

CLEANER TECHNOLOGY PROMOTION IN INDIA



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INDUSTRY FOCUS & GEOGRAPHICAL DISTRIBUTION

- ★ AUTOMOBILE SUPPLY CHAIN : KARNATAKA
 - Foundry & Forging Sector
 - Metal Finishing Sector
- ★ DYE & DYE-INTERMEDIATES : GUJARAT
- ★ DRUGS & PHARMACEUTICALS
- ★ TEXTILE INDUSTRIES
- ★ CO-GENERATION : CDM
- ★ POPs REDUCTION : POPs CONVENTION



RATIONALE OF THE PROJECT

- ★ Limitation of Cleaner Production
- ★ Issue of sustainability
- ★ Visibility
- ★ Decision Making Tool
- ★ Strategy : Dynamic process of continuous improvement



PROJECT OBJECTIVES

DEVELOPMENT OBJECTIVE

To reduce environmental pollution and improve competitiveness of enterprises through adoption of cleaner Technologies



STRATEGIC OBJECTIVES

- ★ Implement & Demonstrate CT
- ★ Create institutional capacity for Transfer of technology
- ★ To analyse success factor for, and obstacles
- ★ Diffusion of Techno-economically viable CT



EXPECTED END OF PROJECT SITUATION

OVERALL IMPACT

- ★ Reduced Pollution through adoption of CT
- ★ Improved competitive position of industries
- ★ Increased market access both for Industries and service providers
- ★ Technology transfer mechanism established



ACHIEVEMENTS SO FAR

CAPACITY BUILDING:

- ★ Methodology for CT Assessment Developed
- ★ Training of Trainer (TOT)
- ★ 1st Level Service Providers Trained to undertake CTA
- ★ 2nd level Service Providers - Coached CT Assessments



ACHIEVEMENTS SO FAR

CT GAP ASSESSMENT:

- ★ 8 CT Assessments completed
- ★ Technology Gaps identified
 - 16 in Dye and Dye Intermediate sector
 - 6 in Foundry sector
 - 6 in Metal Finishing sector
- ★ 2 Cluster level CT Assessment for spent acid recovery



ACHIEVEMENTS SO FAR

LIST OF MAJOR CT OPTIONS:

- ★ Dye & Dye-intermediate Sector
 - Spent Acid Recovery
 - Alternative Route for Dyestuff Synthesis
 - Alternate Catalytic Hydrogenation

- ★ Automobile Supply Chain
 - Air Squeeze Moulding Machine
 - Sand Reclamation & Recovery
 - Ni-Zn Plating Technology for Fuel Tank
 - Recovery of Copper from Plating Bath



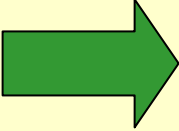
CDM INITIATIVES

CO-GENERATION

- ★ Co-gen technologies suitable for Indian SME's identified
- ★ Comparison of Indian & OECD Technologies
- ★ Pre-assessment of co-generation in 6 units
- ★ Bundling of Project
- ★ Strategy paper on co-generation



CRITICAL ISSUES FOR TECHNO-ECONOMIC VIABILITY OF CT's

- ★ Low net profit margins & intensive global competition 
- ★ Non Availability of relevant Expert on DDI
- ★ Size of Enterprises
 - Predominantly SMEs
 - Large scale units already have access to CTs
- ★ Shift in Approach



THANK YOU!

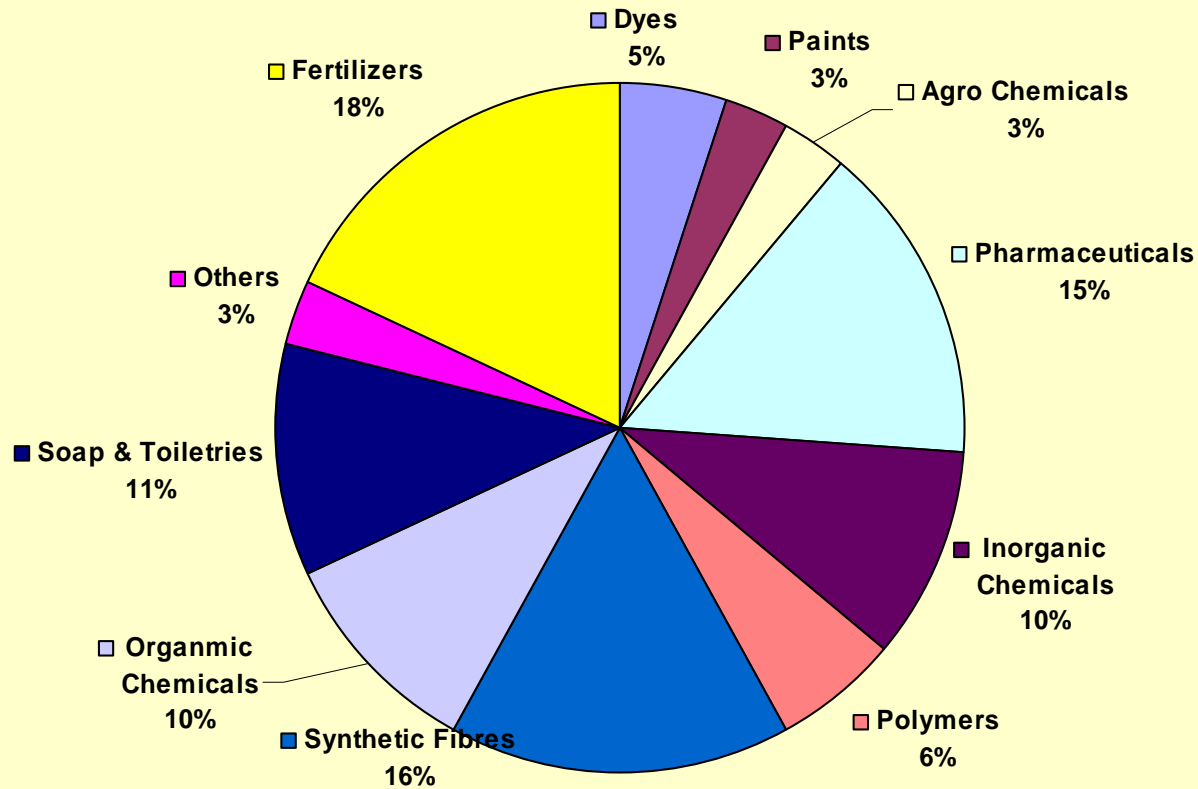


Indian Chemical Industry : Overview

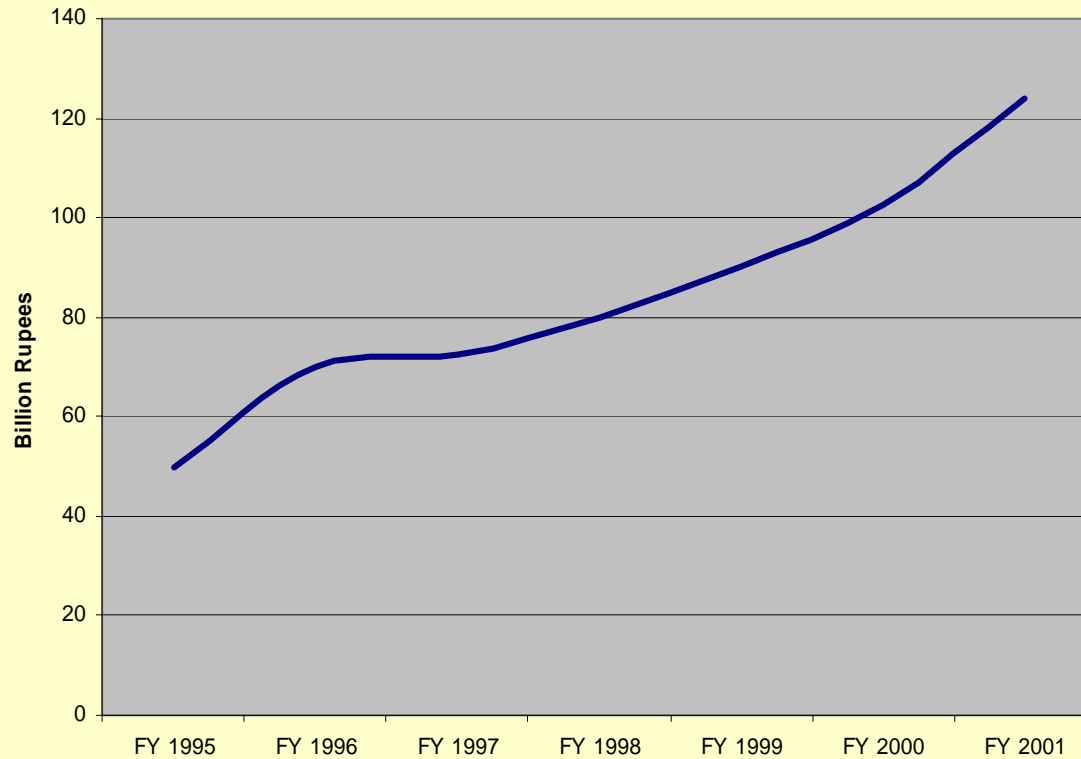
- **14 % output of manufacturing sector**
- **11.8 % export contribution**
- **Regarded as infrastructure for other sectors**
- **11 % growth rate (compounded for the last 5 years)**
- **Identified by GOI as thrust sector**



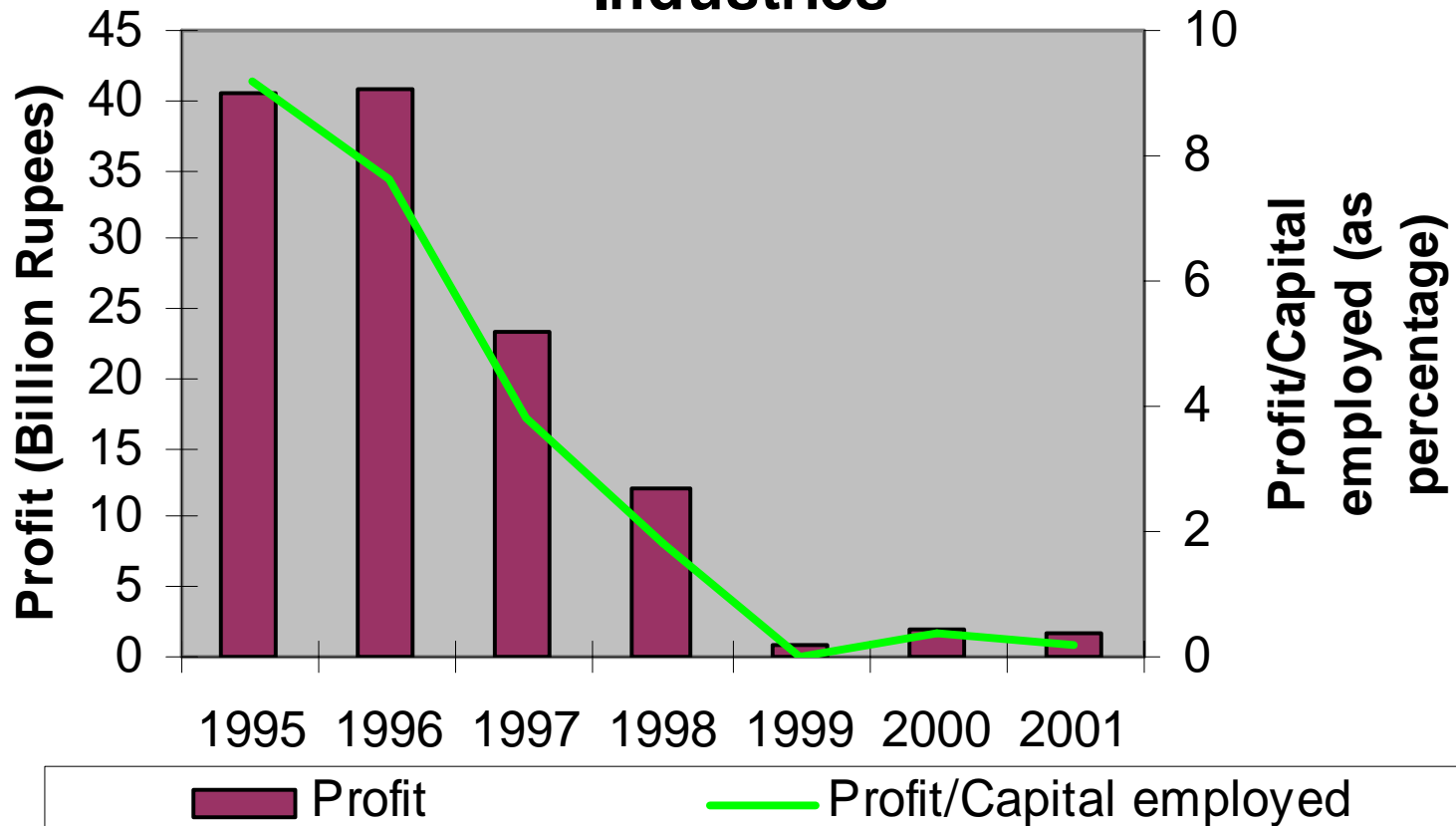
Indian Chemical Industry : Segments



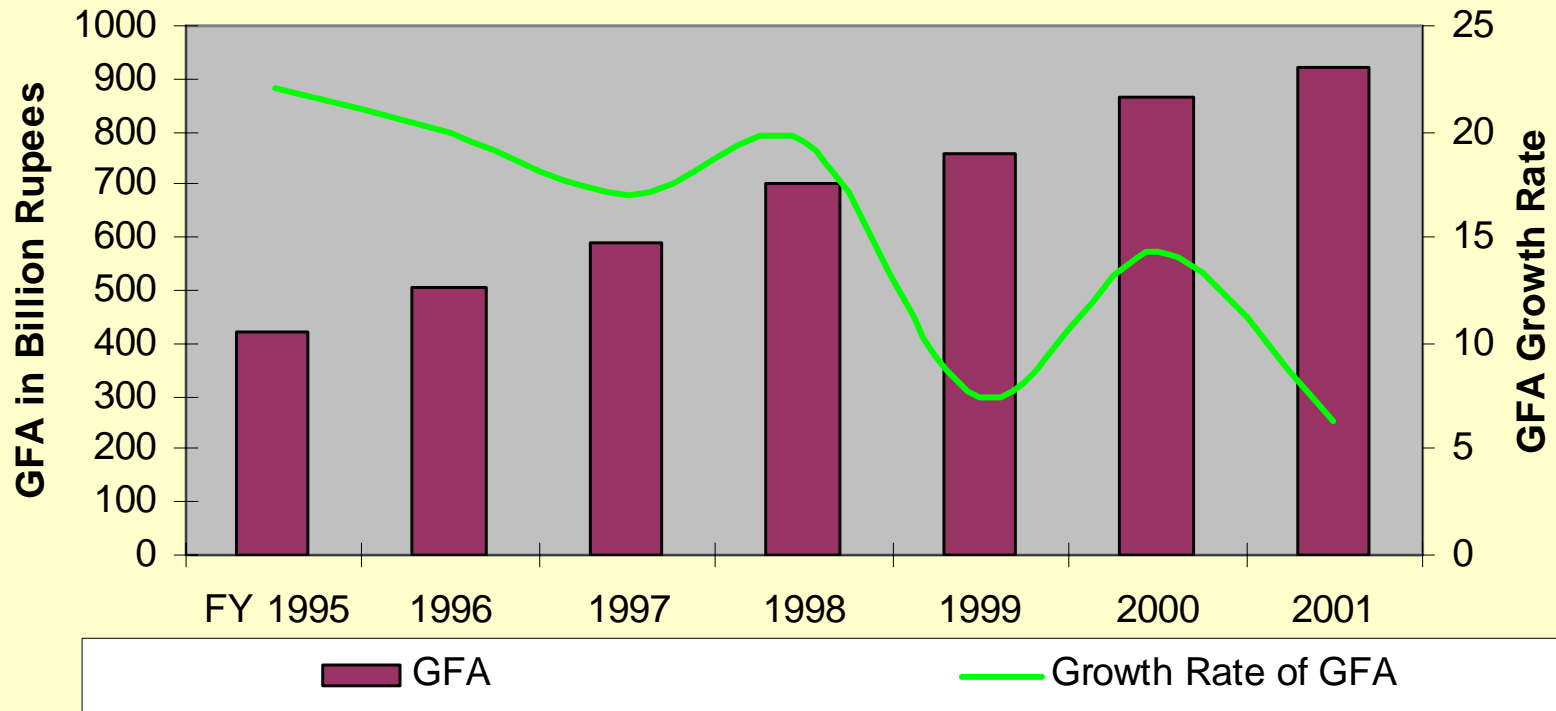
Indian Chemical Industry : Exports



Profit Trends in Indian Chemical Industries



Gross Fixed Assets (GFA) in Indian Chemical Industry



Indian Dye & Dye Intermediates: Overview

Number of units	950
Production capacity tones/annum	1,50,000
Production tones/annum	1,30,000
Export value 1999-00 2000-2001	Rs.22484 M (USD : 478 M) Rs.28320 M (USD : 602 M)
India's share in world market	6 %

