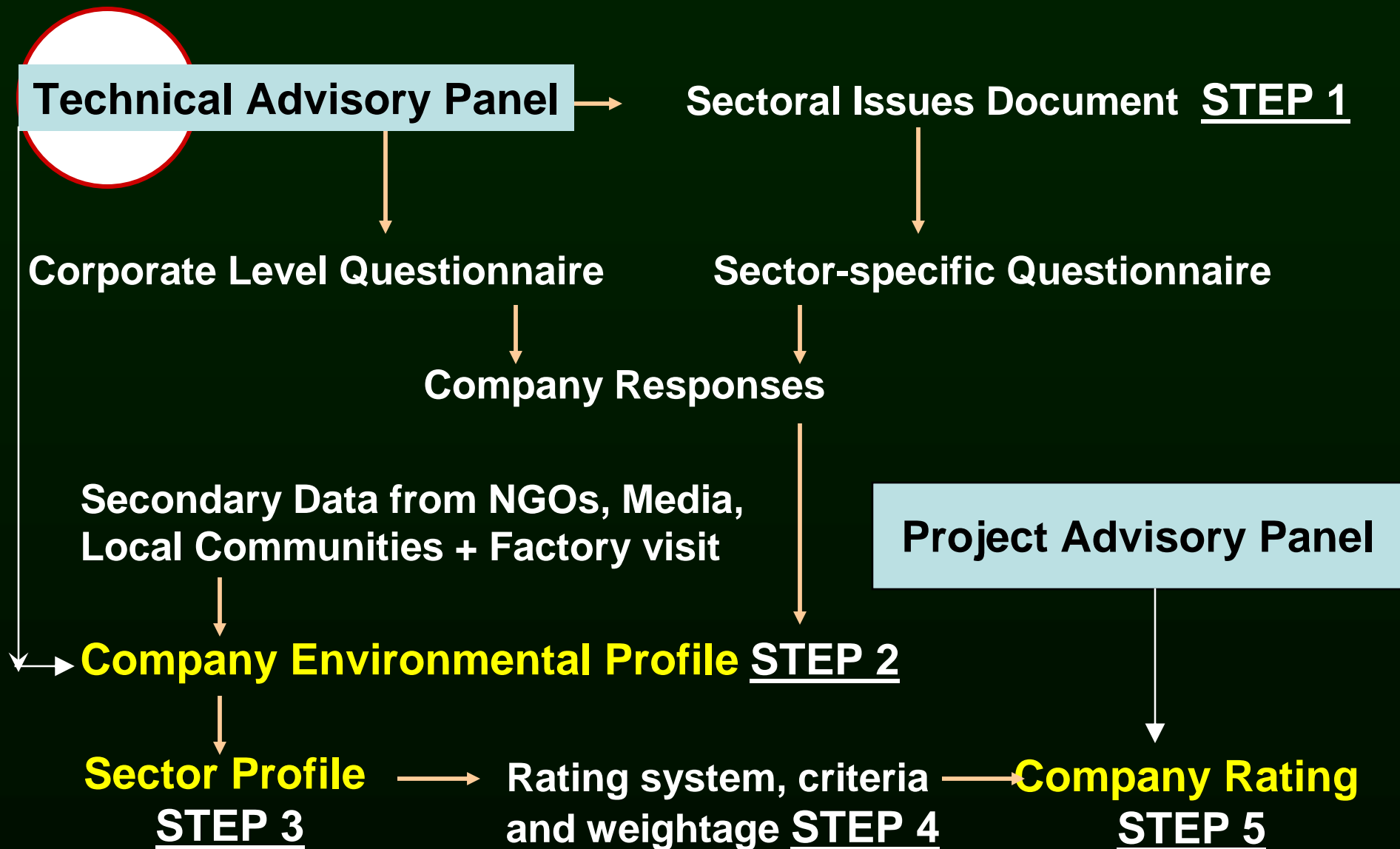
- **Voluntary data disclosure by companies**
- **Survey production plant to doubly ensure the credibility of information**
- **Put focus on the major Indian companies on the stock market – reputation incentive/ disincentive**
- **Include both companies that offer to participate and refuse to participate (based on secondary data)**



Institutional structure

- **Project Advisory Panel:** Includes eminent persons from industry, government, politics, academia, research institutions.
- Dr. Manmohan Singh – ex-Chairperson and Dr.M.S.Swaminathan current Chairperson.
- **Technical Advisory Panel:** Experts from industry, research and academia
- **Green Inspectors:** Network of volunteers trained to undertake inspection of plants.
- **Green Rating Team at CSE**

5 steps to Green Rating





Rating methodology

- Uses Life Cycle Analysis (LCA) to rate the actual performance of companies
- Considers stakeholders perception (local community, NGOs, regulators, media etc) as an integral part of the rating assessment



The Ranking Scale

● Fives Leaves Award

- Above 75% — 5 Leaves award
- 50% to 75% — 4 Leaves award
- 35% to 49.9 % — 3 Leaves award
- 25% to 34.9 % — 2 Leaves award
- 15% to 24.9 % — 1 Leaf award
- Less than 15% — No award





GRP's Progress

- **Rated 4 industrial sectors so far (5 assessed):**
 - Pulp and paper – twice
 - Chlor-alkali
 - Automobile
 - Cement
 - Mining – assessed not rated (State of India's environment report on mining)
- **Now: Rating top 200 Indian companies from 18 sectors on energy, GHG emissions & water**



GRP performance

- Introduced transparency
 - Pulp and paper sector – 100% - 1st phase & 90%; 2nd phase voluntary
 - Automobile sector – 90% voluntary participation
 - Chlor-alkali sector – 93% voluntary participation
 - Cement sector – 95% voluntary participation

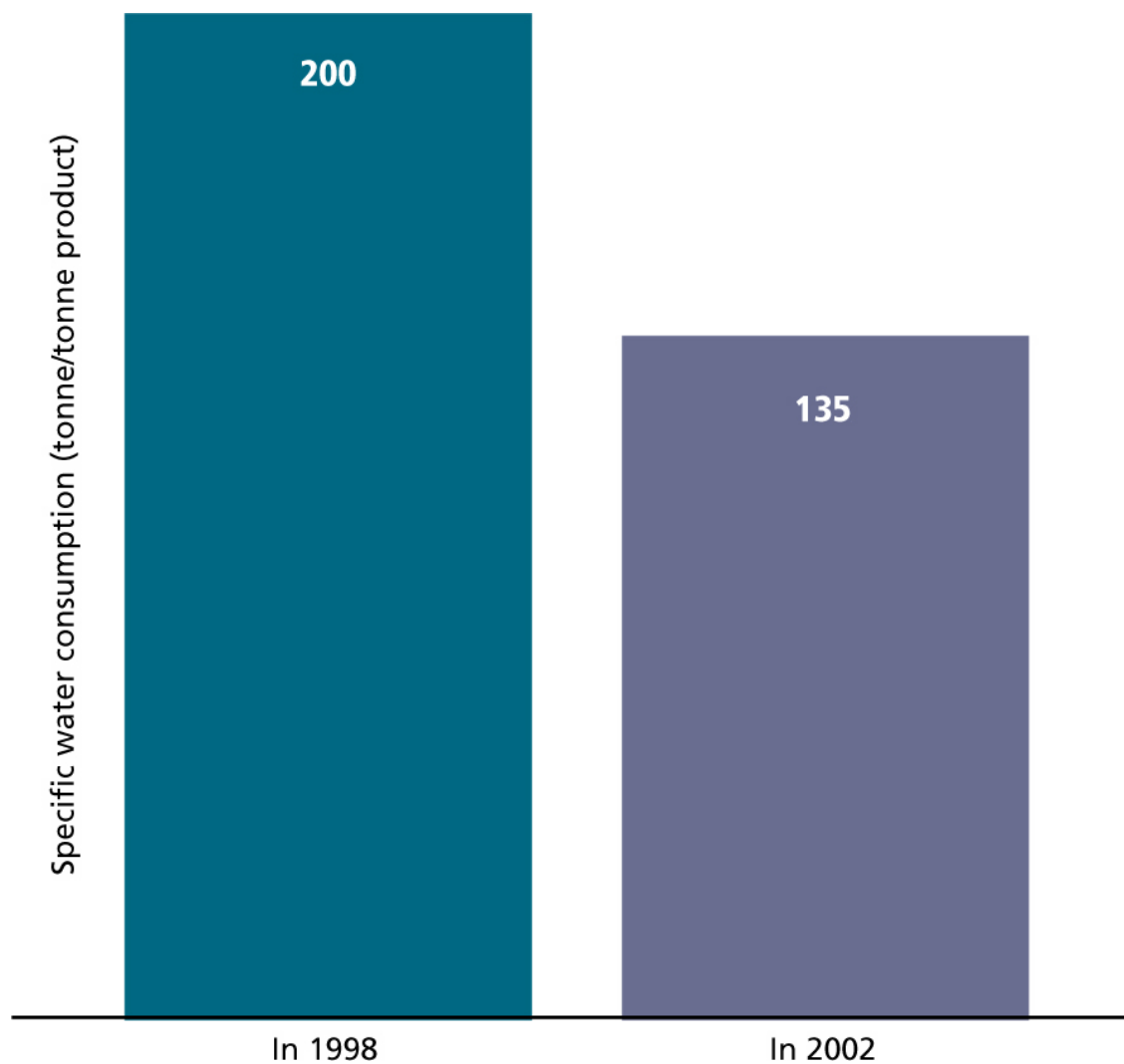


GRP performance

- **Multiple uses and impacts**
 - Introduction of stricter and rational standards for industrial sectors
 - Changed regulations on mercury pollution from chlor-alkali industry
 - Govt. incentivising change to membrane cell
 - Judiciary uses company profiles
 - Local community uses the data to push for change
 - Used in AGM
- **Improvements in the environment performance of companies**

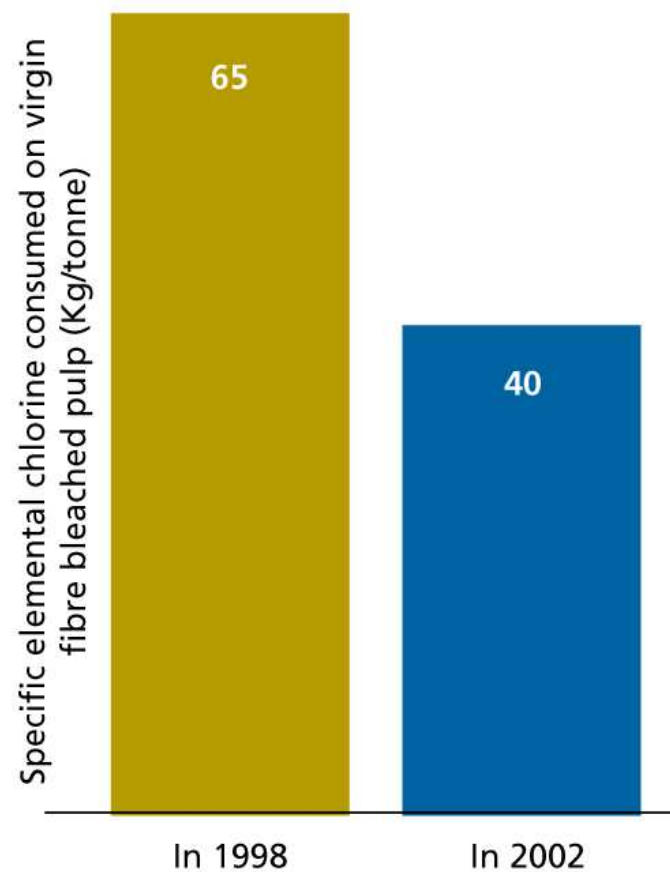


Reduction in water use





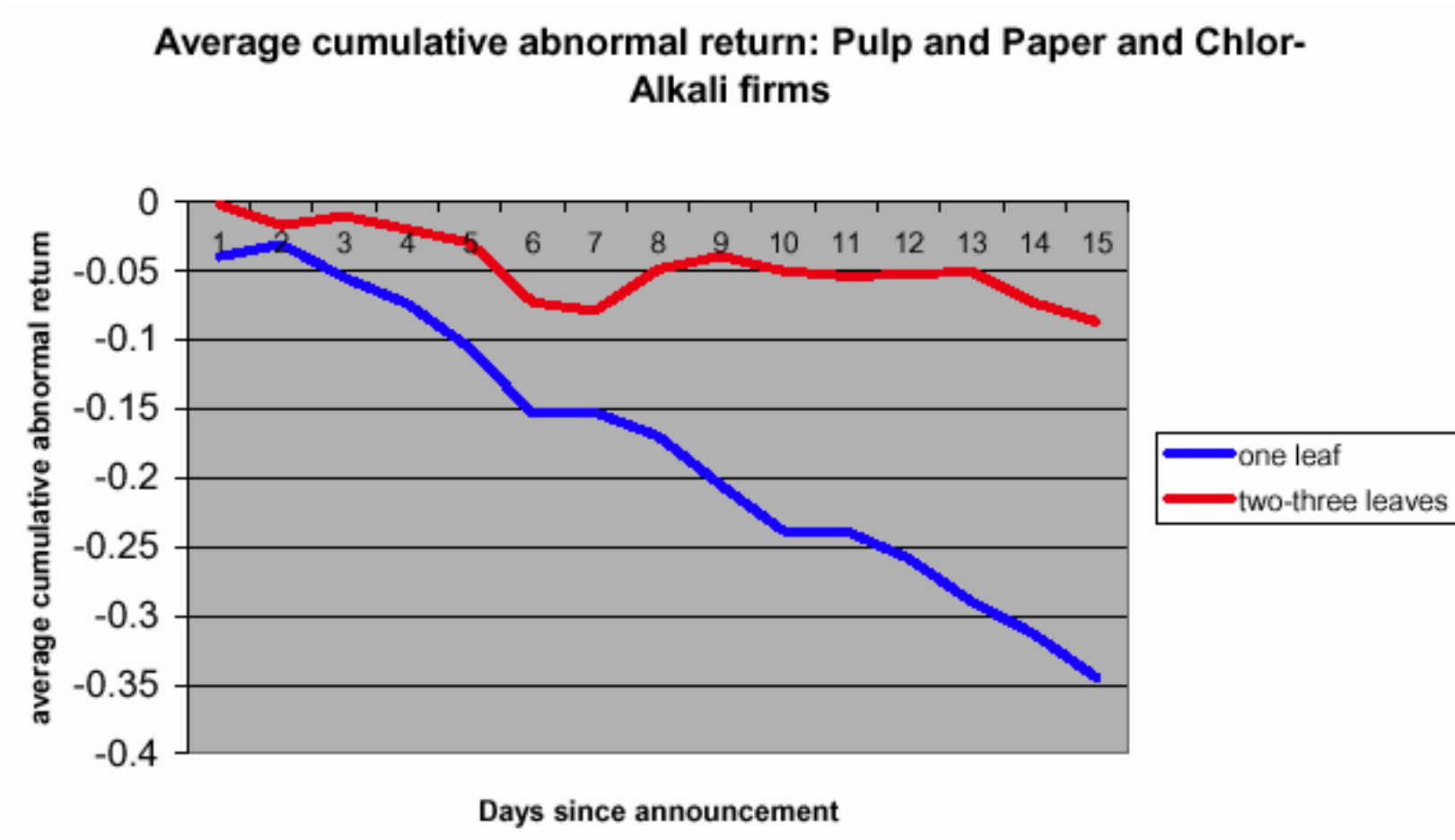
Reduction in chlorine use





GRP performance

- Influences stock market





GRP

- **Working and promoting democracy – system of checks and balances outside the government**

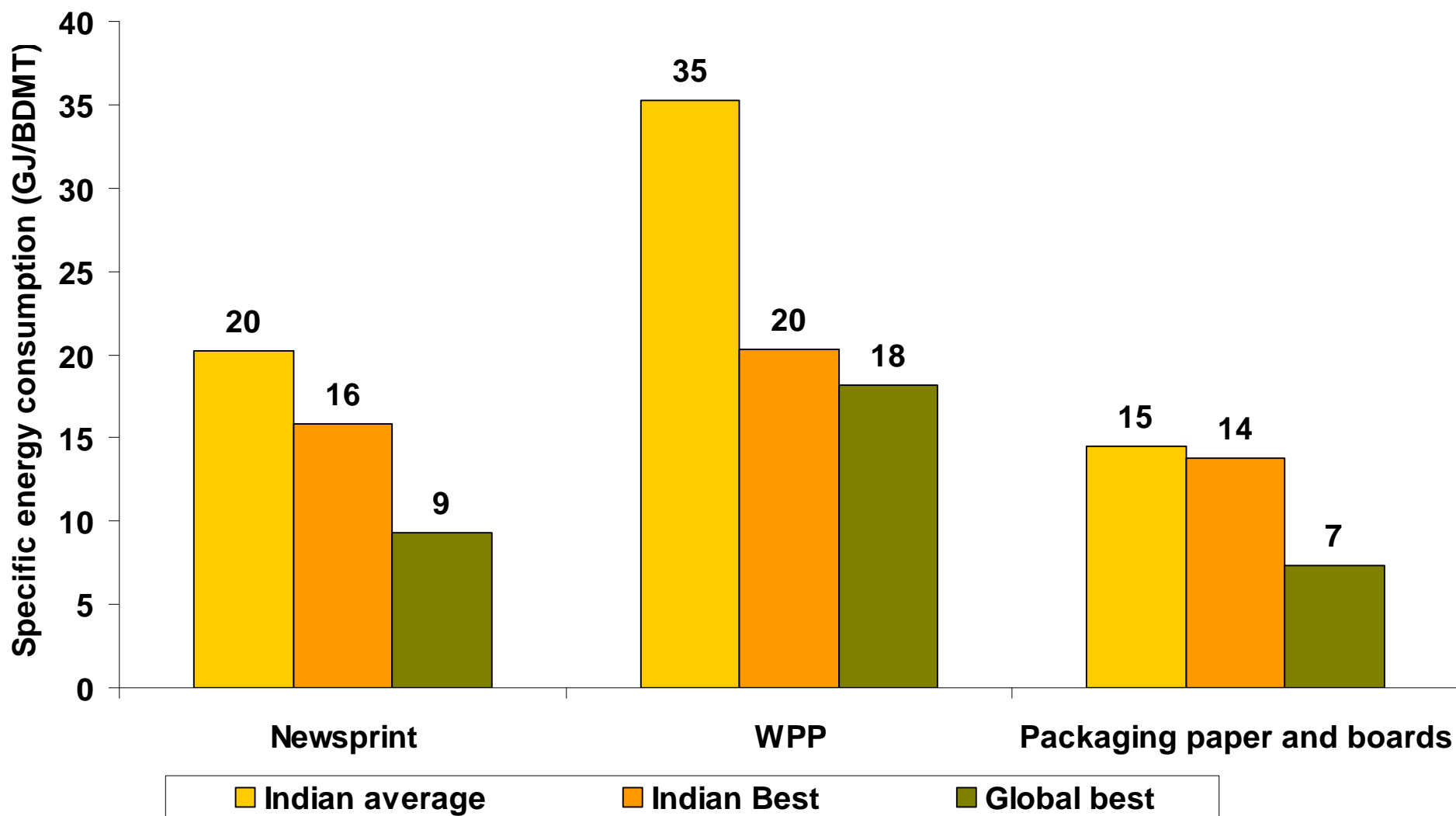


Energy & GHG Emissions

- **Nuanced picture – benchmarking with global best practices**
 - Vintage/ technology
 - Size and structure of industry
 - Raw material and fuel quality and mix
 - Product mix



Pulp and paper sector





Pulp and paper sector

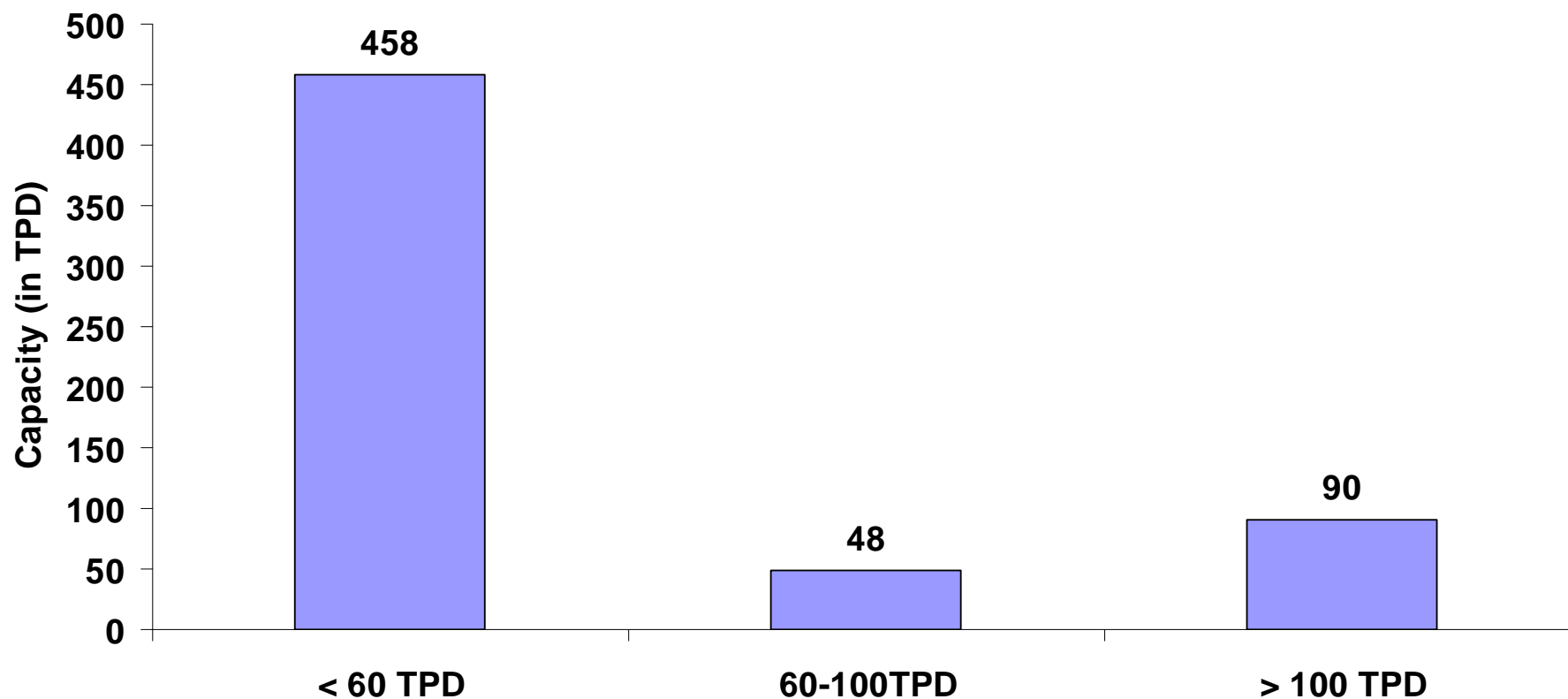
Raw material mix





Pulp and paper sector

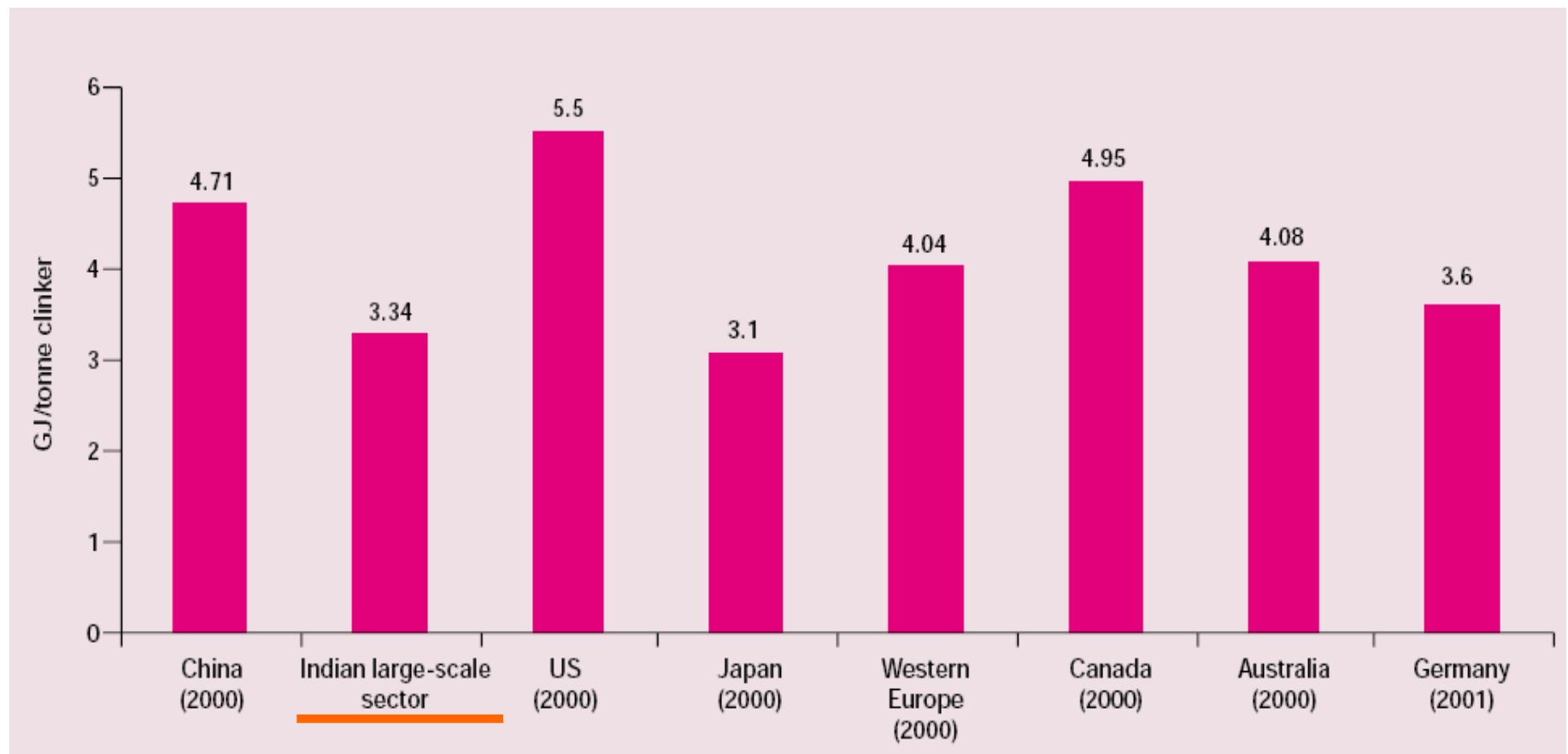
Capacity classification
(8.5 million MT)





Cement sector

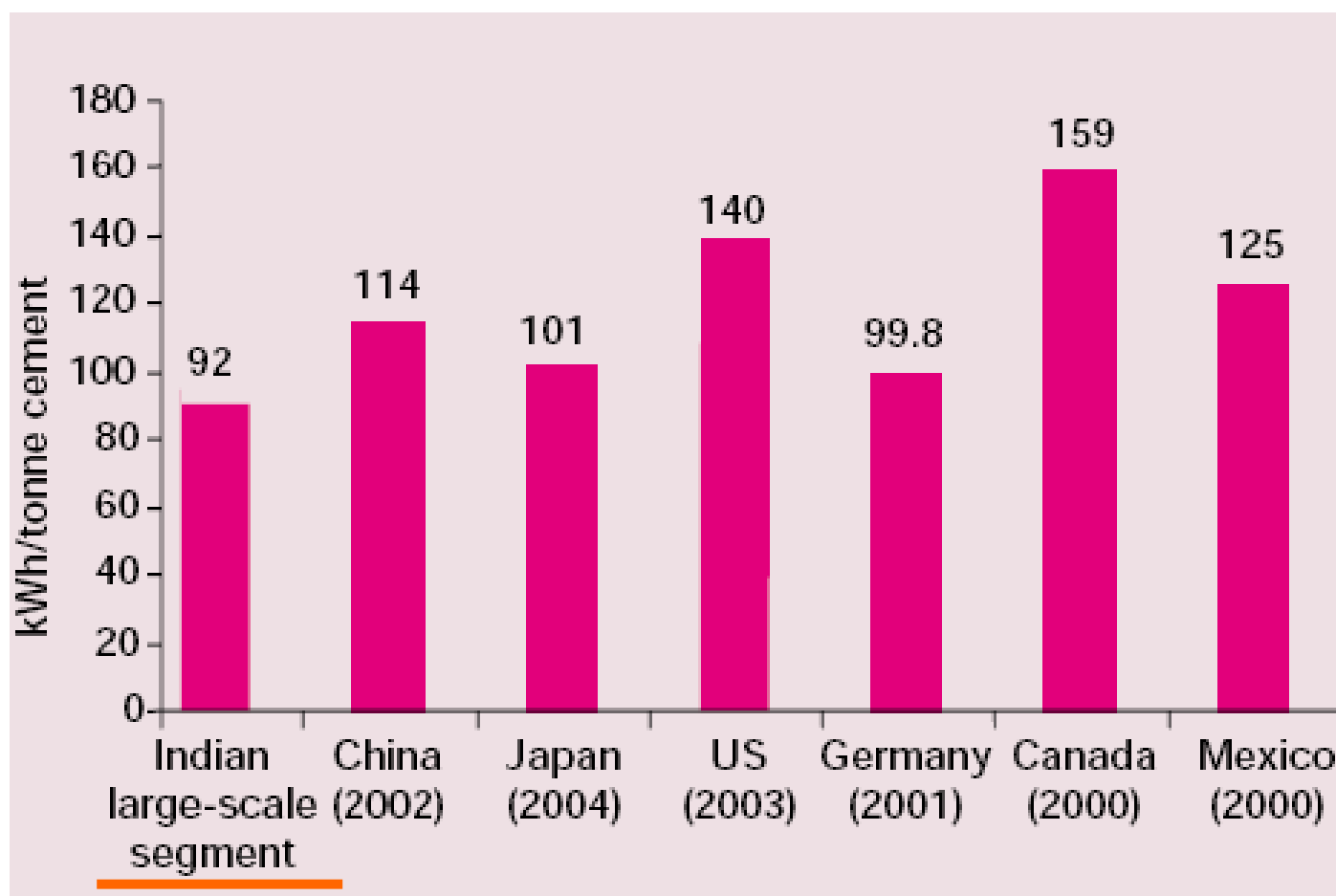
SPECIFIC THERMAL ENERGY CONSUMPTION





Cement sector

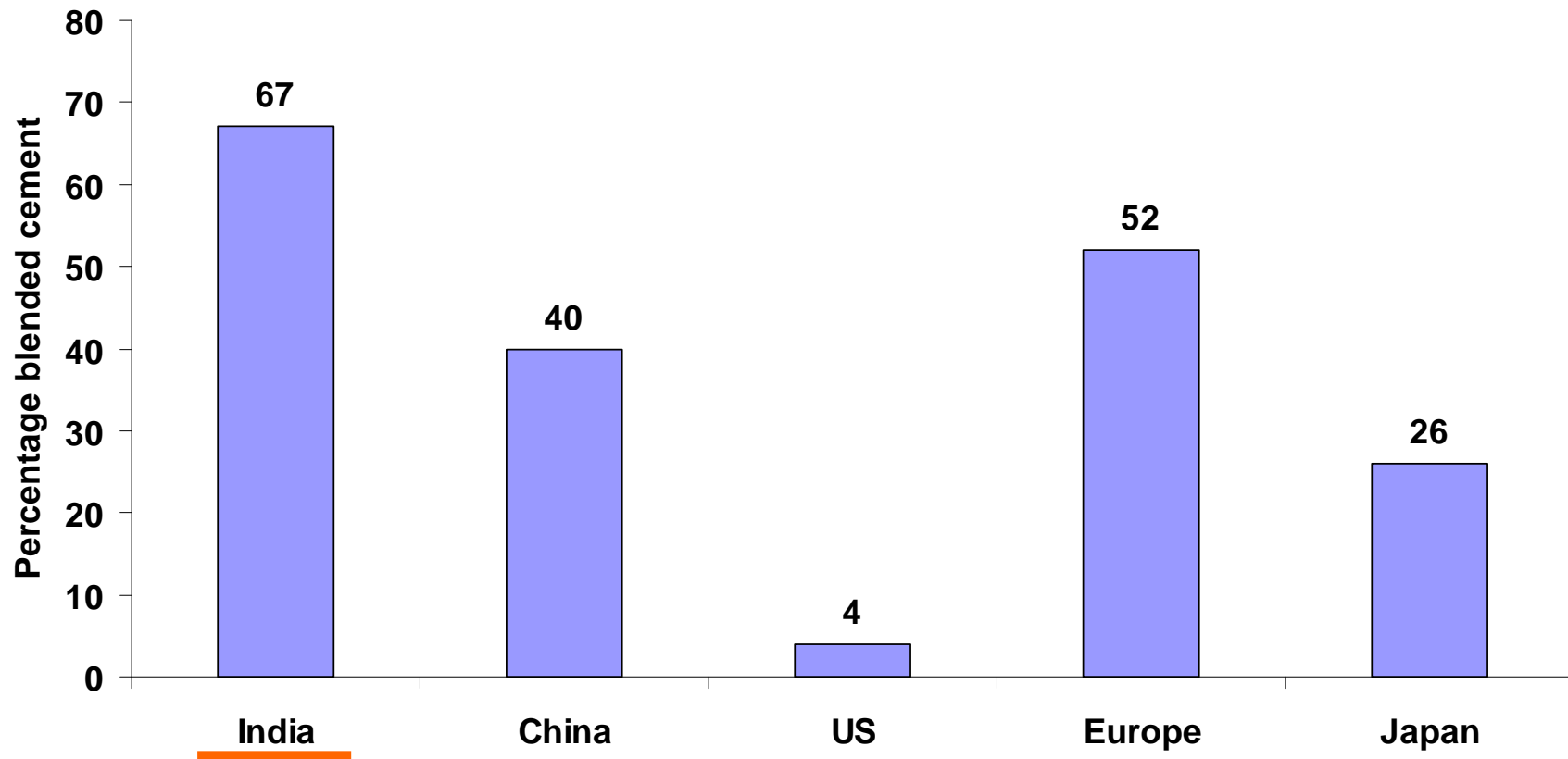
SPECIFIC POWER CONSUMPTION





Cement sector

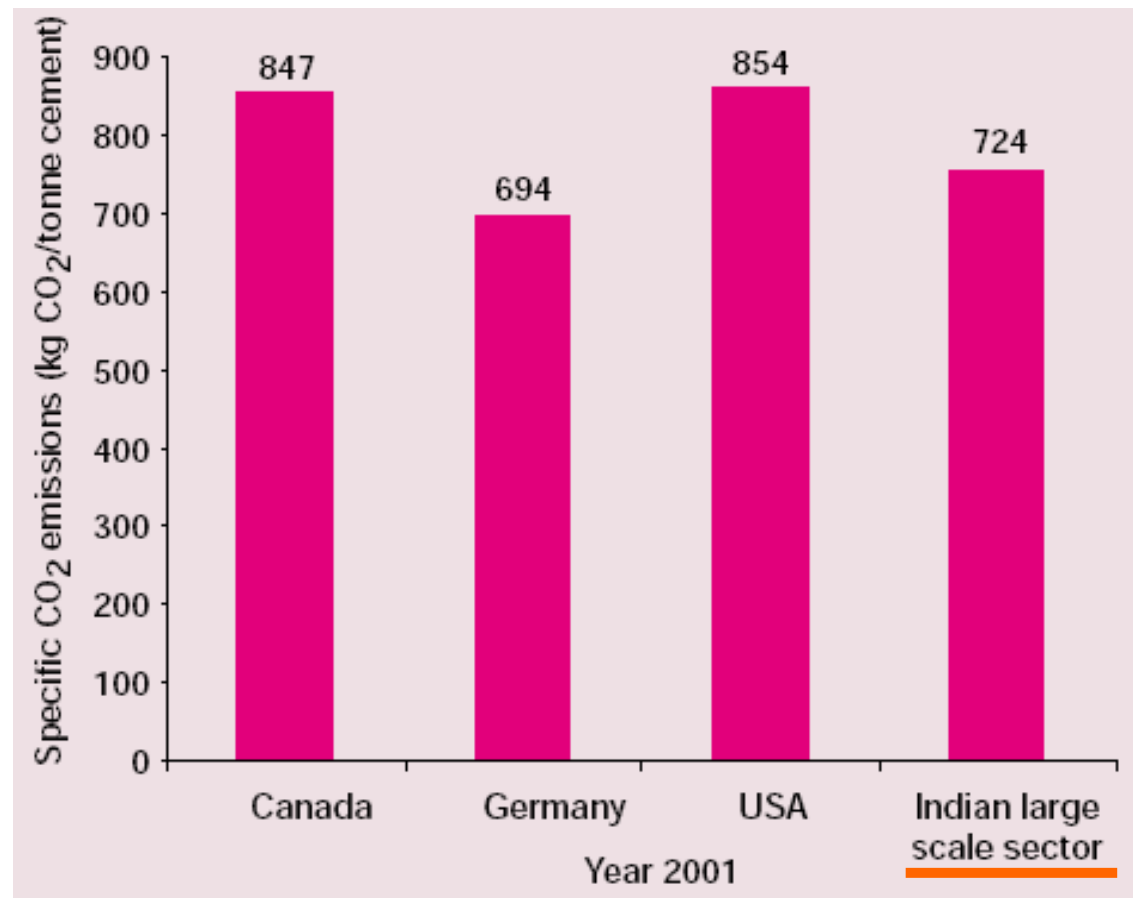
Market share of blended cement





Cement sector

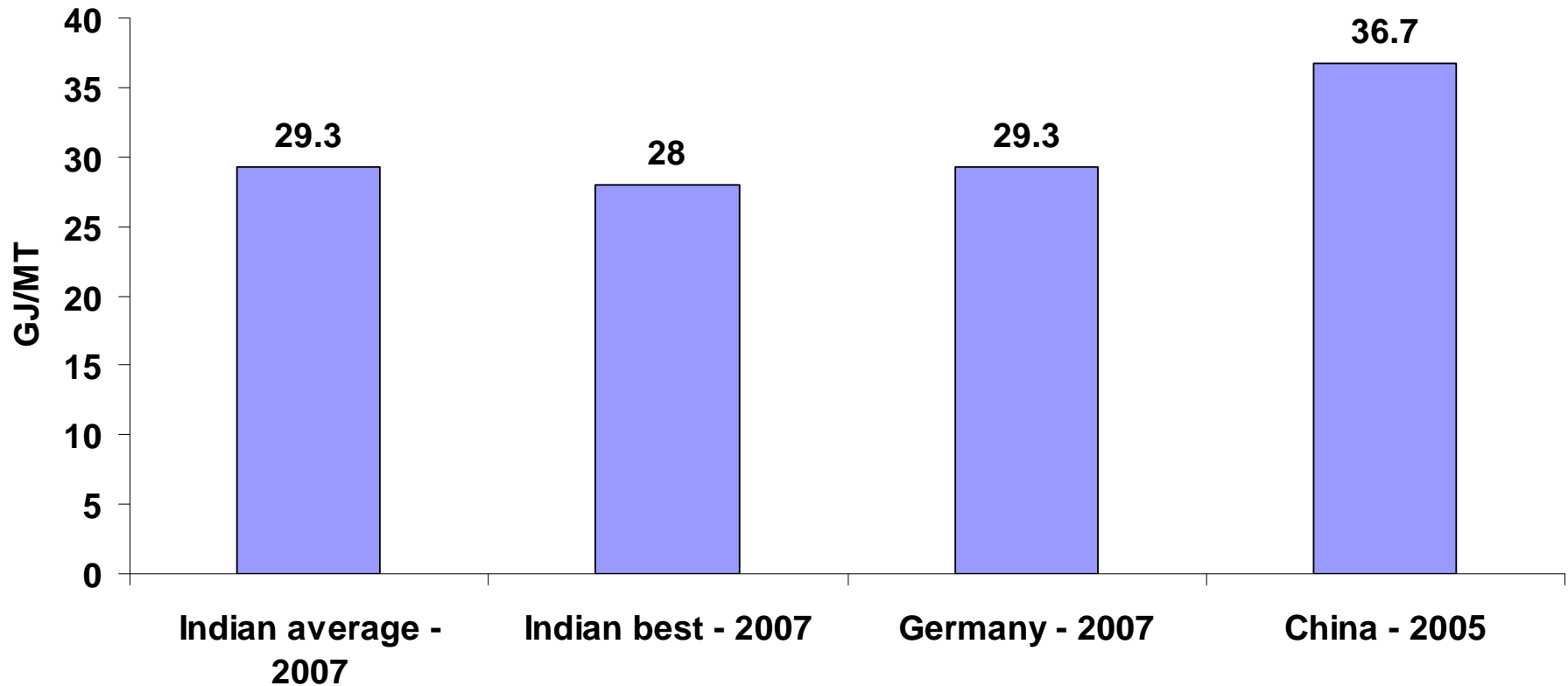
BENCHMARKING CO₂ EMISSIONS





Fertilizer sector

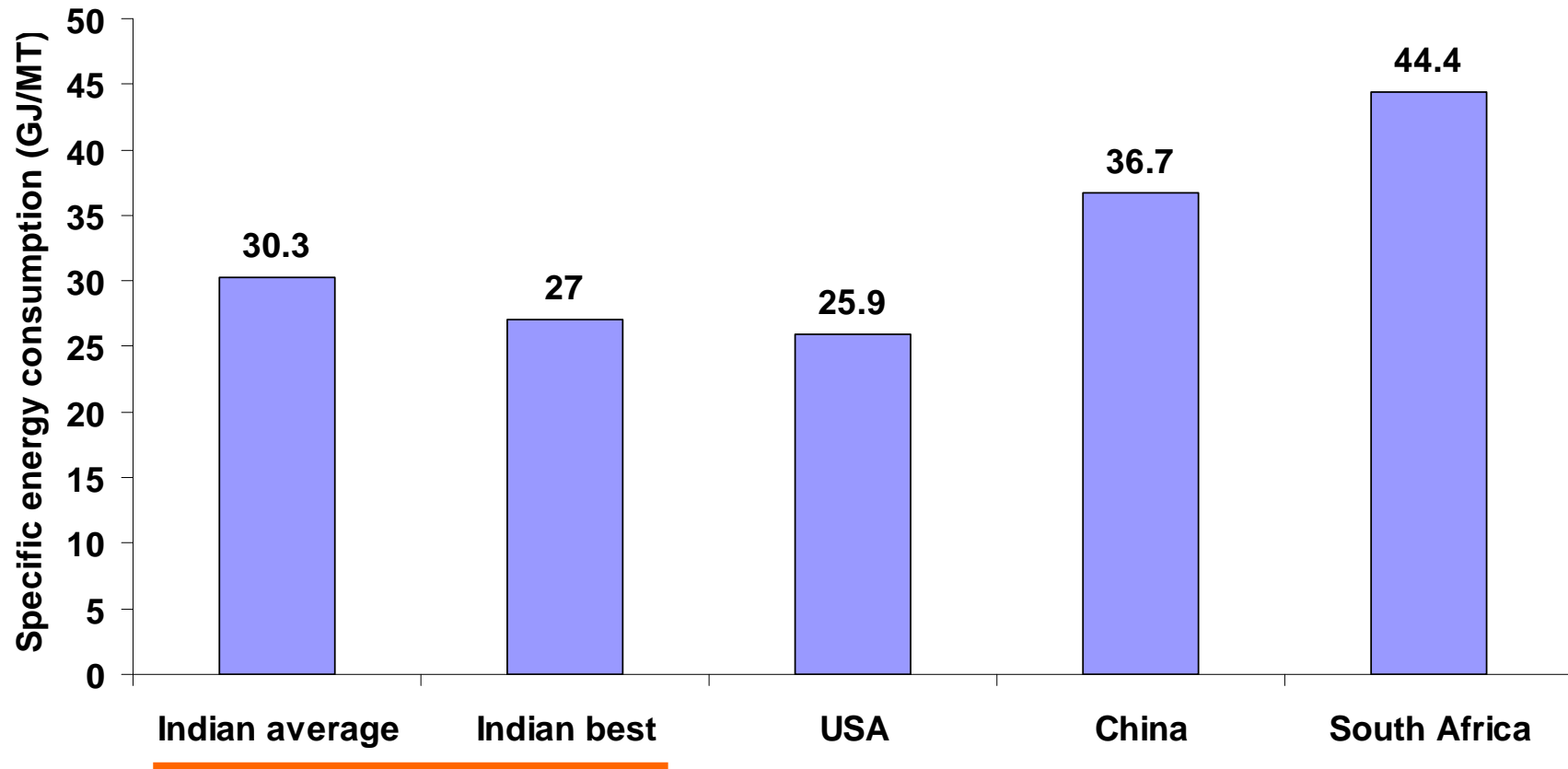
Specific primary energy consumption for ammonia production





Iron & steel sector

Primary energy consumption for crude steel production



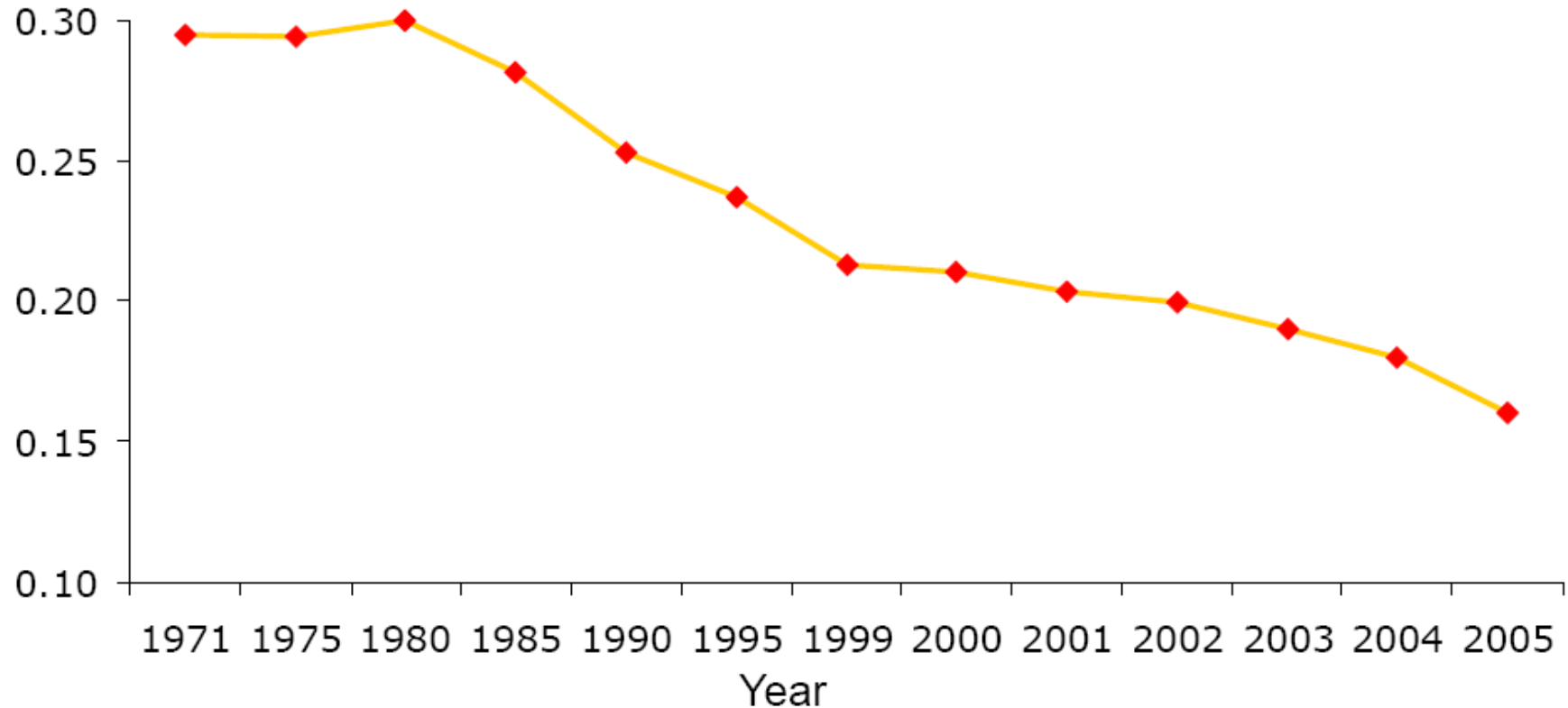


India's energy intensity

Historical record of India's energy intensity

Energy intensity of GDP (kgoe/\$ 2000 PPP) based on IEA data

TPES (kgoe)/GDP (\$2000 PPP)

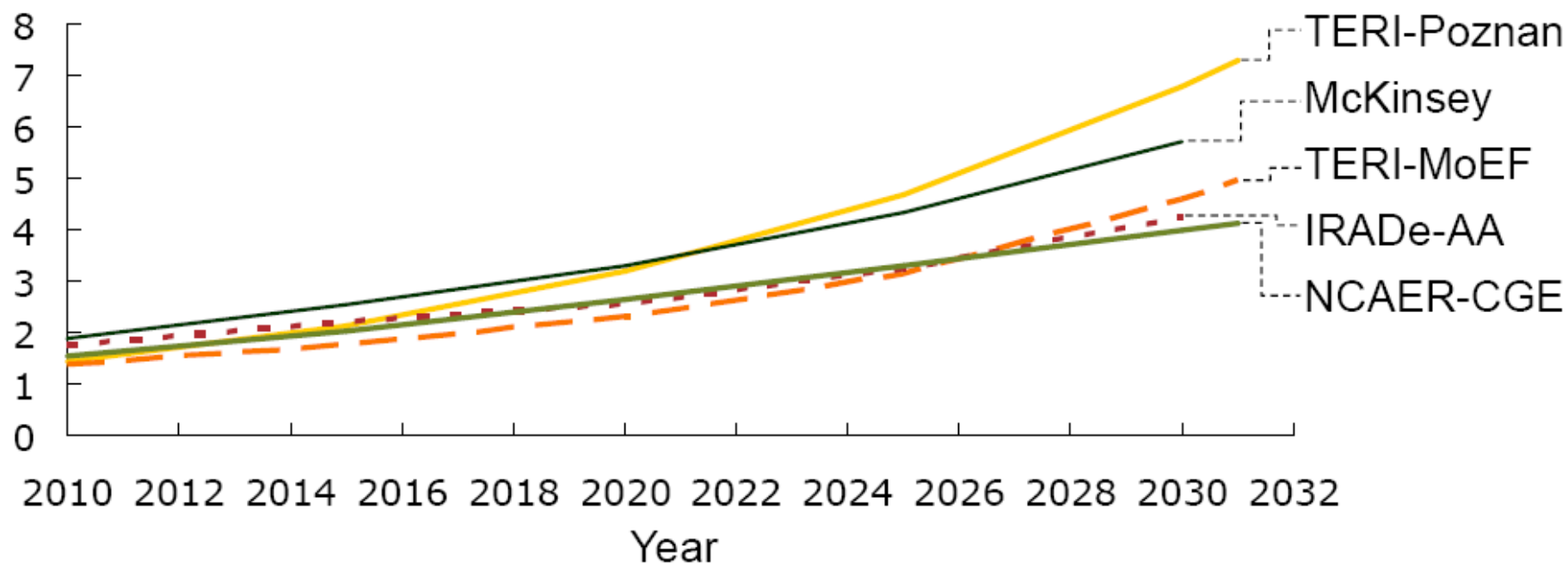




India's projected emissions 2030

Aggregate GHG emissions projections for India from 5 studies in Illustrative Scenarios (2010-2030)

Total GHG emissions, billion tons CO₂e

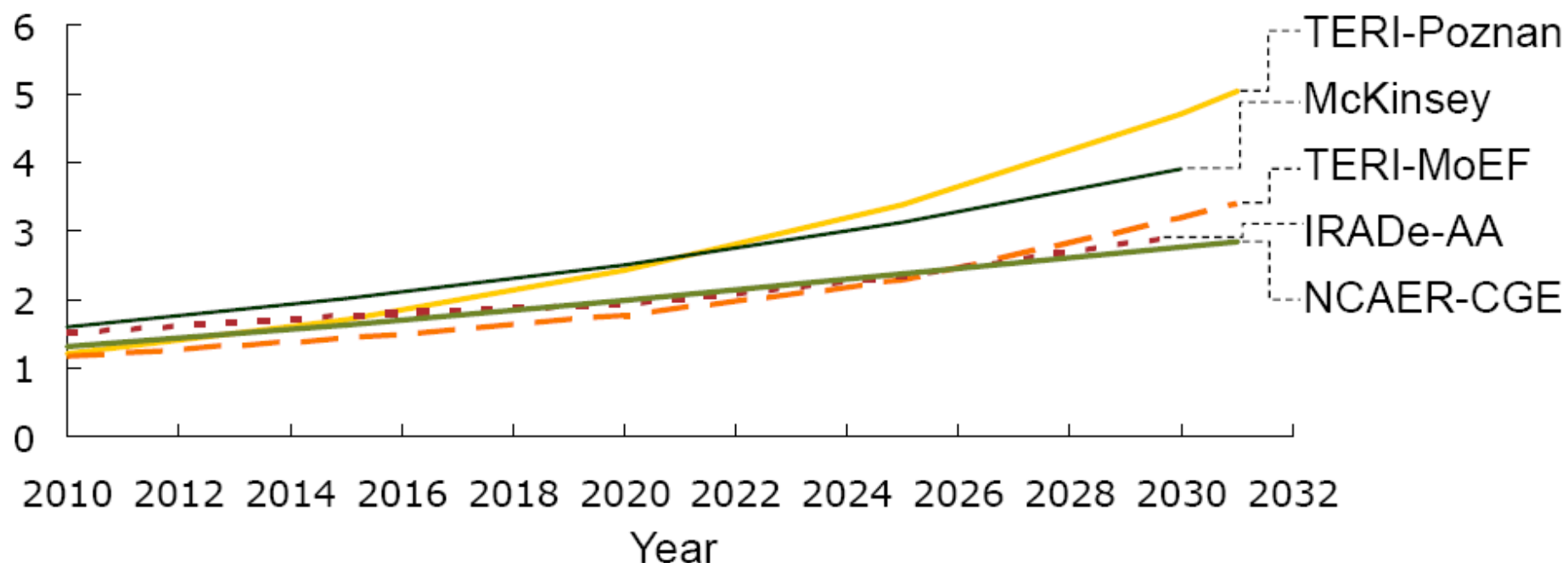




India's projected per capita emissions 2030

Per capita GHG emissions projections for India from 5 studies in Illustrative Scenarios (2010-2030)

Per capita emissions, tons CO₂e





India's energy and emissions trajectory

- By 2030, India will be one of the most energy and emission efficient economies
- Its per capita emissions in 2030 will be lower than the current global average per capita emissions
- Still, its emissions will grow 2.5-3 times to meet the basic developmental goals
- This trend holds true for all developing countries



Way ahead

- **Its about ecological and economic space – developed countries must create space for the developing countries to grow**
- **Efficiency is not sufficiency – transformational technology and reduction in consumption**
- **It will cost money – to hold India's emissions to 3 billion tonnes/ annum, will require more than a trillion USD in next 20 years (3-4% of GDP) – who will pay?**