

Report on

# Waste Management in India 2010

---

Evaluate Sector Trends

Understand Key Segments

Estimate Market Potential

Identify Investment Opportunities

India Infrastructure Research

[www.indiainfrastructure.com](http://www.indiainfrastructure.com)

## Table of Contents

<b>1. OVERVIEW</b> .....	- Introduction	- Policy and Regulations
- Sector Basics	- Current Scenario	- Size and Growth
- Key Sector Trends	- Policy and Regulation	- Drivers of Growth
- Key Government Programmes	- Investment and Financing	- Key Sector Trends
- Private Sector Participation	- Private Sector Participation	- Opportunities
- Issues and Challenges	- Issues and Challenges	- Issues and Challenges
- Outlook	- Outlook	- Future Road Map
- Conclusion	- Conclusion	
<b>2. RECENT DEVELOPMENTS</b> .....		
- Introduction		
- New Acts and Amended Rules		
- Other Government Initiatives		
- Investment and Financing		
- Key Projects		
- Private Participation and Initiatives		
- Technology		
- Conclusion		
<b>3. POLICY AND REGULATION</b> .....		
- Introduction		
- Institutional Framework		
- Legal Framework		
- Policy Initiatives		
- Environmental Standards/Norms		
- Issues and Challenges		
- Future Road Map		
<b>4. KEY GOVERNMENT PROGRAMMES</b> .....		
- Introduction		
- Jawaharlal Nehru National Urban Renewal Mission		
- Total Sanitation Campaign		
- MNRE's Waste to Energy Programme		
- Other Programmes		
- Conclusion		
<b>5. WASTE MANAGEMENT MARKET</b> .....		
- Introduction		
- Size and Growth		
- Technology and Economics		
- Financing Opportunities		
- Future Roadmap		
- Key Player Profiles		
<b>6. MUNICIPAL SOLID WASTE MANAGEMENT</b> .....		
- Introduction		
- Key Trends and Recent Developments		
- Size and Growth		
- Key Project Profiles		
- Best Practices		
- Issues and Challenges		
- Future Road Map		
<b>7. ELECTRONIC WASTE</b> .....		
- Introduction		
- Segment Basics		
<b>8. INDUSTRIAL HAZARDOUS WASTE MANAGEMENT</b> .....		
- Introduction		
- Policy and Institutional Framework		
- Industrial Classification of Hazardous Waste		
- Size and Growth		
- Treatment Technologies and Facilities		
- Imports and Exports		
- Best Practices		
- Key Project Profiles		
- Issues and Challenges		
- Future Road Map		
<b>9. LIQUID WASTE MANAGEMENT</b> .....		
- Introduction		
- Overview		
- Size and Growth		
- Key Trends and Recent Developments		
- Key Project Profiles		
- Noteworthy Initiatives		
- Issues and Challenges		
- Future Road Map		
<b>10. SUSTAINABLE WASTE MANAGEMENT</b> .....		
- Introduction		
- Overview		
- The 3R Framework		
- Integrated Waste Management		
- Applications of 3R in India		
- Moving to 4R		
- Future Road Map		
<b>11. PRIVATE SECTOR PARTICIPATION</b> .....		
- Introduction		
- PSP Models		
- Policy Initiatives		
- PSP in Waste Management		
- Key Completed Projects		
- Key Ongoing Projects		
- Key Projects in the Pipeline		
- Challenges		
- Conclusion		
<b>12. FUTURE OUTLOOK</b> .....		
- Introduction		
- Macroeconomic Outlook		
- Mapping the Future		
- Policy Outlook		
- Market Outlook		
- Conclusion		
<b>13. APPENDIX</b> .....		

## List of Tables

Different Types of Waste  
 Treatment Methods for Solid Waste  
 Urban Population, Income and Waste Generation  
 Continent-wise Percentage of Waste Disposal  
 Global Policies on Waste Management  
 Waste Management and Wastewater Treatment Deals Since 2009  
 Private Participation Scope by Sector  
 Key Financings by the World Bank and ADB  
 Projects Completed  
 Projects in the Pipeline  
 Central Ministries in the Waste Management Sector  
 Central Level Organisations  
 State-level Organisations  
 Agencies for Waste Management in Key Metropolitan Cities  
 Other Agencies involved in Waste Management  
 Rules/Guidelines for Waste Management  
 Policies for Waste Management  
 Use-based Classification of Surface Waters in India  
 Wastewater Generation Standards  
 Bio-medical Effluent Generation Standards  
 Structure of JNNURM (as on June 30, 2010)  
 Objectives of JNNURM  
 Reforms under JNNURM  
 Fund Assistance under JNNURM (% share)  
 Fund Allocation under Urban Infrastructure and Governance for Waste Management (as of June 2010)  
 Completed Waste Management Projects under Urban Infrastructure and Governance (as of June 2010)  
 Fund Allocation under UIDSSMT for Waste Management as of June 2010 (Rs million)  
 Accomplishment of Reforms  
 Institutional Set-up under TSC  
 Funding Pattern of TSC (%)  
 Subsidy Available for BPL Households under the TSC  
 Year-wise Physical Progress of TSC (No.)  
 Component-wise Cumulative Physical Progress under TSC as of September 2010  
 MNRE's Waste to Energy Programme Detail  
 Subsidy under the Recovery of Energy from Industrial and Commercial Waste Programme  
 Projections for Power Generation Potential from Waste  
 Achievement in WTE Installed Generation Capacity  
 Progress of WTE between 2007-08 and 2009-10  
 Completed Urban WTE projects  
 Achievement under ILCSS  
 Status of NRCP (as of March 2010)  
 Factors Affecting Technology Costs  
 Cost Analysis of Different Type of Landfills  
 Cost Analysis of Different Types of Recycling Technologies  
 Cost Analysis of Different Types of Incineration and WTE Technologies  
 Allocation to ULBs under the Thirteenth Finance Commission  
 Financing Required under Urban Infrastructure and Governance  
 State-wise Waste Management PPP Projects under Various Stages of Bidding  
 Key Financials of Ramky Enviro Engineers Limited  
 Key Financials of SPML Infra Limited (Consolidated)  
 Key Financials of UPL Environmental Engineers Limited  
 Key Financials of SELCO International Limited  
 Key Financials of Jamshedpur Utilities and Services Company Limited  
 Solid Waste Generation in Selected Class I cities  
 State-wise SWM Projects Sanctioned under the JNNURM  
 State-wise SWM Projects Approved under the UIDSSMT  
 Hazards of E-waste Component  
 Formal E-waste Re-processors Registered with the Central Pollution Control Board  
 States Generating Large Amounts of Hazardous Waste by Type (mt)  
 Details of Existing TSDFs for Landfill/Disposable Hazardous Waste (as of July 2008)

Details of Existing Incinerators for Incinerable Hazardous Waste (as of July 2008)  
 Year-wise Funds Allocated for Development of TSDFs on PPP in States  
 Highest Quantities of Hazardous Waste Commodities Imported and Exported in 2009-10 (mt)  
 Water Supply, Sewage Generation and Treatment  
 State-wise Sewage Generation and Treatment Capacity in Class I Cities  
 Status of Sewage Generation and Treatment Capacity in Metropolitan Cities  
 State-wise Sewage Generation and Treatment Capacity in Class II Towns  
 Category of Industries Generating Liquid Waste  
 Wastewater Contribution from Various Industries  
 Proportion of Population using Improved Sanitation Facilities  
 Decadal Trend of WSS Status in Class I Cities and Class II Towns  
 Capacity and Scale of Industries Located in Pali, Balotra and Jodhpur  
 Per Capita Municipal Waste Generation in 2007  
 Sources of Environmental Pollution through Improper Waste Disposal  
 SWOT analysis for 3R in India  
 Recycling Techniques for Organic Solid Waste  
 Important Recycling Materials: Advantages and Drawbacks  
 Recycling Techniques for Non-organic Solid Waste  
 Advanced Landfill Technologies for MSW  
 Levels of Wastewater Recycling  
 International Practices of Urban Waste Management  
 Waste Management Practices in India  
 Cluster-wise Waste Treatment Capacity in Madhya Pradesh  
 WTE Potential by Waste Type (MW)  
 Biogas Power Plants in Surat (MW)  
 Biomass Gasifier Installation by OVN in 2008  
 PSP Options  
 Key Central Government Initiatives  
 Particulars of Gorai Dumping Ground  
 Particulars of Tiruppur Water Supply and Sewerage Project  
 Ongoing PPP Projects in Waste Management  
 PPP Projects in Waste Management in the Pipeline  
 Waste Management-related Projects Registered under CDM from India

## List of Figures

Projects Sanctioned Under JNNURM  
 Projects sanctioned under JNNURM in 2008-09 and 2009-10  
 Project Sanctioning and Monitoring Mechanism under JNNURM  
 Sector-wise Share in Sanctioned Projects under UIDSSMT  
 Sector-wise Share in Sanctioned Projects under Urban Infrastructure and Governance  
 Objectives of TSC  
 Components of TSC  
 Year-wise Trend in Funding of TSC  
 Waste Management Market in India  
 Estimated Growth of MSW  
 Estimated Growth of Bio-medical Waste  
 Sources of E-waste  
 Key Stakeholders for E-Waste Generation and Management  
 Composition of E-waste in India  
 Sources of E-waste in India  
 Growth in E-waste Generation in India (in 1,000 tonnes)  
 Trend in Industrial Hazardous Waste Generation in India  
 Trends in Import and Export of Hazardous Waste in India  
 Uses of Fly Ash  
 Wastewater Generation and Treatment Levels  
 The 3R Framework  
 Wastewater Treatment Technologies Used in India  
 Approval Mechanism for PPP Projects  
 Share of project by investment  
 Share of projects by number  
 State wise share of projects

I would like to purchase the "Waste Management in India 2010" report for Rs 40,000 (\$923)

I am enclosing a cheque/demand draft for Rs \_\_\_\_\_ vide cheque/demand draft no. \_\_\_\_\_  
drawn on \_\_\_\_\_ dated \_\_\_\_\_ in  
favour of "India Infrastructure Publishing Pvt. Ltd.".

Signature

Name (Block Letters) \_\_\_\_\_

Designation \_\_\_\_\_

Company \_\_\_\_\_

Mailing Address \_\_\_\_\_

Telephone \_\_\_\_\_ Mobile \_\_\_\_\_

Fax \_\_\_\_\_

E-mail \_\_\_\_\_

### Payment Options

#### Wire transfer details

Beneficiary : India Infrastructure Publishing Pvt. Ltd.  
Bank Name : The Royal Bank of Scotland N.V.  
Address : M-6, Hauz Khas, New Delhi 110016, India  
Account No. : 1050338  
Swift Code : ABNAINBBDEL  
IFSC Code : ABNA0100327

### Contact Details

#### Raktima Majumdar

Information Products

India Infrastructure Publishing Pvt. Ltd.

B-17, Qutab Institutional Area. New Delhi - 110 016. India

Tel: +91-11-46078365 (D), +91-11-41034600, 01(B)

Mobile: +91-9711398022 Fax: +91-11-2653 1196

Email: raktima.majumdar@indiainfrastructure.com

To buy online please visit [www.indiainfrastructure.com](http://www.indiainfrastructure.com)