

# Medical, Plastic and Municipal Wastes Management

**(Rotary Kilns, Multiple-chamber incinerators, Hydroclave Treatment, General Waste, Fabric Filters, Formaldehyde Wastes, Solvents, Mercury, biogas plants , Commercial Waste, Hazardous Wastes, Proteins)**



# Introduction

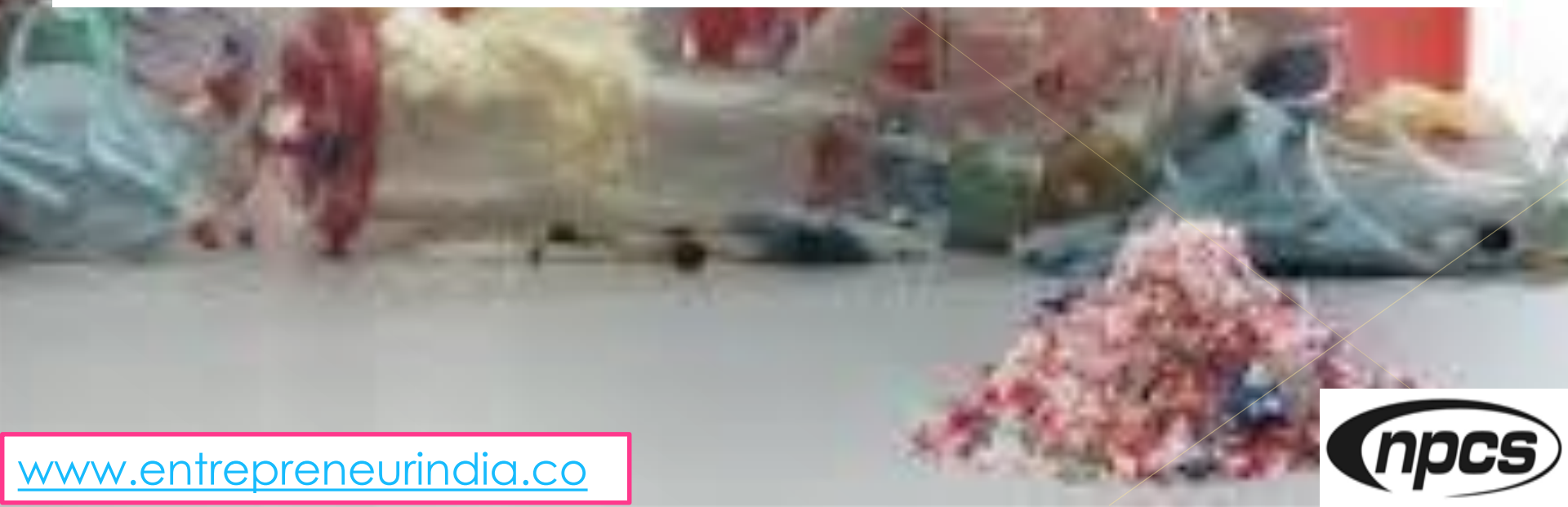
Waste management or Waste disposal is all the activities and actions required to manage waste from its inception to its final disposal. This includes amongst other things, collection, transport, treatment and disposal of waste together with monitoring and regulation. It also encompasses the legal and regulatory framework that relates to waste management encompassing guidance on recycling etc.

Plastic recycling is the process of recovering scrap or waste plastic and reprocessing the material into useful products. Since plastic is non-biodegradable, recycling is a part of global efforts to reduce plastic in the waste stream, especially the approximately eight million metric tonnes of waste plastic that enter the Earth's ocean every year. This helps to reduce the high rates of plastic pollution.

Municipal solid waste (MSW), commonly known as trash or garbage in the United States and as refuse or rubbish in Britain, is a waste type consisting of everyday items that are discarded by the public. "Garbage" can also refer specifically to food waste, as in a garbage disposal; the two are sometimes collected separately.

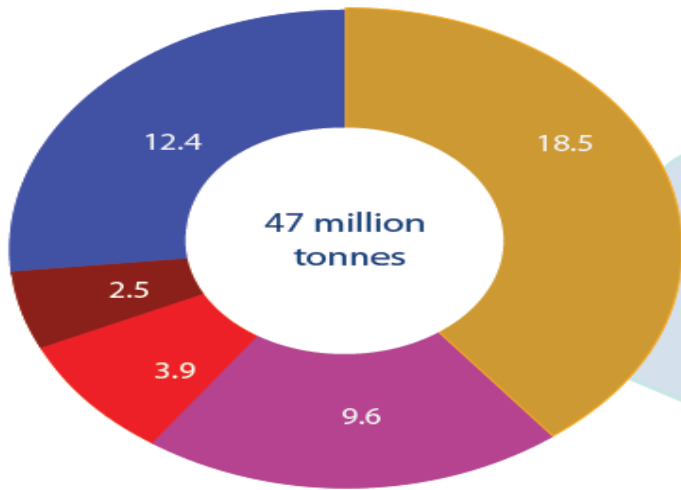


Biomedical waste is any kind of waste containing infectious (or potentially infectious) materials. It may also include waste associated with the generation of biomedical waste that visually appears to be of medical or laboratory origin (e.g., packaging, unused bandages, infusion kits, etc.), as well research laboratory waste containing biomolecules or organisms that are restricted from environmental release.

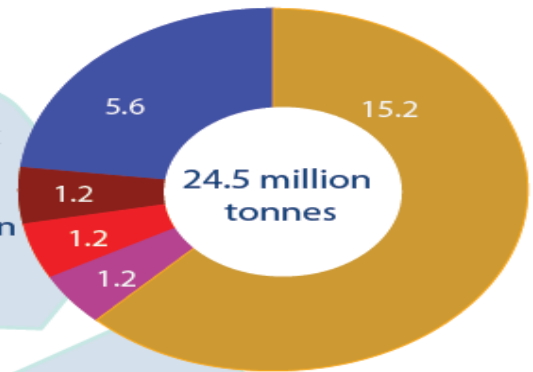


# Plastic: Production, Waste and Treatment

### Plastics production

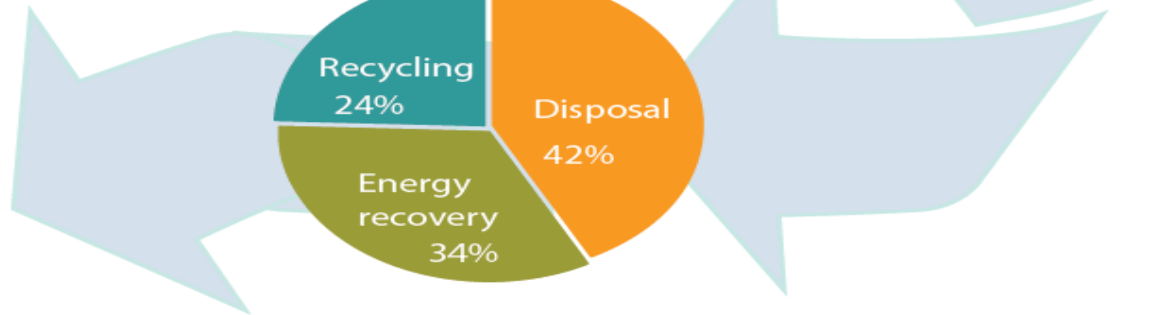
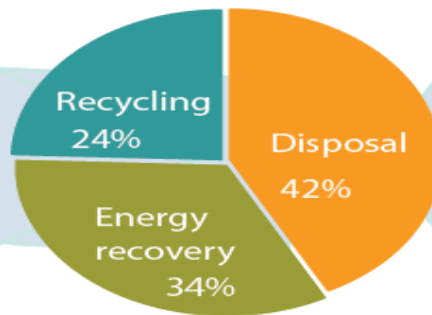


### Plastic waste



- Others
- Electrical & electronic
- Automotive
- Building & Construction
- Packaging

### Treatment of plastic waste



## **Market Outlook**

India is a growing market for plastics and consumes about 12.8 Million Metric Tonnes (MMT) of plastics annually against global consumption of 285 MMT per year.

The e-waste management market, which is regularised compared to other solid waste, is expected to grow at 10.03 percent and the bio-medical waste management market is expected to grow at 8.41 percent during the same period.

The Waste Management Market in India 2014 - 2025 report finds that the waste management market in India is expected to be worth US\$ 13.62 billion by 2025. Indian municipal solid waste (MSW) management market is expected to grow at a CAGR of 7.14% by 2025 while e-waste management market is expected to grow at a CAGR of 10.03% during the same period. India has planned to achieve a capacity of 2.9 million hospital beds by 2025 which will help bio medical waste management market to grow at a CAGR of 8.41%.

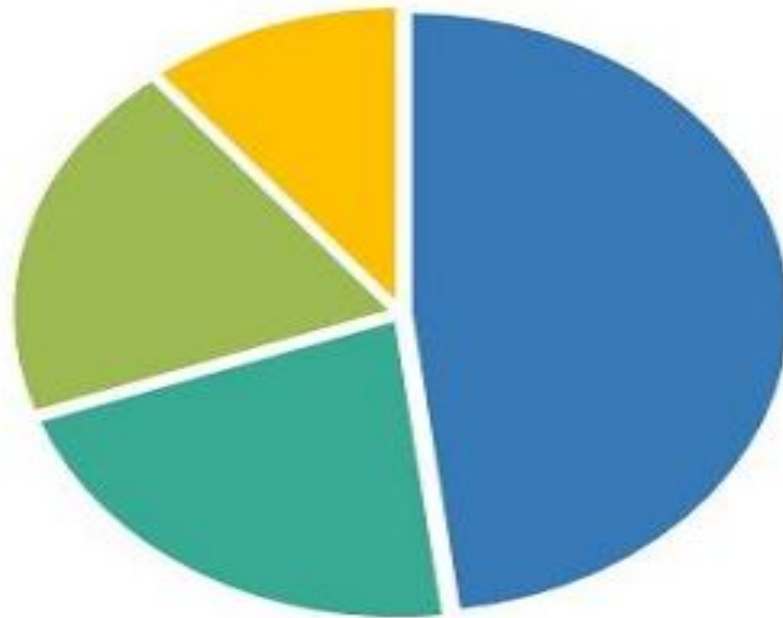
India's consumption of plastics will increase to 20.02 million tons per year from the current 8.01 million tons per year.

The global plastic waste management market is projected to be valued at around USD 26,573.3 million by 2020, growing at a CAGR of 3.02% from 2015 to 2020. The market for recycling plastics is projected to grow at the highest CAGR.





# Plastic Waste Management Market



■ Asia-Pacific ■ Europe ■ North America ■ RoW\*

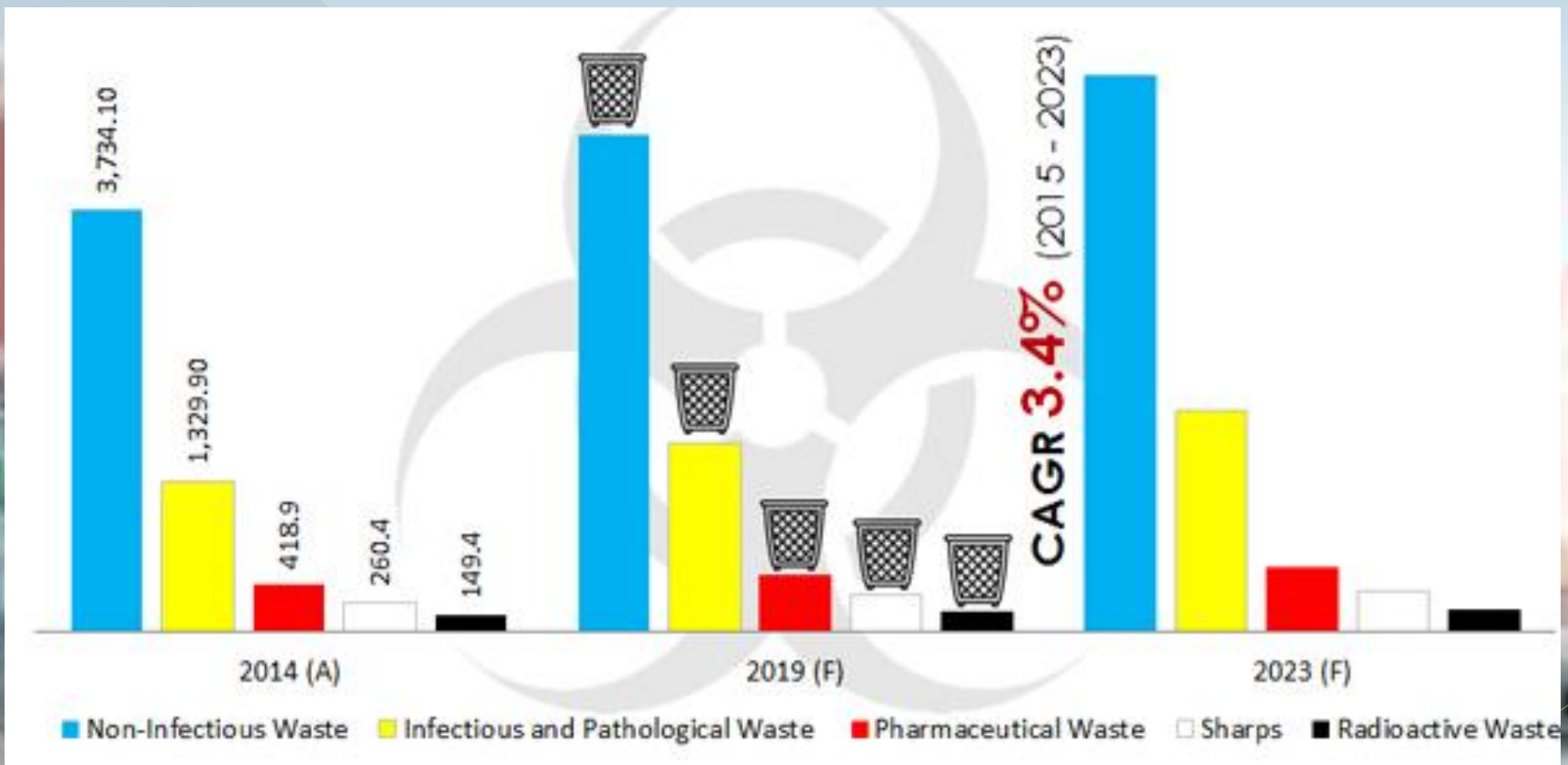
The global recycled plastics market will grow at a steady CAGR of more than 4% during the forecast period. The growing demand for plastics from various industries including healthcare, food and beverage, oil and gas, and construction is expected to propel the growth prospects of the recycled plastics market globally.

The Global Plastic Waste Management Market is poised to grow at a CAGR of around 3.5% over the next decade to reach approximately \$31.61 billion by 2025.

The global medical waste management market is expected to reach USD 13.3 Billion by 2020 from USD 10.3 Billion in 2015, at a CAGR of 5.2% from 2015 to 2020.

A large portion of the overall medical waste generated in the U.S. is of the non-infectious variety. In 2014, non-infectious waste accounted for a dominant share of around 63% in the U.S. waste management market. In the same year, infectious waste accounted for the second-largest, 22.6%, share of the market.

# U.S. Medical Waste Management Market



Global Medical Waste Management Market is valued at \$10.78 billion in 2015 and is expected to grow at a CAGR of 5.9% to reach \$16.2 billion by 2022.



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- 
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- (iv) Institutional Waste:
- (v) Garbage:
- (vi) Rubbish:
- (vii) Ashes:
- (viii) Bulky Wastes:
- (ix) Street Sweeping:
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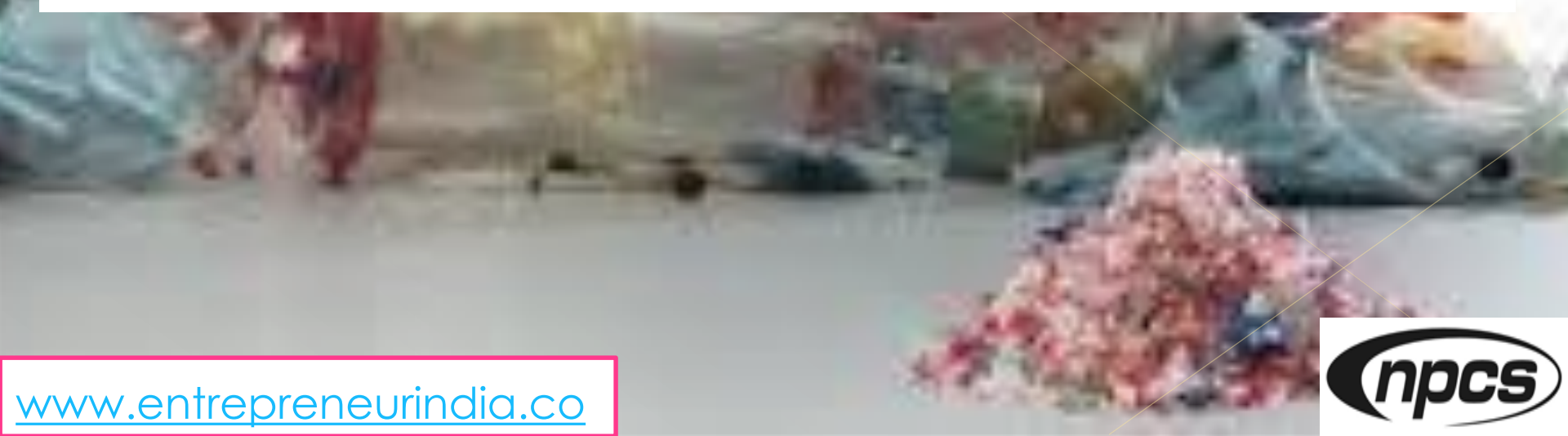
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## ➤ ESTIMATED QUANTITIES OF DPW

- Scenario 1
- Scenario 2
- Scenario 3
- Scenario 4

- Scenario 5
- SUMMARY

## **28. Objectives and Action Items**

- OBJECTIVES FOR IMPROVING MUNICIPAL SOLID WASTE MANAGEMENT
- Source Reduction
- ACTION ITEMS:
- ACTION ITEMS:
- OBJECTIVE 1: EVALUATE POTENTIAL FOR MINIMIZING PACKAGING
- ACTION ITEMS:
- OBJECTIVE 2: EDUCATION AND OUTREACH ON SOURCE REDUCTION
- ACTION ITEMS:

- RECYCLING
- ACTION ITEMS:
  - Improving Recyclability of the Waste Stream
  - Collection/Separation
  - Processing
  - Marketing
  - Public Education
  - Landfilling and Incineration
- OBJECTIVE 1: FURTHER EVALUATE ADDITIVES
- ACTION ITEM:
  - OBJECTIVE 2: MONITOR PVC USE
  - ACTION ITEMS:
    - OBJECTIVE 3: IMPROVE DISPOSAL OPTIONS
    - ACTION ITEMS:
      - OBJECTIVES FOR HANDLING PROBLEMS OUTSIDE THE MSW MANAGEMENT SYSTEM

- Wastewater Treatment Systems/Combined Sewer overflows/Stormwater Drainage Systems
- Wastewater Treatment Systems

**ACTION ITEM:**

- Combined Sewer Overflows

**ACTION ITEMS:**

- Storm water Discharges

**ACTION ITEMS:**

- Other Sources of Marine Debris
- Vessels

• OBJECTIVE 1: IMPLEMENT ANNEX V OF MARPOL

• ACTION ITEMS:

• OBJECTIVE 2: REDUCE IMPACT OF FISHING GEAR

**ACTION ITEM:**

- Plastic Manufacturers, Processors, and Transporters

## **ACTION ITEMS:**

- Garbage Barges

## **ACTION ITEM:**

Land- and Sea-Originated Litter

- OBJECTIVE 1: SUPPORT LITTER RETRIEVAL AND CHARACTERIZATION

## **ACTION ITEMS:**

- OBJECTIVE 2: SUPPORT LITTER PREVENTION

## **ACTION ITEMS:**

- Degradable Plastics

## **ACTION ITEMS:**

# 29. Recent Legislative and Regulatory Actions

- LOCAL AND STATE ACTIONS
- FEDERAL ACTIONS
- IMPLICATIONS FOR PLASTICS RECYCLING



# Tags

Medical Waste Management and Disposal, Waste Management Medical Waste, Medical Waste Industry, Biomedical Waste Management, Commercial Medical Waste Disposal, Waste Management, Medical Waste Disposal, Medical Waste Management Industry, Bio-Medical Waste Management, Biohazardous Waste & Medical Waste Disposal, Municipal Solid Waste Management, Waste Management Industry, Solid Waste Management, Municipal Waste Treatment, Municipal Solid Waste Management in India, Waste Collection & Disposal, Waste & Recycling, Municipal Solid Waste Disposal, Municipal Waste and Recycling Management, Waste Disposal and Recycling, Municipal Solid Waste Recycling (MSW) & Processing, Municipal Solid Waste (MSW) Recycling, Municipal Solid Waste Recycling Plants, Municipal Solid Waste Processing Plant, Solid Waste Recycling Plant, Solid Waste Recycling Process, Sustainable Recycling of Municipal Waste, Recycling of Municipal Solid, Processing and Recycling Municipal Waste, Solid Waste Management and Recycling, How to Start Medical Waste Disposal Business, Recycling Medical Waste, Starting Medical Waste Disposal Business, Medical Waste Management Business Plan, Medical Waste Disposal Business, Starting Profitable Recycling Business, Plastics Recycling Business Plan, Small Business Ideas in Waste Management Industry, Medical Waste Recycling, Medical Waste Recycling Process, Waste Management Business Plan, Recycling Waste Materials Business Plan, Plastic Waste Management, Plastic Waste Management in India, Starting Plastic Recycling Business Plant, How to Start Plastic Recycling, Business Plan on Plastics Recycling,



# Tags

Start Small Plastic Recycling Business, Business Plan on Plastic Recycling, Profitable Recycling Business Ideas & Opportunities, Plastic Recycling Business Opportunities, Plastic Waste Recycling Plant, Hazardous Waste Recycling, NPCS, Niir, Process Technology Books, Business Consultancy, Business Consultant, Project Identification and Selection, Preparation of Project Profiles, Startup, Business Guidance, Business Guidance to Clients, Startup Project, Startup Ideas, Project for Startups, Startup Project Plan, Business Start-Up, Business Plan for Startup Business, Great Opportunity for Startup, Small Start-Up Business Project, Best Small and Cottage Scale Industries, Startup India, Stand Up India, Small Scale Industries, New Small Scale Ideas for Plastic Waste Management Industry, Municipal Waste Recycling Business Ideas You Can Start on Your Own, Small Scale Medical Waste Management, Guide to Starting and Operating Small Business, Business Ideas for Medical Waste Management, How to Start Municipal Solid Waste Recycling Business, Starting Plastic Waste Management, Start Your Own Medical Waste Recycling Business, Medical Waste Recycling Business Plan, Business Plan for Medical Waste Management, Small Scale Industries in India, Municipal Waste Recycling Based Small Business Ideas in India, Small Scale Industry You Can Start on Your Own, Business Plan for Small Scale Industries, Starting Plastic Waste Recycling, Profitable Small Scale Manufacturing, How to Start Small Business in India, Free Manufacturing Business Plans, Small and Medium Scale Manufacturing, Profitable Small Business Industries Ideas, Business Ideas for Startup

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# Who are we?

- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*

*We at NPCS want to grow with you by providing solutions scale to suit your new operations and help you reduce risk and give a high return on application investments. We have successfully achieved top-notch quality standards with a high level of customer appreciation resulting in long lasting relation and large amount of referral work through technological breakthrough and innovative concepts. A large number of our Indian, Overseas and NRI Clients have appreciated our expertise for excellence which speaks volumes about our commitment and dedication to every client's success.*



*We bring deep, functional expertise, but are known for our holistic perspective: we capture value across boundaries and between the silos of any organization. We have proven a multiplier effect from optimizing the sum of the parts, not just the individual pieces. We actively encourage a culture of innovation, which facilitates the development of new technologies and ensures a high quality product.*



# What do we offer?

- *Project Identification*
- *Detailed Project Reports/Pre-feasibility Reports*
- *Business Plan*
- *Industry Trends*
- *Market Research Reports*
- *Technology Books and Directory*
- *Databases on CD-ROM*
- *Laboratory Testing Services*
- *Turnkey Project Consultancy/Solutions*
- *Entrepreneur India (An Industrial Monthly Journal)*

# How are we different ?

- *We have two decades long experience in project consultancy and market research field*
- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*



# Our Approach

**Requirement collection**

**Thorough analysis of the project**

**Economic feasibility study of the Project**

**Market potential survey/research**

**Report Compilation**

# Who do we serve?

- *Public-sector Companies*
- *Corporates*
- *Government Undertakings*
- *Individual Entrepreneurs*
- *NRI's*
- *Foreign Investors*
- *Non-profit Organizations, NBFC's*
- *Educational Institutions*
- *Embassies & Consulates*
- *Consultancies*
- *Industry / trade associations*



# Sectors We Cover

- *Ayurvedic And Herbal Medicines, Herbal Cosmetics*
- *Alcoholic And Non Alcoholic Beverages, Drinks*
- *Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin*
- *Activated Carbon & Activated Charcoal*
- *Aluminium And Aluminium Extrusion Profiles & Sections,*
- *Bio-fertilizers And Biotechnology*
- *Breakfast Snacks And Cereal Food*
- *Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling*

## Sectors We Cover Cont...

- *Bamboo And Cane Based Projects*
- *Building Materials And Construction Projects*
- *Biodegradable & Bioplastic Based Projects*
- *Chemicals (Organic And Inorganic)*
- *Confectionery, Bakery/Baking And Other Food*
- *Cereal Processing*
- *Coconut And Coconut Based Products*
- *Cold Storage For Fruits & Vegetables*
- *Coal & Coal Byproduct*

## Sectors We Cover Cont...

- *Copper & Copper Based Projects*
- *Dairy/Milk Processing*
- *Disinfectants, Pesticides, Insecticides, Mosquito Repellents,*
- *Electrical, Electronic And Computer based Projects*
- *Essential Oils, Oils & Fats And Allied*
- *Engineering Goods*
- *Fibre Glass & Float Glass*
- *Fast Moving Consumer Goods*
- *Food, Bakery, Agro Processing*

## Sectors We Cover Cont...

- *Fruits & Vegetables Processing*
- *Ferro Alloys Based Projects*
- *Fertilizers & Biofertilizers*
- *Ginger & Ginger Based Projects*
- *Herbs And Medicinal Cultivation And Jatropha (Biofuel)*
- *Hotel & Hospitability Projects*
- *Hospital Based Projects*
- *Herbal Based Projects*
- *Inks, Stationery And Export Industries*

## Sectors We Cover Cont...

- *Infrastructure Projects*
- *Jute & Jute Based Products*
- *Leather And Leather Based Projects*
- *Leisure & Entertainment Based Projects*
- *Livestock Farming Of Birds & Animals*
- *Minerals And Minerals*
- *Maize Processing(Wet Milling) & Maize Based Projects*
- *Medical Plastics, Disposables Plastic Syringe, Blood Bags*
- *Organic Farming, Neem Products Etc.*

# Sectors We Cover Cont...

- *Paints, Pigments, Varnish & Lacquer*
- *Paper And Paper Board, Paper Recycling Projects*
- *Printing Inks*
- *Packaging Based Projects*
- *Perfumes, Cosmetics And Flavours*
- *Power Generation Based Projects & Renewable Energy Based Projects*
- *Pharmaceuticals And Drugs*
- *Plantations, Farming And Cultivations*
- *Plastic Film, Plastic Waste And Plastic Compounds*
- *Plastic, PVC, PET, HDPE, LDPE Etc.*

## Sectors We Cover Cont...

- *Potato And Potato Based Projects*
- *Printing And Packaging*
- *Real Estate, Leisure And Hospitality*
- *Rubber And Rubber Products*
- *Soaps And Detergents*
- *Stationary Products*
- *Spices And Snacks Food*
- *Steel & Steel Products*
- *Textile Auxiliary And Chemicals*

## Sectors We Cover Cont...

- *Township & Residential Complex*
- *Textiles And Readymade Garments*
- *Waste Management & Recycling*
- *Wood & Wood Products*
- *Water Industry(Packaged Drinking Water & Mineral Water)*
- *Wire & Cable*



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