

# 事例発表 インド

## 企業環境管理: インドの緊急責務

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インド経済の急速な成長は、最近見られる現象である。経済政策の系列的転換は 90 年代初頭に始まり、ビジネスの自由化へとつながった。10 年後、こうしたイニシアティブが功を奏し始め、GDP 成長率は年間 8~9% に達し、過去 4 年間、成長を続けることができた。インドの成長に対するグローバル企業の見解は非常に前向きで、2050 年までに第 3 の経済大国になると見ている。継続的成長は、低所得層や地方にもある程度浸透してきた。経済成長とは別に、インドでは人口も増加しており、2007 年に 12 億 5000 万人に達した。人口増加と所得レベルの上昇によって、消費パターンは劇的に変化している。全体として、食料や衣類などの生活必需品から、ブランド製品、旅行、教育、健康などへの移行がますます進んでいる。生産と消費の急増は、環境に深刻な影響を及ぼしている。事前に環境問題に取り組まない限り、近い将来、経済は減速する可能性がある。

インド政府は、汚染産業を規制する法律制定や指導を随時行ってきた。行政にとって、成長と長期的環境保護のジレンマは近年顕著である。中央・州汚染管理委員会によって政策が実施されている。能力不足、円滑化よりも思考の管理を重視したこと、そして労働量の増加が産業の効果的な監視に影響を与えている。一方で、司法当局は、複数の産業に対して、基準排出量の厳密な遵守を行うか、永久に閉鎖するかのどちらかの行動を強制した。NGO もまた、特に多国籍企業の環境搾取を制限する活動に積極的に取り組んでいる。従って、政策、インフラ支援、規制機関を統合する必要がある。さらに、企業は、世代内および世代間の衡平を低減する責任を自主的に担うことにより、企業の社会的責任(CSR)を実証する必要がある。

インド産業界は、環境に関する緊急責務に対応しているが、望ましいレベルには至っていない。大企業は、環境政策を自主的に実行し、国際基準への適合に努めている。しかしながら、設備不足、技術革新、小規模産業の優位、認識や関心の低さを理由に、環境コンプライアンスから逃れ続ける企業が多数ある。戦略の発展と実行において環境問題を体系的に統合するためには、インドの企業の意思決定プロセスを理解する必要がある。この研究の目的は、協議プロセスによる企業環境管理(CEM)慣行への包括的アプローチを展開することである。

**キーワード:** 企業環境管理 (CEM)、環境コンプライアンス、企業の社会的責任 (CSR)、企業環境意思決定、企業環境戦略

# **Corporate Environmental Management: Imperative for India**

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Rapid growth of Indian Economy is a recent phenomenon. Paradigmatic shift in economic policies took place in early nineties leading to liberalization of businesses. After a decade these initiatives started paying off and the GDP growth rates reached 8-9 per cent per annum, and it managed to sustain the growth for the past 4 years. Global business outlook about Indian growth is very positive and envisaged to be third largest economy by 2050. Sustained growth has percolated down to lower income segments and hinterlands as well to some extent. Apart from economic growth, India is also experiencing population explosion and has touched 1.25 billion in 2007. Both population and increase in income levels are dramatically changing the consumption pattern. Overall the shift is from basic goods such as food and clothing to more and more branded products, travel, education, health etc. Surge in production and consumption is impacting environment seriously. Unless the environmental issues are addressed in advance it may lead to economic slow down in near future.

Government of India had passed legislations and directives from time to time to control polluting industries. As a public administration the dilemma of growth and long term environmental protection is conspicuous in the recent years. Policies are implemented by Central and State Pollution Control Boards. Shortage of competence, control mindset rather than facilitation, and increase in work load has affected effective monitoring of industry. On the other hand Judiciary has forced actions on several industries either to strictly comply with the emission norms or close down permanently. Increasingly NGOs are also becoming active especially to restrict multinational companies from environmental exploitation. Hence, the policy, support infrastructure, and regulatory institutions need to be integrated. Further, corporations need to demonstrate Corporate Social Responsibility (CSR) by voluntarily taking up the responsibility to reduce intra-generational and intergenerational equity.

Indian industry is responding to the environmental imperatives but not to the desired levels. Large corporations do voluntarily implement environmental policies and try to meet international standards. However, due to lack of facilities, technological innovations, dominance of small scale industries, poor awareness and concern many corporations continue to evade from environmental compliance. There is a need for understanding decision making processes of corporations in India to systematically integrate environmental issues in the strategy development and implementation.

Objective of this research is to develop comprehensive approach to Corporate Environment Management (CEM) practices by consultative process.

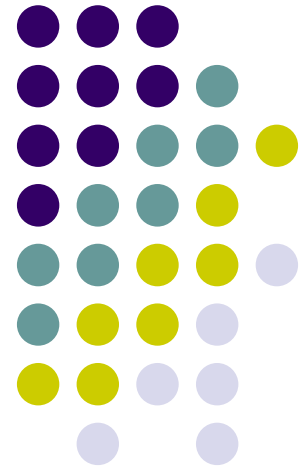
**Keywords:** Corporate Environmental Management (CEM), Environmental Compliance, Corporate Social Responsibility (CSR), Corporate Environmental Decision Making, Corporate Environmental Strategy.

# Corporate Environment Management: Imperative for India

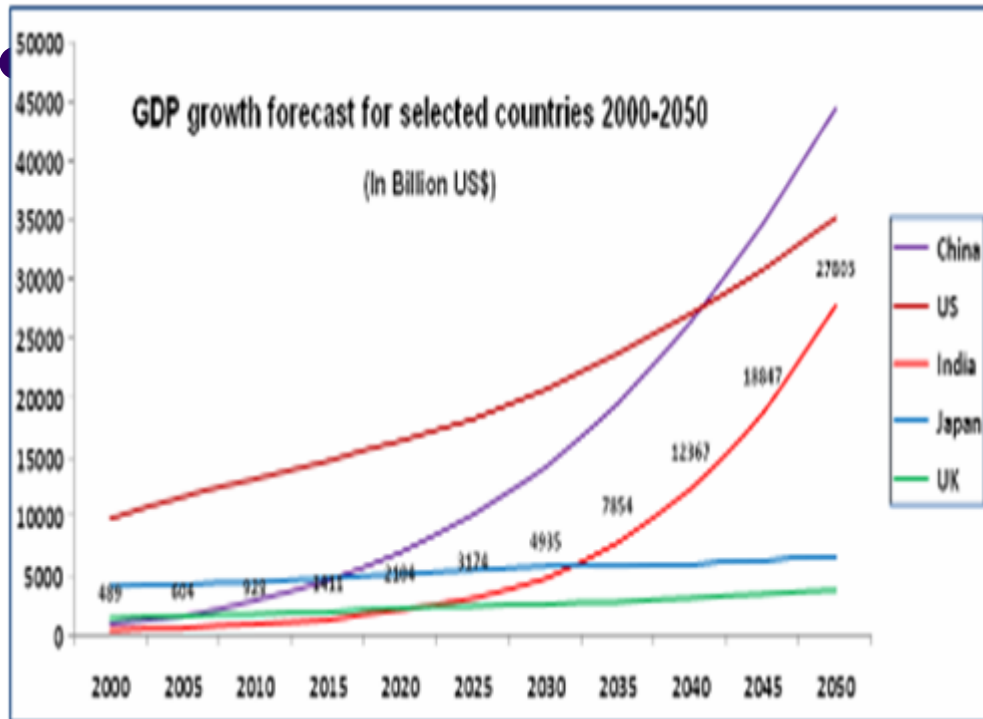
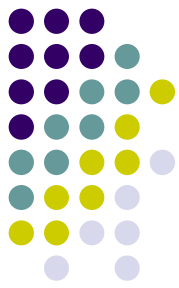
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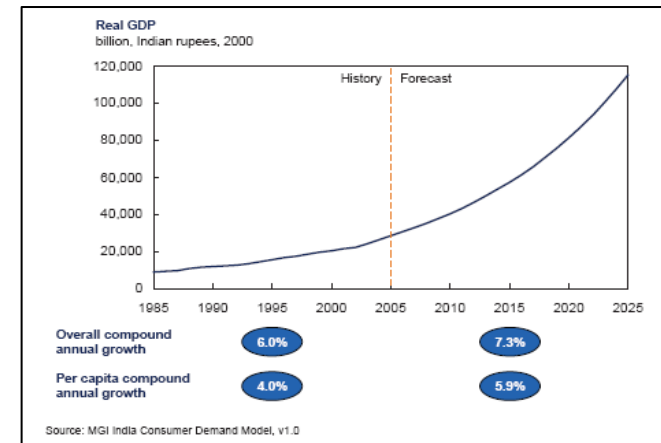
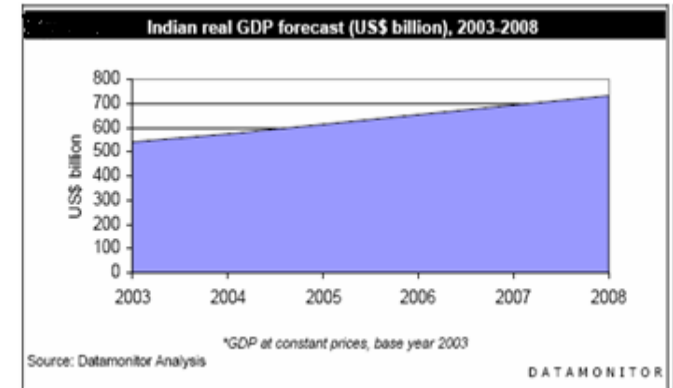
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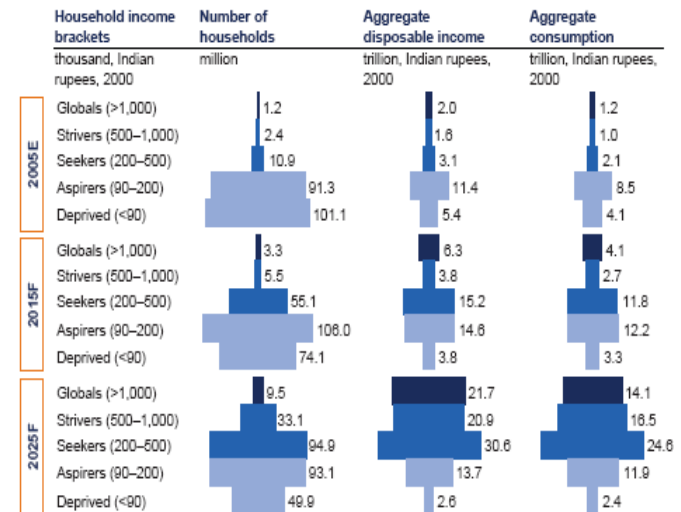
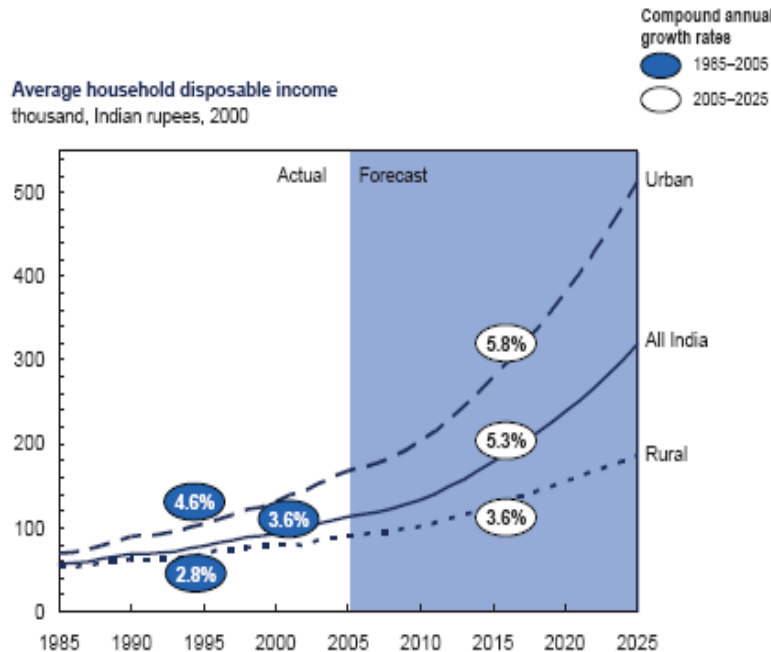
# India Poised to Grow faster



Goldman Sachs has predicted that India will become 3rd largest economy of the world by 2035 based on predicted growth rate of 5.3 to 6.1%. Currently It is cruising at 9.4% growth rate.



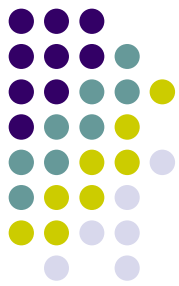
# Individual Household Income and Demographic Changes



Source: McKinsey Global Institute

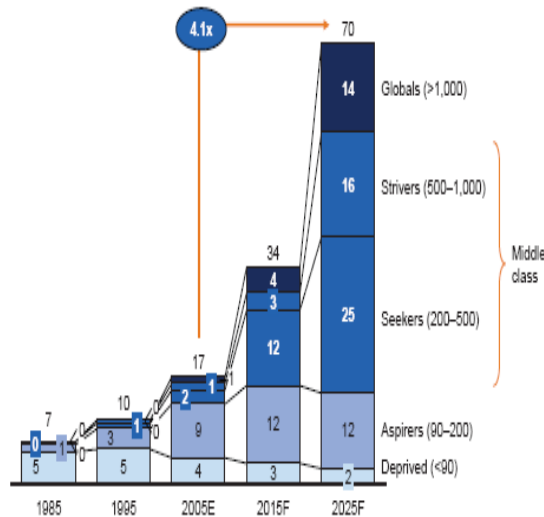
Source: McKinsey Global Institute

# Envisaged Consumption Pattern



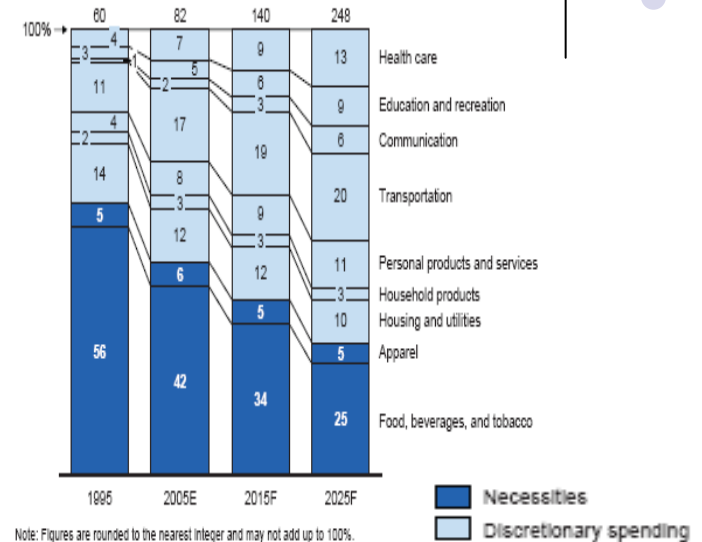
Aggregate consumption across income brackets  
trillion, Indian rupees, 2000

Household income brackets  
thousand, Indian rupees, 2000

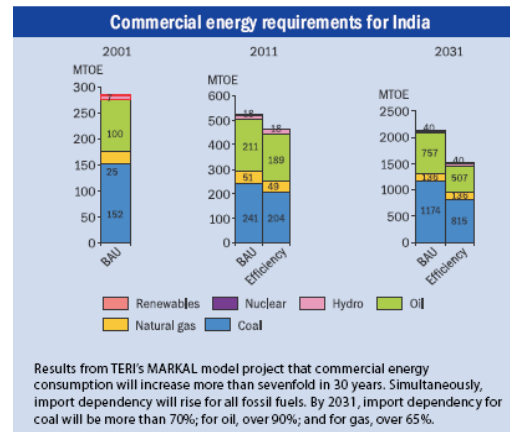


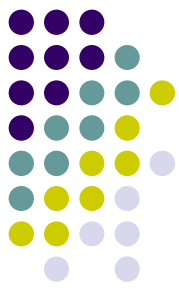
Note: Figures are rounded to the nearest integer and may not add up exactly to column totals.  
Source: McKinsey Global Institute

Share of average household consumption  
%, thousand, Indian rupees, 2000

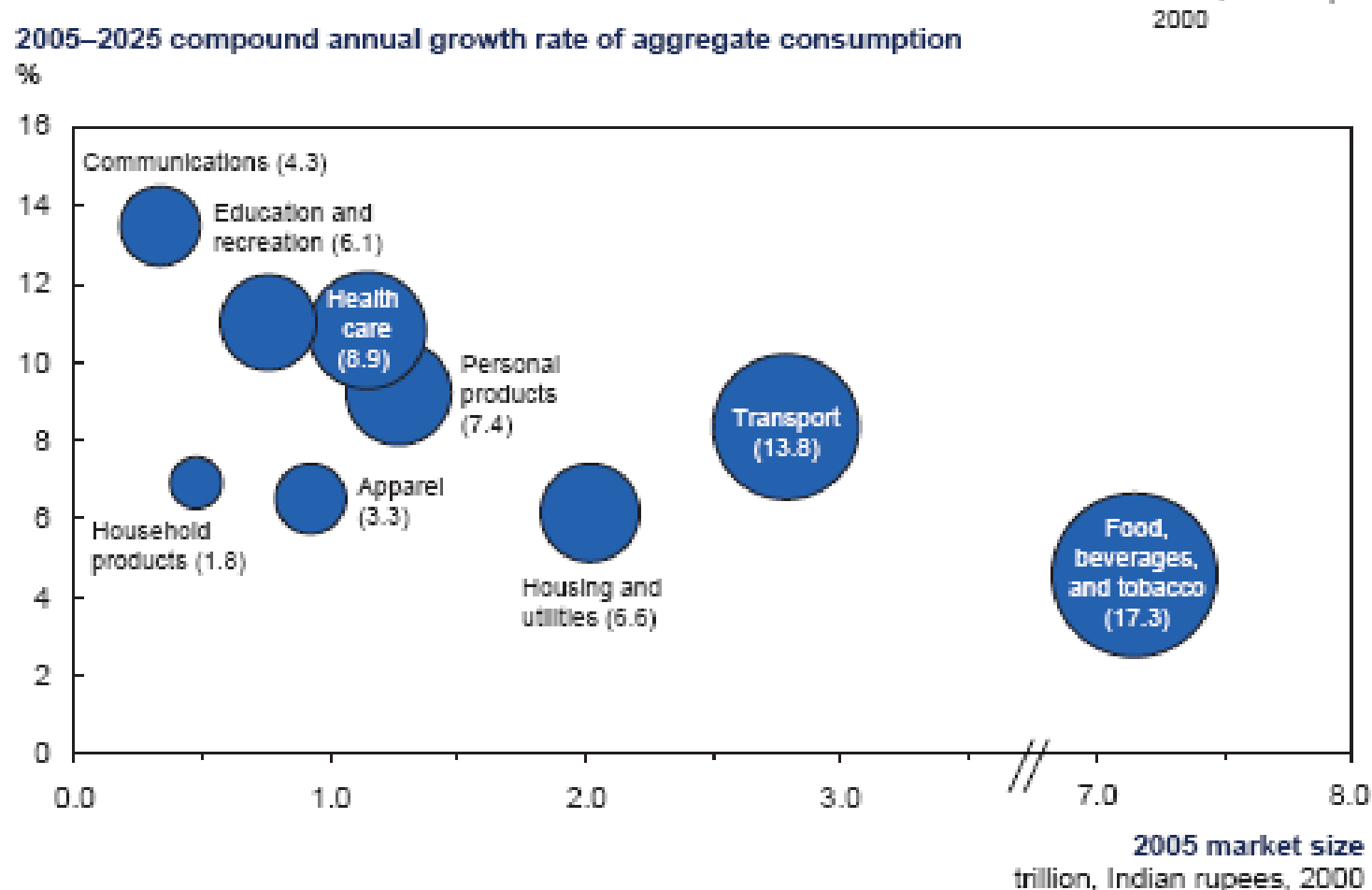


Note: Figures are rounded to the nearest integer and may not add up to 100%.  
Source: McKinsey Global Institute





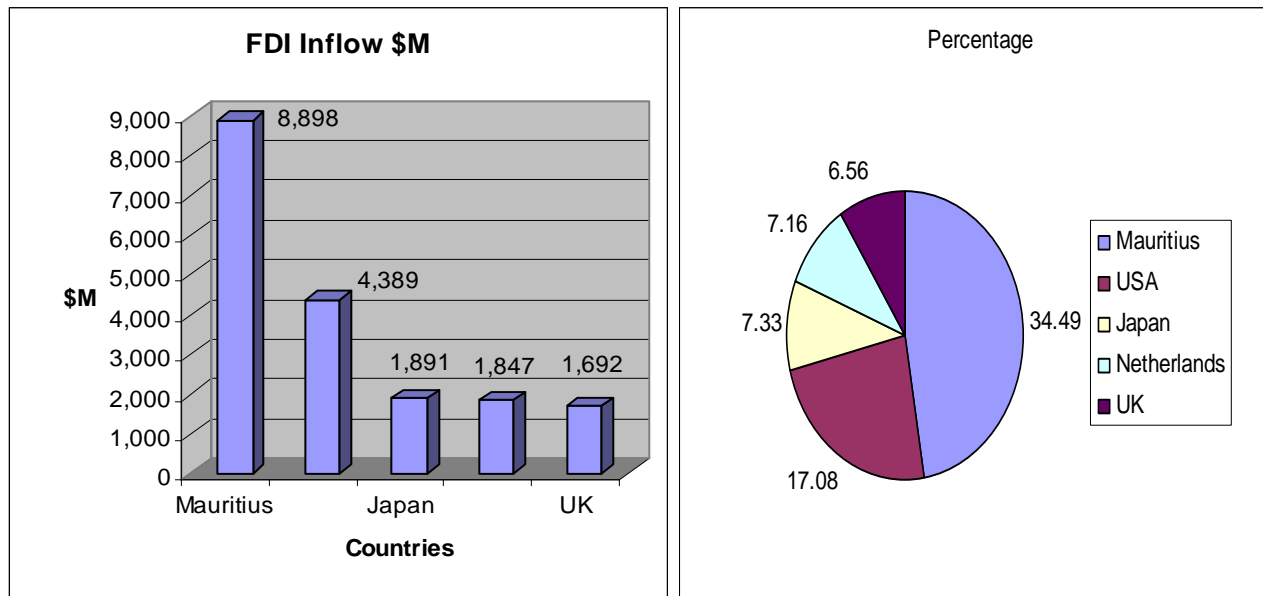
# Size of Market for Different Categories



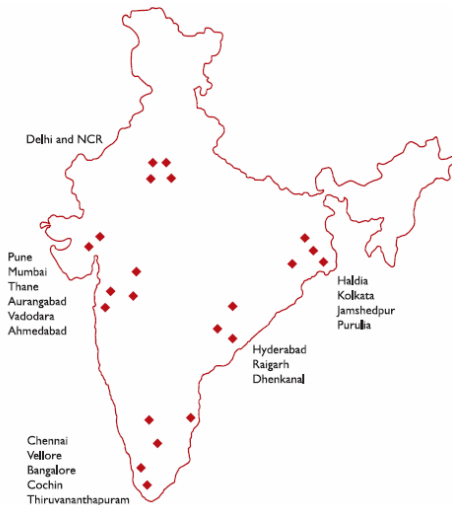
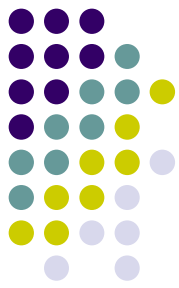
Source: McKinsey Global Institute



# Share of top five investing countries in FDI inflows. (1991–2004)



# India Japan Investment Relationships



- **Japan 4th largest investor : US\$ 2.18 billion (November 2007)**
  - US\$ 168 million in 2005
  - US\$ 104 million in 2006 (Jan -Sept)
- **Top sectors**
  - Transportation (55%), Electrical Equipment (7%),
- **About 350 Japanese companies present in India.**
- **Japan Global Investments**
  - US\$31 billion in 2004
  - US\$46 billion in 2005
  - Around US\$10 billion in East Asia
- **Japan cell set up in to facilitate establishment and operation of Japanese investments.**

Source: MIC - GOI



**Nature rides with Honda** Over the last ten years, nature has been Honda's constant companion. And it's been a journey fueled by the power of dreams. This journey continues. And everyday Honda is taking one step closer to an eco friendly future.



# Japanese FDI Projects over 2005-2007

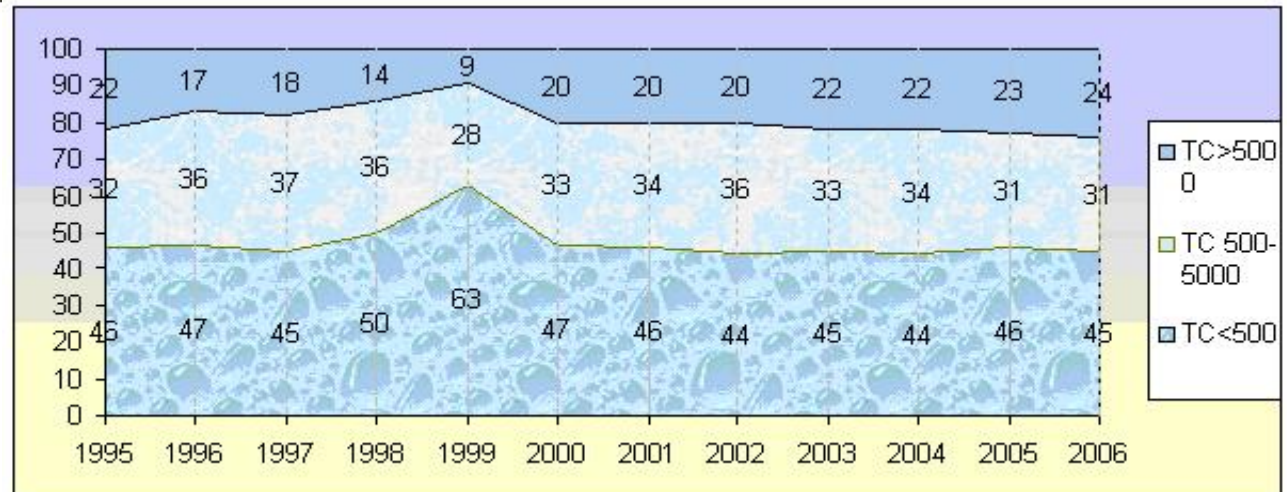
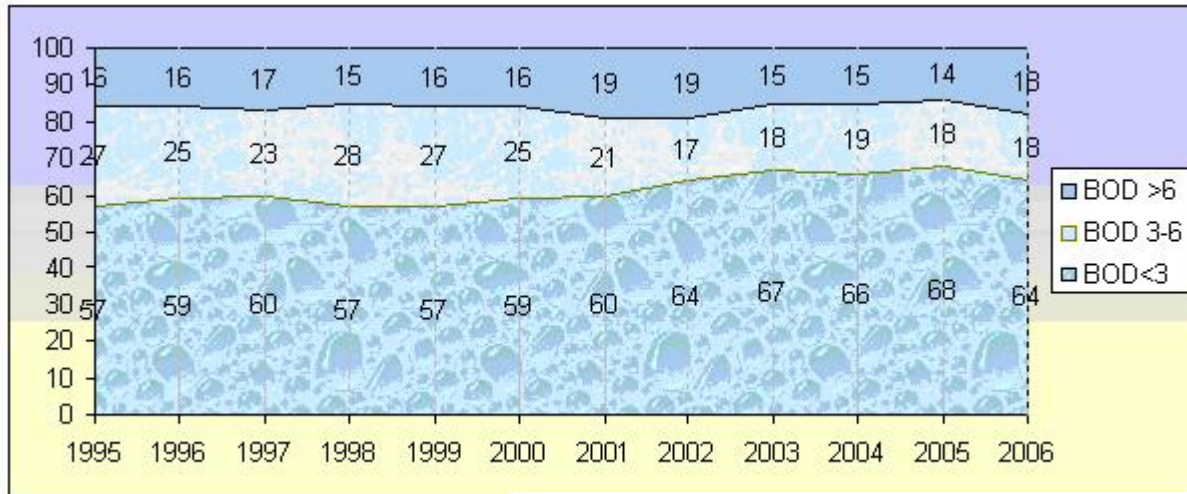
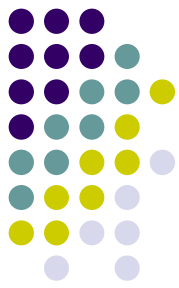


Company Name	FDI (US\$ million)	Description
Maruti Udyog	699	New factory for car production & diesel engine plant
MCC PTA	364	Increasing capacity of Haldia plant
Toyota Motor Corporation	128	Increasing its capacity
Honda	214	Increasing its capacity and building new factory
Sakata Inx	54	Increasing its capacity

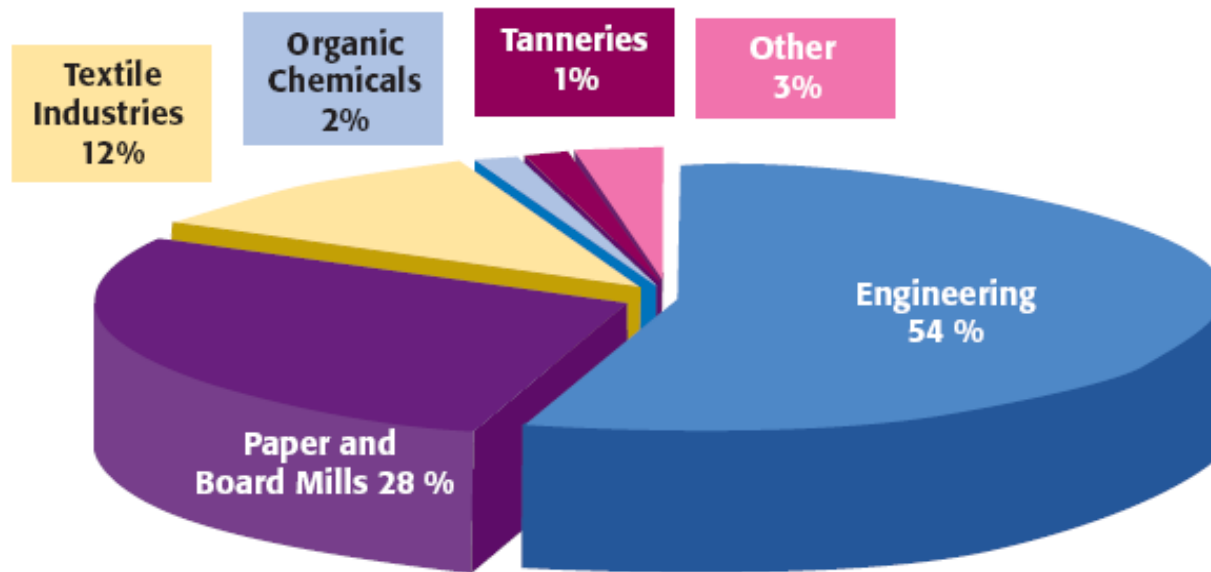
# Some Concerns



# Water Quality



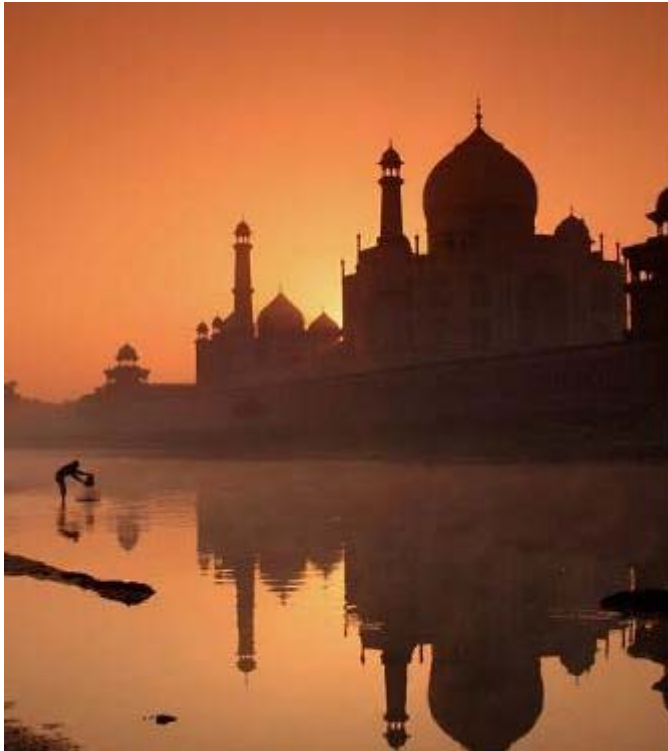
# SSI and Waste Water Discharge



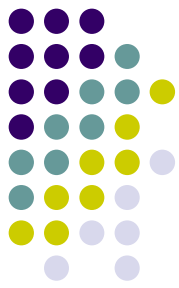
*Small-scale enterprises in India generate 3900 million liters of wastewater per day. The graph above indicates the percentage contributed by sector.*



# Concerns are at Different Levels



# Environmental Management Institutional Structure



- Legal Framework
- Active Judiciary
- Non-Governmental Organizations
- National Environmental Policy 2006
- Corporate Voluntary Action



# Growing Legislative Framework



- The Water (Prevention and Control of Pollution) 1974, 1977
- No. 19 of 2003, [17/3/2003] - The Water (Prevention and Control of Pollution) Cess (Amendment) Act, 2003.
- No.14 of 1981, [29/3/1981] - The Air (Prevention and Control of Pollution) Act 1981, amended 1987
- No.29 of 1986, [23/5/1986] - The Environment (Protection) Act, 1986, amended 1991.
- Noise.....
- Hazardous material.....
- Bio medical.....
- Electronic components.....
- Weak Institutional support and Policing mindset.



# Active Judiciary

- Closure of Glass bangle industry in Muradabad
- Closure of Textile Dying industry in Tirupur
- Adaptation of CNG for public transportation vehicles in Delhi
- Taj Trapezium and closure of refinery

# NGO activism



Dec 2002



Aug 2003



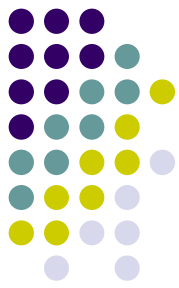
Aug 2006

# National Environment Policy 2006



- **Conservation of Critical Environmental Resources:**  
To protect and conserve critical ecological systems and resources, and invaluable natural and man-made heritage, which are essential for life support, livelihoods, economic growth, and a broad conception of human well-being.
- **Intra-generational Equity: Livelihood Security for the Poor:**  
To ensure equitable access to environmental resources and quality for all sections of society, and in particular, to ensure that poor communities, which are most dependent on environmental resources for their livelihoods, are assured secure access to these resources.
- **Inter-generational Equity:**  
To ensure judicious use of environmental resources to meet the needs and aspirations of the present and future generations.
- **Integration of Environmental Concerns in Economic and Social Development:**  
To integrate environmental concerns into policies, plans, programmes, and projects for economic and social development.

# Corporate Initiatives



TERI



- Toyota Vendor Development
- Tata Sons ready to clear Carbide
- Verion Distilleries



# Industry focus

- Fast Growing Industry
  - Approx. US\$ 8.7 billion industry in 2004-05
  - Annual growth rate 30%
  - US\$17billion by 2012 (AT Kearney study)
- High degree of export orientation
  - 60% of exports to US and Europe
- Top global vehicle manufacturers/ tier 1 suppliers sourcing components from India:
  - General Motors, Daimler Chrysler, Volvo, Cummins, Ford, Fiat, Renault, Toyota Motors
- Opportunities to leverage on low cost, high-skilled manpower to reduce cost of production



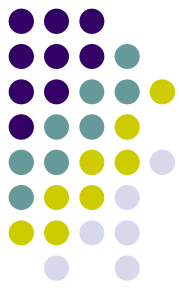
- **Indian textiles sector:**
  - Turnover US\$37 billion;
  - Exports US\$13 billion;
  - Investments of US\$11 billion in the last five years;
- **India is 2<sup>nd</sup> largest producer of cloth and 3<sup>rd</sup> largest producer of cotton yarn;**

- **Textiles sector has the potential to reach US\$85 billion by 2010**
  - Exports can reach US\$50 billion
  - Garments to account for 50% of exports;
- **Investment required US\$30 billion**

- Third largest producer of food
  - Largest milk producer
  - Largest livestock population
  - 2<sup>nd</sup> largest in fruits & vegetables
- Tremendous opportunities
  - 50% of household income spent on food items
  - Fast rise in demand of processed food expected with increasing income levels and urbanization: over 250 million strong middle class
- A new Integrated Food Law being enacted
- Investment of US\$ 28 billion required to raise food processing from 2% to 8-10%.
- Investment opportunities in processing of fruit & vegetable, meat, fish & poultry, milk products, packaged food & drinks.



# Environmental Challenges Facing Indian Industry



- Environment not seen as a source competitive advantage
- Trade-off Between Cost & Competitiveness
- Historical Diversification Strategies
- Dominance of Small & Medium Scale Sectors
  - ▶ Low material productivity
  - ▶ Input subsidies
  - ▶ Outdated technologies
  - ▶ Lack of access to low cost finance
- Market Failure - Policy Distortions & Subsidies
- Legislative Barriers
- Absence of Good Manufacturing Practices
- Inadequate Infrastructural Supports
- Competitive Rivalries & Resource Scarcity
- Financial Barriers



# Barriers to Industrial Sustainability



- Market Barriers - Lack of purchasing power
- Technological Incompetence
- Information Asymmetry & Knowledge Gaps
- Inadequate R&D & Technology Transfer
- Organizational Barriers
  - ▶ Cultural, Attitudinal, Social factors
  - ▶ Organizational Structures & Incentives
  - ▶ Lack of access to low cost finance
- Barriers to the Use of Economic Instruments
  - ▶ No Prior Experience of MBIs
  - ▶ Legal System Oriented to Command& Control
  - ▶ Current Industrial Structures
- Barriers to Clean Technology Adoption
  - ▶ Information Draught
  - ▶ Low Risk Bearing Capacities
  - ▶ Operational Difficulties
  - ▶ Financial Constraints
  - ▶ Inadequate R&D & Technology Transfer





# Research Approach

- In-Depth case studies of companies in the targeted industry.
- Survey of companies.
- In-depth interviews of industry experts and corporate managers.
- Consultative process.
- Availability of authentic database, primary data

# Thank you!

