

Call for best practice Creating Zero Waste Communities

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Plastic Free Market

Background

The city of Noida, a bustling urban center in India, has grappled with persistent challenges in managing its solid waste. Over recent years, Noida has witnessed substantial population growth and economic development, resulting in a significant increase in the generation of solid waste. According to the Central Pollution Control Board (CPCB), Noida produces an astonishing 600 metric tonnes of solid waste daily, with expectations that this volume will double within the next decade. This alarming surge in waste generation has been further exacerbated by the rampant use of single-use plastics, posing not only an environmental threat but also intensifying the city's waste management woes.

To address these pressing issues, the “Plastic Free Market” campaign has been launched by Centre for Development Communication Trust, led by CA Shivangi Sultania, our Chief Sustainability Officer. The program is funded by HCL Foundation and supported by Noida Authority.

To achieve this goal, the project is working closely with market associations and raising awareness about the detrimental effects of plastic pollution, while simultaneously offering sustainable alternatives.

Objectives

The primary objective of the project is to develop a comprehensive guide to better living by means of creating “plastic free markets” in Noida.

- To reduce the usage of single-use plastic in the markets of Noida by organizing workshops on plastic waste management and generating awareness about plastic pollution and its alternatives.
- To implement sustainable waste management solutions in the markets to ensure the waste does not reach the landfill.
- To encourage market associations to create plastic-free zones and develop a plan to ensure the program’s sustainability.
- To create an enabling environment and behavioural practices promoting prolonged safe sanitation practices.

Focus of Best Practice

1) Reduction of Single use plastic: Implemented measures to decrease the use of Single-Use Plastics (SUP).

2) Use of alternatives to Plastic: Explore and adopt environmentally friendly materials as substitutes for traditional plastics in various applications.

3) Implemented waste reduction strategies: Compost organic waste, and Deposit Refund Scheme (DRS) for cloth bags to promote responsible waste management and reduce landfill waste.

Initiative Description

Target Audience

The geography of operations of the project is 10 markets in Noida and it’s an ongoing project for 12 months, started in 17th February.

The following are the key strategies to achieve the project's objectives:

- 1. Focus on waste management:** The project focused on the management of waste generation in the identified markets by implementing sustainable waste management solutions.
- 2. Generate Awareness:** The project organized workshops on plastic waste management, IEC campaigns on reducing the usage of single-use plastic, and generate awareness about plastic pollution and its alternatives. The project also works closely with market associations to create plastic free zones.
- 3. Stakeholder Engagement:** The project engaged with all stakeholders, including the market associations, vendors, and consumers, to ensure the success of the project. The project will work closely with the market associations to develop a plan for sustainable waste management and create plastic-free zones.

Key Initiatives and highlights

- 1. Baseline Survey** – The baseline survey activity aimed to collect data on the current practices and perceptions related to solid waste management and plastic usage in 10 markets in NOIDA. The survey included questions on the types and quantities of waste generated, waste segregation practices, plastic usage patterns, awareness about plastic pollution, and willingness to adopt sustainable practices. The CDC team had conducted a baseline survey in April to assess the awareness of 563 shopkeepers about their plastic-free market project. As part of this survey, the team informed the shopkeepers about the project and conducted interviews using a structured questionnaire.

Market Detail

S. No.	Market Name	Sector	No. of shops	Total Survey
1.	Central Market Inclusive of Vending zone	50	135	123
2.	Savitri Market	18	70	57
3.	Gardenia Glory (High-Rise Apartment Market)	46	58	55
4.	Jalvayu Vihar Market	25	48	27
5.	Fruit Market Atta	27	50	35
6.	Damodar Market Inclusive of Vending Zone	37	90	84
7.	Rasoolpur Nawada b block Market	62	44	40
8.	Ever green market	41	50	42
9.	Godavari Market	37	38	30
10.	Jaipuriya Market Inclusive of vending zone	27	114	70
			697	563

Table 1 Market Detail

2. IEC Content Designing - CDC team used graphic design software to create a visually appealing design for the flyers.

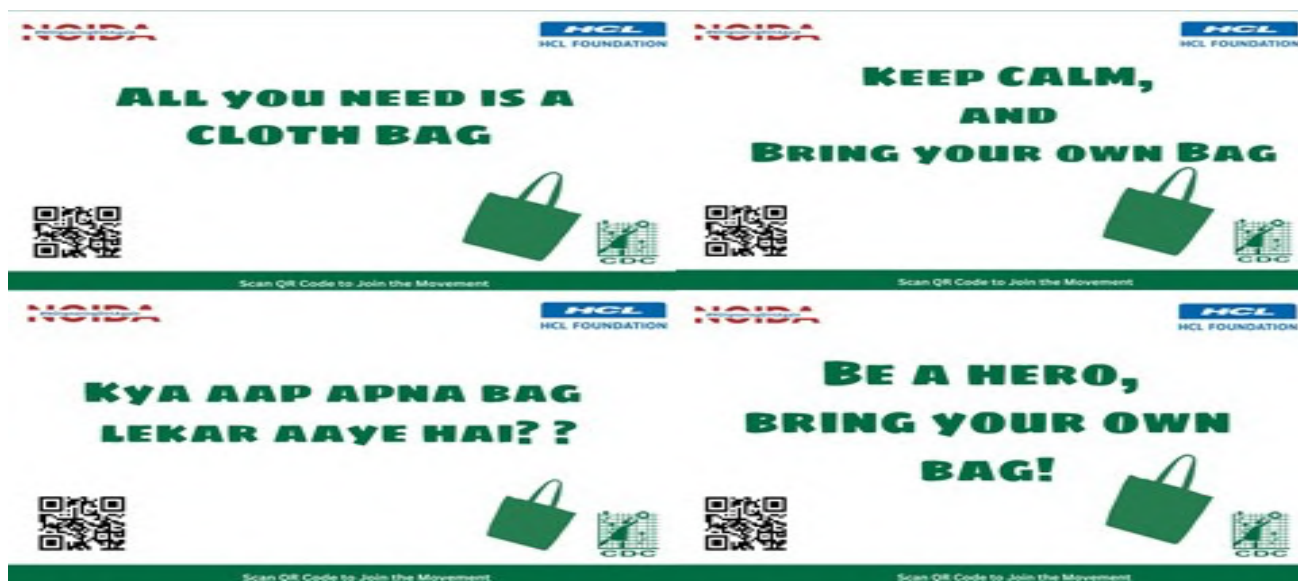


Figure 1 IEC Content



Figure 2 IEC Content outside sweet shop

- **Noida Day Event** - Noida day celebration on 15th and 16th April held at Noida stadium was a successful event that aimed to make Noida self-reliance and sustainable. CDC introduces Prakriti as the plastic awareness mascot. It was receiving well by people who took selfie with Prakriti.



Figure 3 Noida day event

3. IEC Activities

- Awareness Shopkeepers and Consumers** - CDC's efforts to raise awareness among shopkeepers and consumers about the harmful effects of plastic have yielded positive results. Through various initiatives, such as workshops, information sessions, and educational materials, the CDC team effectively communicated the need to reduce plastic waste and provided sustainable alternatives.

IEC Awareness data in 10 Markets

Total Shopkeeper aware	563
Total Consumer aware	2984

Table 2 IEC Awareness



Figure 4 Shop to Shop Awareness

b) Meeting with Market Association:

During the meeting, CDC team shared their findings and insights regarding the cleanliness and plastic waste management in the market. They emphasized the negative environmental impact of SUP and the importance of adopting sustainable alternatives. The team also highlighted the significance of proper dustbin placement and waste segregation practices in creating a cleaner and more hygienic market environment.

c) Capacity building training

CDC had conducted Capacity building training for shopkeepers on SUP (Single-Use Plastics) usage, alternatives, segregation, and other related topics.

No. of CBT	Total participant
15	278

Table 3 Capacity building Training



Sec 37 – Godavri Market



Sec 37 – Damodar Market

Figure 5 capacity building training

d) Anti-Plastic Drives

CDC team organized 4 anti-plastic drives in Sec 62 B block, Sec 37 Godavari, Sec 25 Jalvayu vihar and Sec37 Godavari market, wherein challans were made for Shops still using Single Use Plastic. Raising awareness among shopkeepers about the ban on single-use plastic and educating them about the harms of plastic on oceans, rivers, and water bodies can have a positive impact on reducing plastic pollution.

No. of Anti-Plastic drive	Total participant	No. of Challans
12	354	34

Table 4 Anti-plastic drive



Figure 6 Cleanliness drive

e) Quiz Competition in Markets

CDC has been organizing quiz competitions for consumers. The objective is to raise awareness about the environment and local knowledge related to Noida.

- **Quiz Timing:** The duration of the quiz has been kept as 1 minute wherein 3 question are asked to any consumer
- **Question Selection:** 9 questions were selected for the quiz related to environment and Noida specifications like World environment day celebration, Impact of plastic waste and when Noida was establishing etc.
- **Prizes:** Participant giving right answers receive a cloth bag or biodegradable cutlery.

f) Games Activity

CDC team has introduced a series of games aimed at raising awareness about waste management and plastic waste. These games are designed to engage consumers and help them better understand

the importance of waste management practices and the impact of single-use plastics on the environment.

- 1- Snake and ladder
- 2- Ring toss
- 3- Throw ball
- 4- Scavenger hunt / Recycle Relay
- 5- Bowling Segregation game

Sector	Market Name	Total Participant
46	Gardenia Glory	151
37	Damodar Market	147
50	Central Market	122
18	Savitri Market	121
26	Jaypuriya Market	118
27	Atta Fruit Market	130
37	Godavri Market	136
46	Gardenia Glory	119
50	Central Market	126
18	Savitri Market	124
	Total	1274

Table 5 Games data



Figure 7 Games

g) Dangler for awareness

CDC team created dangler for awareness in markets. This dangler is strategically hung in prominent locations to bring attention to the issues of single-use plastic and carry bag usage. The dangler features impactful quotes that resonate with the public and encourage positive behaviour changes.

Sector	Market	Total Dangler
27	Atta fruit Market	20
62	B block Market	28
18	Savitri Market	20
37	Damodar Market	60
25	Jalvayu Vihar	25
37	Godavri Market	25
46	Gardenia Glory	35
41	Evergreen Market	35
50	Central Market	40
26	Jaypuriya Plaza	80
27	Atta fruit Market	20
	Total	368

Table 6 Dangler



Figure 8 Dangler sample



Figure 9 Dangle at shops

4. Pilot DRS

The implementation of the **Deposit Return Scheme (DRS)** in Sector 62 Market, Godavari Market, Damodar Market marked a significant step towards combating the rampant usage of single-use plastic carry bags in these areas. As part of this pioneering initiative, a DRS pilot program has been launched, aiming to bring about a positive transformation in the community's approach to plastic waste management. By introducing a deposit system, consumers are encouraged to return used plastic bags, promoting responsible and sustainable practices.

A customer is charged 20 Rs for each bag, and the same is refunded once the customer returns the bag. Till date, 1200 bags have been issued another this initiative.

Shop Name	Type of Shop	No. of Bags
Gaur Enterprises	Sweet	140
Namkeen	Beverage	135
White Drycleaner	Dray Clean	235
Evergreen	General store	140
Annapurna	General Store	235
Ridhi siddhi	Gift Shop	135
New Neelkanth	General store	140

Table 7 DRS data



Figure 10 Pilot DRS

5. Beautification

a) Clean-up drives

The CDC team organized clean-up drives in 3 different locations: Sec 62 B block Market, Sec 27 Atta fruit Market and sec 18 Savitri Market. These clean-up drives were conducted with the participation of dedicated volunteers. Plastic waste was handed to ragpickers for generation of livelihood

No. of Drives	Total participant	Total waste KG	Total waste given to rag picker KG
27	260	2170	355

Table 8 Clean-up data



Figure 11 Clean-up drives

b) Wall Arts

CDC team had taken a creative and impactful approach to beautifying market areas and promoting cleanliness through the art of wall art. Till date around 2500 Sqft of Noida has been beautified with our initiative

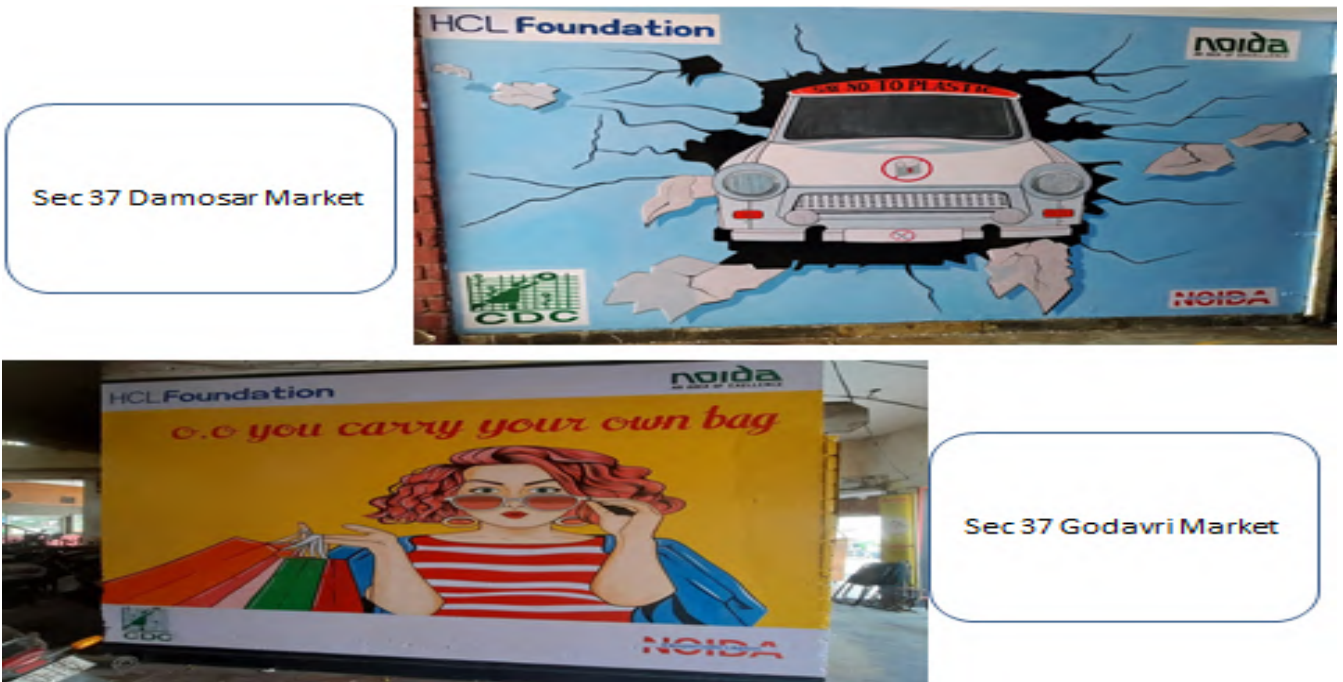


Figure 12 Wall Arts

c) Benches made of Plastic Waste

CDC team has procured and installed benches made of plastic waste in the markets. Each bench has resulted in diversion of 41 Kgs of Plastic Waste from the Landfill. 5 such benches have been installed in vibrant colors in the markets .



Figure 13 Benches

6. Events organized by CDC

• World Environment Day

World Environment Day is an important global event celebrated annually on June 5th. It serves as a platform to raise awareness about environmental issues, promote sustainable practices, and encourage collective action to protect the planet. Here is the campaigning and preparation about World Environment Day:

1. Consumers and Shopkeeper awareness about the event
2. Printing of banners and other things
3. Invitation to Guests and officials

CDC organized a successful World Environment Day event in Sec 50 Market with the theme "#Beattheplasticpollution". The event aimed to raise awareness about the harmful effects of plastic waste and promote a plastic-free market.

Links:

- <https://noidadastak.com/noida-news-nukkad-natak-gave-the-message-of-being-plastic-free-and-garbage-free/>
- <https://youtu.be/hSYCXK7p-gY>
- [नोएडा में एचसीएल फाउंडेशन ने की स्वच्छता अभियान की शुरुआत \(janatamanch.com\)](https://janatamanch.com)



Figure 10 world environment day

● **Swachhta Wali Azaadi Event**

Centre for Development Communication organized a felicitation ceremony with the aim of recognizing and appreciating plastic-free shops that have taken significant steps to reduce their usage of plastic. 40 shops were appreciated for going plastic free within 4 months of the project initiation.



Figure 13 Independence Day Event

● **World Clean-up Day**

CDC organized a capacity-building training for approximately 200 children from “The Earth Paradise School.” The training focused on educating children about plastic waste, its impact on the environment, and ways to reduce and recycle it.



Figure 14 World Clean-up Day

Funding and Budget

The initiative to create a "Plastic-free Market" under the Clean Noida flagship program, funded by the HCL Foundation.

S. No.	Budget Head	Total
A	Human Resource	20,60,000
B	Communication Campaign & Information & dissemination	10,48,000
C	Innovation & System strengthening	2,28,580
D	Reports and Documentation	20,000
E	Admin + Misc.	60,000
G	NGO management cost	2,68,526
	Total Project Cost	36,85,106

Table 9 Budget

Outcomes

S. No.	Output	Outcome	Target Achieved
1.	Baseline survey and report	<ul style="list-style-type: none"> Assessment of the practices including knowledge attitude practices, pattern of waste generation. 	<ul style="list-style-type: none"> Total shopkeeper surveyed: 563 Total consumer surveyed: 560

2.	Strengthening of Market association	<ul style="list-style-type: none"> Achieved SUP Reduction. Shopkeepers sensitized about harm of SUP. Formulated an eco-club and build strong relations with associations. 	<ul style="list-style-type: none"> Total no. of Shopkeeper awared: 563 Total no. of eco-club formed: 2 Total no. of danglers installed: 368
3.	Wall art for awareness	<ul style="list-style-type: none"> Consumers sensitized about SUP. Stakeholders opting SUP alternatives. 	<ul style="list-style-type: none"> Total area painted: 2500 Sq ft. Total plastic free shops: 58
4.	Capacity Building Training	<ul style="list-style-type: none"> Awareness in these markets in regards with the side effects of Single Use Plastic and alternatives available for SUP. 	<ul style="list-style-type: none"> Total no. CBT: 15 Total participants in CBT: 278 Total Shopkeeper aware: 563 Total Consumer aware: 2984
5.	Anti-Plastic drive and clean-up drive	<ul style="list-style-type: none"> Consumer were made aware about sup and segregation. Shopkeeper were made aware about SUP usage and segregation in both market. 	<ul style="list-style-type: none"> No. of Anti-Plastic drive: 12 Total participant: 354 No. of Challahs: 34
6.	Composting unit	<ul style="list-style-type: none"> Segregation of waste. 	<ul style="list-style-type: none"> Total composting unit: 2
7.	Placement of twin bins (110 ltr with welding) at strategic location.	<ul style="list-style-type: none"> Availability and accessibility of twin bins in the markets. Segregation of waste. 	<ul style="list-style-type: none"> Total no. of twinbin installed: 30
8.	Setting up of DRS to encourage return of SUP	<ul style="list-style-type: none"> Reduction in usage of SUP. 	<ul style="list-style-type: none"> Total Pilot DRS: 3 markets Total no. of cloth bags: 1200
9.	Games and quizzes	<ul style="list-style-type: none"> Awareness in these markets in regards with the side effects of Single Use Plastic and alternatives available for SUP. 	<ul style="list-style-type: none"> Total no. of games: 5 Total Participants: 1274
10.	Installation of recycled benches	<ul style="list-style-type: none"> Awareness in these markets in regards with the alternatives available for Single Use Plastic. 	<ul style="list-style-type: none"> Total benches installed: 5

Table 10 Outcomess

Lessons Learned

Implementing a sustainable city initiative brings forth valuable lessons, along with its fair share of challenges and successes. Resistance to change, often a natural human reaction, posed a significant hurdle during our initiative. To overcome this, we found that open communication and community engagement were essential, with public forums and workshops helping address concerns and spread awareness. Another lesson we learned was the prevalence of a lack of awareness about the benefits of sustainability. To counter

this, ongoing public awareness campaigns and educational programs proved effective, utilizing various communication channels such as social media and local media outlets.

The cost implication of sustainable initiatives was another substantial challenge. Convincing stakeholders of the value of these initiatives required demonstrating the return on investment (ROI) through detailed pilot projects. Regulation and enforcement, crucial for ensuring compliance with sustainability goals, presented challenges of their own. Clear regulations, complemented by close collaboration with law enforcement, were found to enhance compliance, although it required continuous monitoring and updates to stay relevant.

Changing behaviors was identified as fundamental to sustainability, but it also posed difficulties. Incentivizing sustainable practices through rewards, tax incentives, or community recognition was found to be an effective strategy. When it came to funding, leveraging Corporate Social Responsibility (CSR) proposals was a valuable resource. However, competition for CSR funds was fierce, necessitating compelling proposals aligned with corporate objectives and maintaining strong partnerships with local businesses. Lastly, diversifying funding sources was critical, with grants, public-private partnerships, and community contributions being vital components of a stable financial foundation. Exploring innovative financing mechanisms like green bonds or impact investments further contributed to the success of our initiative. In conclusion, these lessons, challenges, and successes provide a valuable roadmap for future sustainable city initiatives aiming to create greener, more resilient communities.

Conclusion

The project undertaken in Noida to combat the pervasive issue of single-use plastic in local markets has demonstrated a comprehensive and multifaceted approach to addressing this pressing environmental concern. The initiative commenced with a meticulous assessment phase, which included feasibility studies and baseline surveys. These activities provided invaluable insights into the prevailing state of plastic usage in these areas. Effective stakeholder engagement played a pivotal role in securing support and commitment, while capacity-building initiatives empowered market associations to actively contribute to the project's success. The project's emphasis on beautification through murals, graffiti, and art installations not only added aesthetic value but also likely fostered community engagement and support. Promoting sustainability by encouraging the adoption of eco-friendly alternatives, coupled with the precise execution of activities across ten markets in Noida, showcased the project's dedication to achieving tangible change. Furthermore, community involvement and the utilization of digital platforms for outreach, including creative content and

social media campaigns, have collectively formed a comprehensive and impactful strategy to transform these markets into plastic-free zones. This project serves as an inspiring exemplar of how a holistic approach can effect positive environmental change at the local level.