

Extended Producer Responsibility for Plastic Waste Management, Rules 2016

By:

Indian Pollution Control Association

3-5, DDA Shopping Complex, Hargobind Enclave, Vikas Marg Ext.
Delhi-110092

E-mail: ashish@ipcaworld.co.in

Website: www.ipcaworld.co.in

Contact: 9312432405, 9818323370, 011-42207478

About IPCA

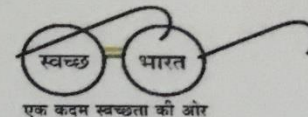
- IPCA established in year 2001 after campus recycling project experience at IIT Delhi from 1998-2001 and enlisted with CPCB at national level.
- IPCA started their journey with MSW collection, segregation and recycling project for Corporate, and subsequently for residential colonies, townships, educational institutions, hotels, and industries and developed supply chain for various waste commodities.
- IPCA has played a significant role in organizing the rag pickers of Delhi NCR from informal to formal sector and creating a network of recyclers at PAN India.
- IPCA is also managing the industrial waste in eco-friendly manner using its own R&D equipment's and techniques.
- IPCA's activities and approach are leading towards attaining the sustainability in waste management sector.

About IPCA

- **Business Type:** Non-Government Organization (NGO)
- **Annual Revenue:** INR 4,53,00,611
- **Total Number of Employees:**
 - Direct : 60
 - Indirect: 800
- **Primary Line of Business:** “Sustainability is our goal”
- **Primary Audience:** Residents, Corporate, Industries, Educational Institutes, Govt., Municipalities & ULBs, Policy Makers, and Rag-picker Communities
- **Operational Area:** Pan India and recently successfully developed system for Plastic Waste Management in Maharashtra, Delhi, Haryana, UP, Uttarakhand, Punjab, Rajasthan and working to scale it up at Pan India
 - **Leadership/Management Team**
 - Prof. Padma Vasudevan, IIT Delhi
 - Prof. P K Sen, IIT Delhi
 - Mr. Ashish Jain
 - Dr. Radha Goyal
 - Mr. Ajay Garg
 - Dr. Priyanka Kulshreshtha



Ministry of the Environment
Government of Japan



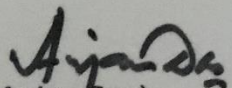
3R Excellence Awards in MSW Management 2018
8th Regional 3R Forum in Asia and the Pacific

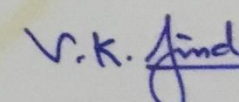
9-12 April 2018, Indore

This certificate is awarded to

India Pollution Control Association (2nd Prize)

for exemplary work in waste to composting in India


(Anjan Das)
Executive Director, CII


(V. K. Jindal)
Joint Secretary, Ministry of Housing and Urban Affairs
Government of India



Confederation of Indian Industry



Indore Municipal Corporation



Government of Madhya Pradesh

Plastic Waste in India

Estimated Quantity of Plastic Waste Generated	15,300 MT Per Day (9% of Total MSW)
Per Capita Plastic Waste Generation	6 kg per capita per year
Plastic Collection and Recycling Rate	60% (India Leads in the world)
Recyclable Plastic composition in waste	80% (LDPE, PET, PVC, HDPE, PP, PS)
Non-Recyclable Plastic Composition in waste	20% (Alkyds, Epoxy, Non Recyclable Ester, Melamine formaldehyde, Polyurethane, Urea formaldehyde, Phenol formaldehyde, Silicons)
Cause of threat	<ul style="list-style-type: none"> ➤ Non-biodegradable in nature ➤ Non segregation ➤ Littering, burning and dumping at Landfill











What do legislations on plastic waste and packaging waste say?



Plastic Waste Management Rules 2016/2018

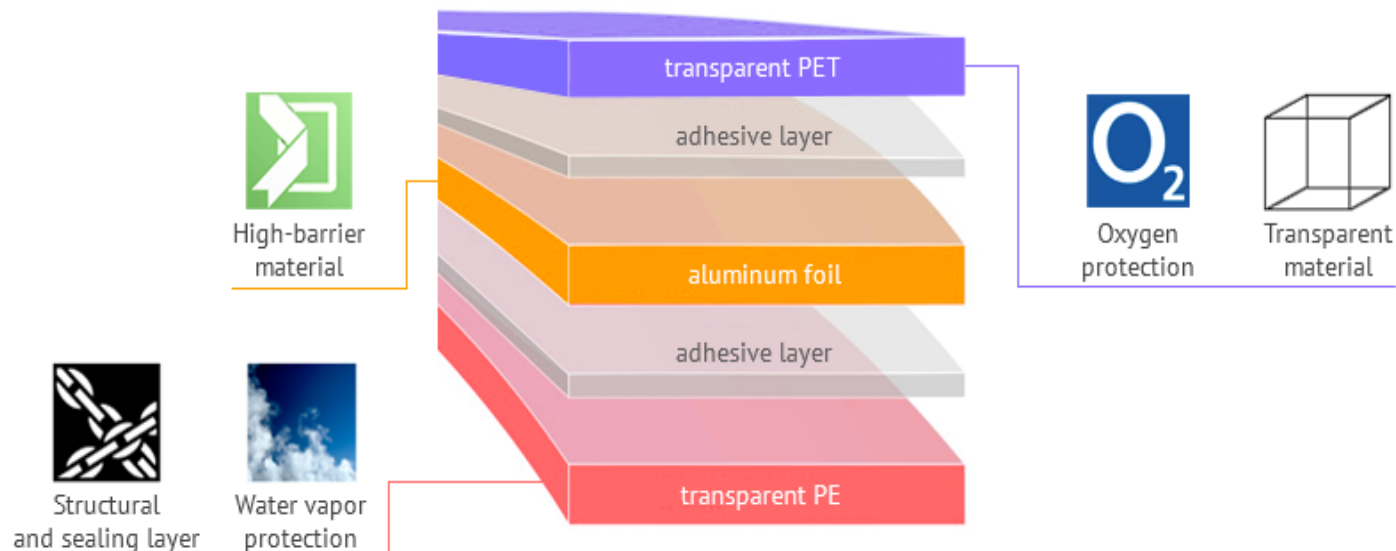
- Advocates collection and recycling processing of plastic wastes
- Introduced EPR (Producer/brand owner develop a mechanism to collect back post consumed packaging plastic waste)

Challenges in Implementation of PWM Rules, 2016

- Lots of ambiguity in the Rules
- Role of Producer/Manufacture/Brand Owner in EPR is not very clear
- No guideline for EPR
- Lack of knowledge and infrastructure for recycling and co-processing for Plastic Waste
- Major stake of informal sector in waste management
- High cost of collection, storage, transportation and treatment

What is MLP?

- Multi layered (ML) packaging comprises a thin foil of aluminum, which is sandwiched, or laminated in a matrix of paper and/or plastic layers.
- As per the **Solid Waste Management Rules (2016)**, “Multi layered packaging” means any material used or to be used for packaging and having at least one layer of plastic as the main ingredients in combination with one or more layers of materials such as paper, paper board, polymeric materials, metalized layers or aluminum foil, either in the form of a laminate or co-extruded structure.





Multi Layer Plastic

Issues with MLPs

- Low density
- Lack of recyclers/processors for MLPs
- No commercial value for MLPs waste
- Lack of collection system for MLPs
- Non-degradable properties
- Chocked drains and other water bodies
- Cause negative impact on the environment and health, if not collected and treated

MLP: Threat to Environmental and Public Health

- The most hazardous impact of MLP waste is its **Non – Degradable** properties. It takes more than 7000 years to degrade
- Its accumulation may lead to **clogging of water bodies** such as drains, rivers, canal etc. Because of its light weight it can flow away due to wind.
- It leads to water pollution, causes land infertility, disturbs the soil microbial activities, releases poisonous chemicals, thereby harming the human health and environment.
- It leads to death of cattle upon indigestion of plastic while eating other waste from dump yards.
- Many people use this waste for open burning as it burns for longer duration, which contaminates the ambient air by releasing highly toxic gases and creating air pollution hazard
- Also, there is **no proper system** evolved by majority of Municipal Authorities for collection, segregation and disposal of such plastic waste.

IPCA launched WE CARE Project on 28th November 2017



With the Consortium Partners'



With the Supporting Partners'



INDIA'S 1ST JOINT EPR INITIATIVE

WASTE

CONSORTIUM PARTNERS

SUPPORTING



WE CARE

Waste Efficient Collection and Recycling

Implemented by:

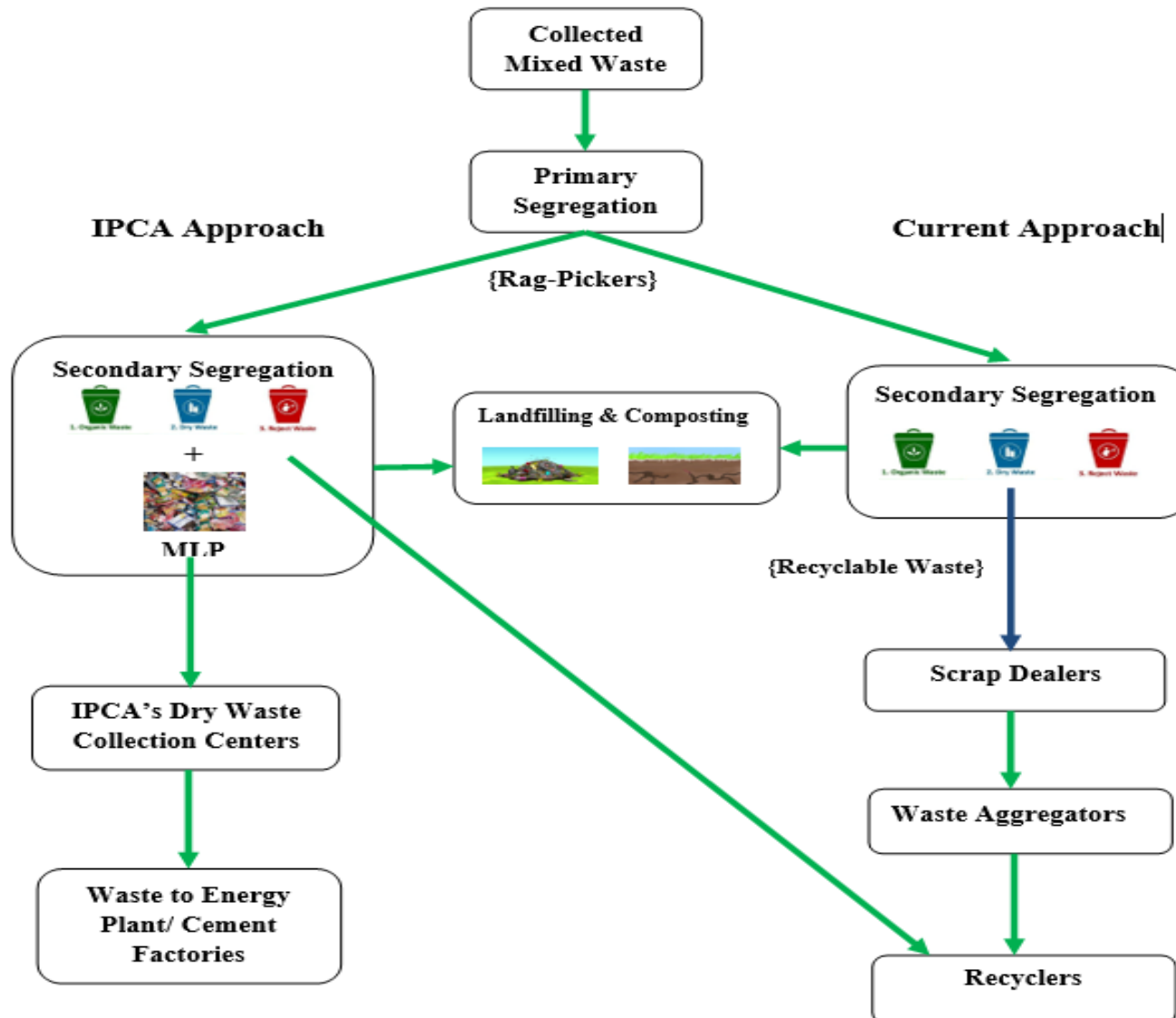


Launch of WE CARE

OBJECTIVES

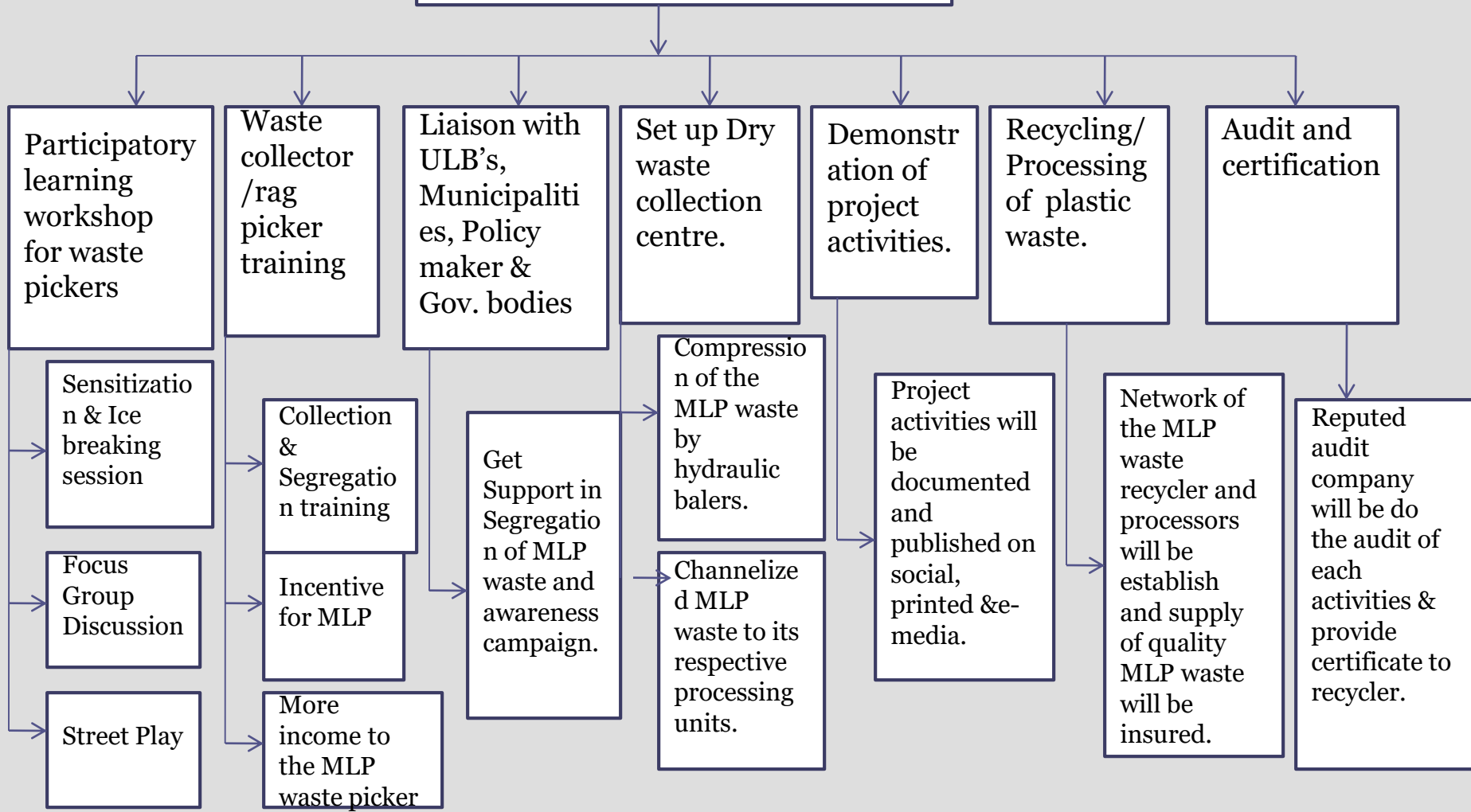
- To bring like minded and environment conscious brand to a common platform to strengthen the collection and processing of plastic waste
- To comply with PWM Rules 2016, which is recently amended with few amendment and now it is PWM (Amendment) Rules 2018
- To develop collect back mechanism of post consumed plastic waste
- To demonstrate plastic is recyclable and energy recoverable
- To develop a sustainable supply chain for the handling and processing of post consumer Plastic waste.
- To build up a network for waste pickers/waste dealers / traders / aggregators for collection and segregation of post consumed Plastic Waste.
- To encourage people to participate in source segregation of waste for betterment of our environment.
- Improving the sanitary condition of India through efficient waste management approach.

METHODOLOGY



Project Activities

Project Activities at a Glance



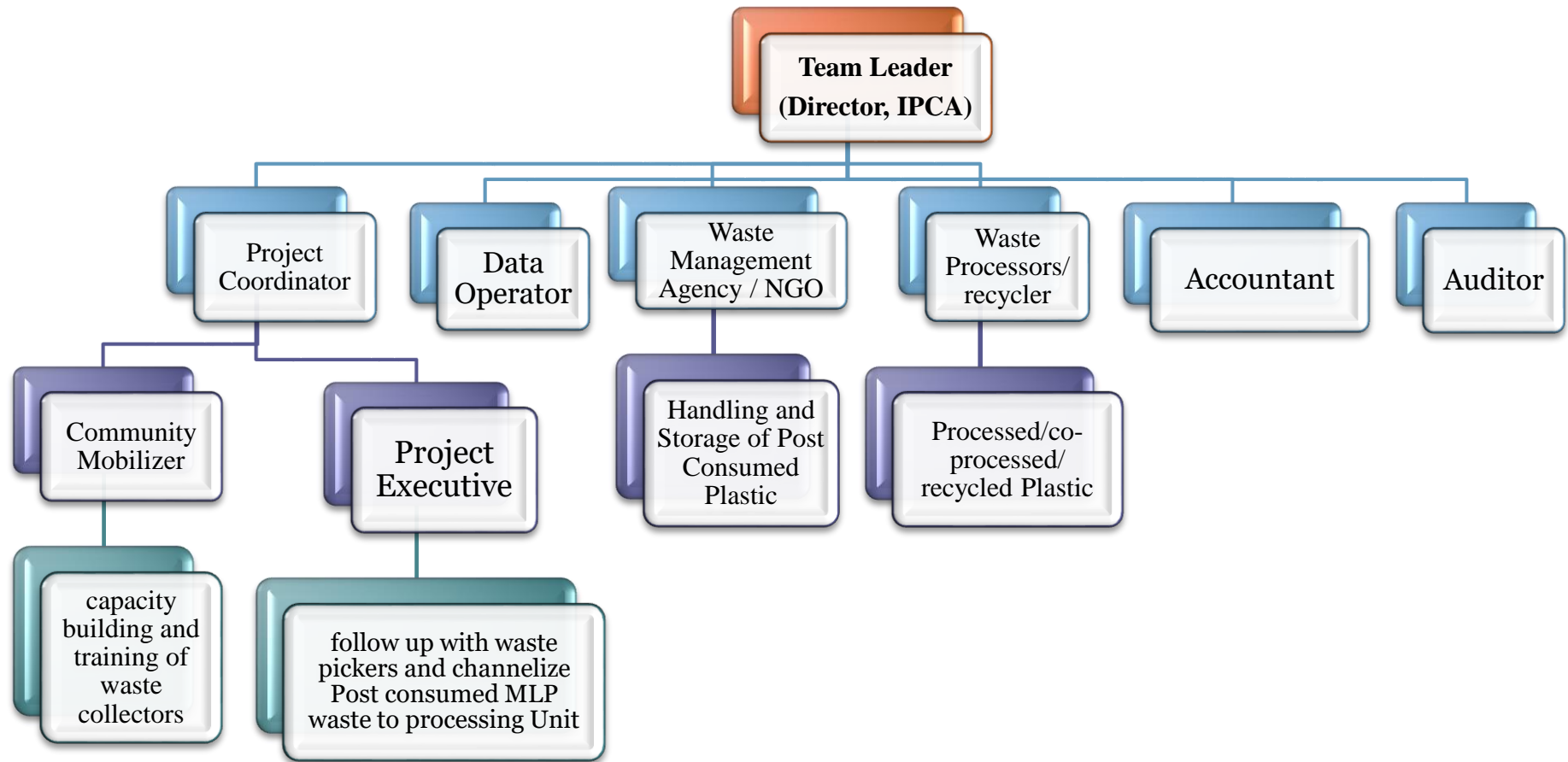
Set Up Dry Waste Collection Centre



Liaison with ULBs, Municipalities, Policy-Maker & Govt. Bodies

- IPCA is regularly Liaisoning with Key Opinion Leaders to disseminate the learning of project.
- IPCA has signed an agreement with EDMC, East Delhi Waste Processing Company Ltd., ACC Ltd. And Ambuja cement Ltd., Deluxe Recycler

IMPLEMENTATION TASK FORCE



PROJECT LOCATIONS

- Delhi
- Noida
- Ghaziabad
- Gurugram
- Faridabad
- Chandigarh
- Dehradun
- Mumbai



PROJECT ACTIVITIES



**Workshop with Waste Collectors/Segregators/
Waste dealers etc.**



**Workshop with Waste Collectors/Segregators/
Waste dealers etc.**



**Workshop with Waste Collectors/Segregators/
Waste dealers etc.**



Networking with Rag-Picker's Communities



Networking with Rag-Picker's Communities



Segregation of MLP



Segregation of MLP



Transportation of MLP Waste



Waste to Energy Plant Ghazipur

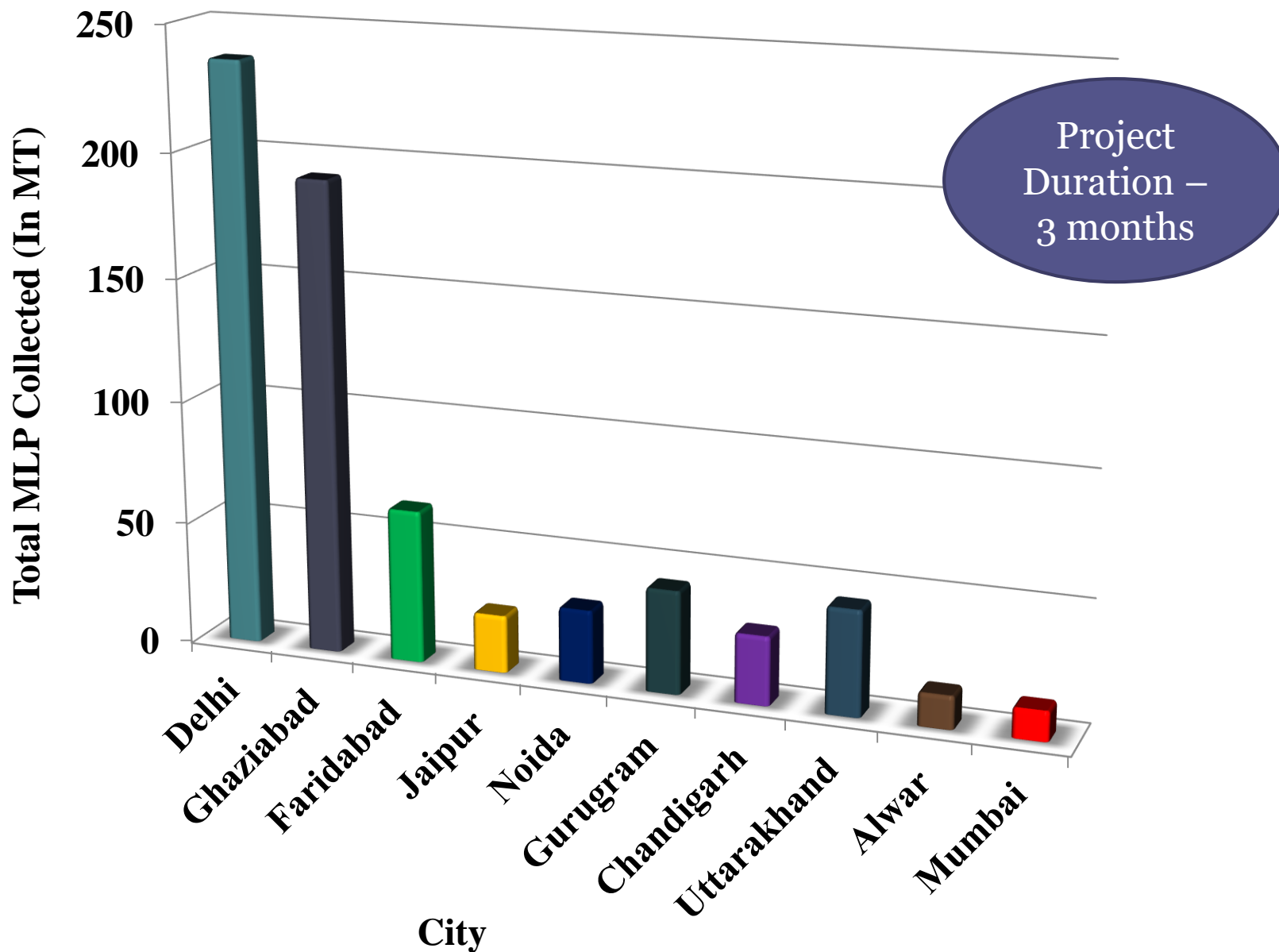


ACC Cement Plant, Gagal, H.P.

Project Deliverables

- Collect and store the post consumed plastic waste as per the target would provide.
- Process and recycle the collected waste through recommended and authorized recyclers and processors.
- Quarterly Diversion Certificate
- Third Party Audited Quarterly report

City wise Total MLP Collection



“WE CARE” FOOTPRINTS



ENVIRONMENTAL IMPACT

- Under this pilot project, a total of **664.210 tons of MLP** has been collected and processed in waste to energy plant and cement kilns
- This has also become a source of alternate fuel in cement kilns as it has high calorific values as compared to coal thereby cutting down the coal consumption by 40%
- This has also resulted in **mitigating CO₂** and equivalent gases emissions by **273000 kg** which is equivalent to **868660 kWh** of energy which can be in various application
- Thus, it is indirectly help in **growth of GDP** of country

SOCIO-ECONOMIC IMPACT

- Through WECARE, we managed to create a network of all the stakeholders includes Waste Collector, Segregator, Waste Dealer, Trader, Aggregator, Govt. Authorities, Municipalities, WtE & Cement Kiln Operators etc.
- It helped in converting **informal sector into formal** one by building a community of rag-pickers
- Approximately **1500 rag-pickers** were involved in collection and segregation of MLP
- For collection of MLP incentives were given to waste collectors, which helped them in earning **additional income of ₹ 3190** over their regular income

BIGGEST ACHIEVEMENT

PWM Rules 2016 amended with the following key points:

- Redefined Multi Layered Plastic and considered it under alternate use category and no need to phase out if use in the any form of energy recovery
- Central registration, if producer/brand owner is operating in more than two states.

IPCA Capacity in Plastic Waste Management

- IPCA has successfully executed pilot project (WE CARE) and collected and Processed 700 MT of Plastic Waste
- IPCA has developed a capacity to collect and processed 20,000 MT of Plastic waste in one year at Pan India.
- IPCA has developed a network of appx. 1500 waste collectors
- IPCA is already supplying plastic waste to authorized recyclers and processor.

THANK YOU