CII-ITC Centre of Excellence for Sustainable Development

Confederation of Indian Industry

CII INDIA PLASTICS PACT

Final report

Understanding consumer perception on plastic packaging and waste in urban India

Study conducted by

NIQ

Project supported by

WRAP

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Executive summary

This study, commissioned by the Confederation of Indian Industry (CII) as part of the India Plastics Pact initiative and conducted by Nielsen IQ, offers a comprehensive exploration of consumer attitudes, behaviors, and preferences surrounding plastic packaging and sustainable alternatives. The research uses a dual-method approach—qualitative depth interviews and a large-scale quantitative survey covering 1,034 respondents across Delhi, Mumbai, Kolkata, and Bengaluru, including both urban and peripheral zones. It reveals critical insights into India's evolving landscape of environmental consciousness, packaging expectations, and behavioral readiness for sustainability.

Packaging as a purchase driver and environmental cue

Consumers today see packaging not merely as functional but as a powerful indicator of product quality, brand values, and environmental responsibility. The study finds that a vast majority (84%) place high importance on packaging in their purchase decisions indicating it is a cue for product quality and trust. Key attributes such as **durability**, **ease of use**, and **brand recognition** dominate preferences, but **environmental friendliness** is also gaining ground—particularly among NCCS C consumers, challenging the notion that sustainability is only a concern of premium buyers.

Material preferences reflect this balance of pragmatism and environmental aspiration. **Plastic remains the most used packaging**, favored for its water resistance and cost-effectiveness, especially in food staples, personal care, and cleaning products. However, many consumers are also aware of the impacts of plastic use/management—**59% associate it with environmental damage**. Meanwhile, materials such as **paper** (for snacks and dry goods), **glass** (for beverages and toiletry items), and **biodegradable packaging** are increasingly being considered a viable substitute, depending on product category and usage context.

Trust, curiosity, and skepticism in label engagement

One of the more nuanced findings of the study comes from analyzing consumers who actively look for sustainability information on packaging; while consumers are becoming more engaged with sustainability messaging, **trust is not absolute**—even among the most attentive segments. For many, label engagement is tempered by a lack of visible verification or credible standards. This underscores the importance of **transparent, third-party verified labeling**, **visible certification marks**, and **consistency in sustainability claims**, which together can bridge the gap between curiosity and brand loyalty.

Conceptual clarity is also a challenge—many consumers **confuse compostability with recyclability**, and 59% incorrectly believe that compostable plastics can be recycled like conventional plastic. This points to the need for **better public education** and **simplified communication** around sustainability terminology.

Qualitative insights reinforce these patterns: while awareness is high, **skepticism about quality, hygiene, and durability** of recycled packaging persists, particularly for food and personal care products. Consumers seek **reassurance through visual cues**, **clear symbols**, and **familiar brand names** before trusting sustainable packaging claims.

Sachet usage: high utility, low awareness

Sachets are almost ubiquitous in Indian households, with **89% of consumers reporting sachet use**, especially in NCCS B and C households. Sachets are widely adopted for affordability, portability, and single-use convenience. However, **perception of sachets' environmental impact varies sharply** by geography and NCCS. Among those who view them as problematic, top concerns include littering, difficulty in collection, and lack of proper disposal mechanisms.

Refill and return models: emerging acceptance

The study identifies strong conceptual support for **refill and returns models**, particularly for pantry staples, household cleaning products, and edible oils. **Refill-at-home** is the most familiar and practiced model, while **store-based refill (refill-on-the-go)** and **return-at-store models** are still nascent in awareness but well-received when explained. Hygiene, trust, and convenience are seen as prerequisites for scale-up, and qualitative feedback highlights that **evolved urban consumers show significant openness**—provided infrastructure and pricing align with expectations.

Waste segregation: a keystone behavior with systemic barriers

Waste segregation emerges as a **keystone behavior**, practiced always by 46% and sometimes by another 35%—particularly in cities like Mumbai and Bengaluru. Cross-tabulations with the COM-B (Capability, Opportunity, Motivation–Behavior) framework show that households that consistently segregate:

- Are **more likely to engage in other sustainable behaviors**, such as using refills, checking labels, and properly disposing plastic waste.
- Display **higher awareness** of recyclable materials and special collection drives.
- **Are motivated by community norms, family influence, and civic responsibility.**
- Are more likely to report **satisfaction with local waste systems** and **feel responsible** for environmental outcomes.

However, systemic gaps remain. Even willing households face **irregular collection services, lack of bins, and poor follow-through** from municipalities. Among non-segregators, **belief that "it makes no difference" because waste is later mixed** acts as a significant demotivator.

Building trust in the end-to-end system and **visibly showcasing positive local outcomes** will be essential to drive sustained behavioral adoption.

Belief in environmental impact drives tangible behavior

A particularly revealing insight arises from the analysis of **belief-action alignment in sustainable shopping**. Among those who **strongly believe** their individual efforts make a difference, there is a **clear preference for tangible, habitual improvements**:

- **43% prioritize carrying their own bags**
- **27% focus on using refills more often**

Conversely, those with weaker convictions about personal impact are more inclined toward **symbolic or passive actions**, such as supporting "eco-friendly" brands. This finding strongly reinforces the importance of **reinforcing belief in personal efficacy**

through storytelling, norm-based communication, and community engagement. Tangible cues and visible feedback loops—such as neighborhood cleanliness or community recognition—can help convert ambivalent intent into committed action.

Label reading and media channels: opportunity for influence

Consumers are increasingly attentive to **packaging labels**, especially those in NCCS A and urban zones. However, visibility and credibility of sustainability information remain inconsistent. Consumers who actively engage with labels seek:

- Certifications or **quality marks**
- Trustworthy cues like **QR codes** or endorsements

Skepticism coexists with curiosity—indicating that while awareness is high, **label design and validation need strengthening** to reinforce consumer trust.

TV and social media remain the most effective communication platforms, with significant influence observed in both current usage and preferred channels. Traditional formats such as newspapers and posters still play a role in peripheral regions and NCCS C. Peer influence, educational institutions, and municipal campaigns also shape consumer understanding— highlighting the need for **multi-platform, regionalized communication strategies**.

Conclusion: bridging belief, behavior, and systems

The Indian consumer is increasingly aware and selectively engaged in sustainability-related behaviors. Some kinds of consumers show stronger intent and willingness to pay premiums for greener products, but barriers around **trust, affordability, and system reliability** continue to limit scale. Notably, NCCS C consumers are not disengaged—they are environmentally concerned but constrained by infrastructure, cost, and informational gaps.

To accelerate the transition toward sustainable packaging and consumption, stakeholders must:

- **Design credible, affordable, and well-communicated alternatives**, especially sachets and daily-use items
- **Make sustainable options aspirational and accessible** through better packaging design and labeling
- **Invest in system-level transparency**, showing consumers that their efforts—like segregation—truly make a difference
- **Leverage trust, peer norms, and belief in efficacy** to influence mainstream behaviors
- **Reinforce keystone behaviors** such as label-checking, waste segregation, and reuse habits through reward, recognition, and rein

Chapter 1: Introduction

1.1 Background and rationale

The India Plastics Pact initiative, managed by the Confederation of Indian Industry (CII), is a collaborative initiative uniting businesses, governments, NGOs, and citizens to drive the development of a circular economy for plastic packaging in India. As part of this initiative, Collaborative Action Groups (CAGs) have been formed to address key thematic areas related to sustainable plastic use. These include:

- Promoting Reuse and Refill Business Models
- Enhancing the use of Films and Flexible Plastic Packaging
- Understanding citizen behaviour/attitudes
- Working towards achieving 25% average recycled content in plastic packaging

This survey is an activity undertaken by the CAG focusing on understanding citizen behavior and attitudes related to plastic packaging. The insights are intended to inform interventions that align with the broader goals of the India Plastics Pact.

Nielsen IQ was commissioned to conduct this study across the metropolitan cities of Delhi, Mumbai, Kolkata, and Bengaluru, including their peripheral areas. The findings presented in this report are based on primary survey data collected during the first quarter of 2025.

1.2 Research approach

To comprehensively capture consumer perceptions and behaviors regarding plastic packaging in India, a modular approach has been adopted, combining qualitative and quantitative components.

1.2.1 Qualitative module

The qualitative phase is designed to develop an in-depth understanding of consumer perceptions, knowledge, and attitudes concerning plastic packaging, recycling, and reuse. Insights from this phase are critical in shaping the structure and content of the quantitative survey tool.

1.2.2 Quantitative module

The quantitative phase builds upon the findings from the qualitative study to validate and generalize the key insights across a wider and more diverse population. It provides statistically robust data to guide strategic recommendations.

1.3 Methodology

1.3.1 Qualitative methodology

- Method: In-depth interviews (IDIs) conducted at respondents' homes
- Duration: Each interview lasts approximately 120 minutes
- Purpose:
    - Capture authentic consumer behavior and attitudes without external influence
    - Observe waste segregation/recycling/reuse practices in real-life settings
- Sample plan:

- Geography: Metro cities – Delhi, Mumbai, Kolkata, Bangalore, Chennai (urban and sub-urban areas)
- Respondent Profile:
  - Age: 18–45 years
  - Gender: Equal male-female split
  - Socio-economic class (NCCS): A, B, and C
  - Segmentation: 70% Mainstream consumers, 30% Evolved consumers
- No of In-depth Interviews -40 IDIs

1.3.2 Quantitative methodology

- Method: Face-to-face interviews using Computer-Assisted Personal Interviewing (CAPI) in local languages
- Instrument: Structured questionnaire primarily consisting of close-ended questions
- Sample Size: 1000 respondents across four metro cities and their peripheral areas
- Sampling Approach:
  - Area-based purposive sampling with 4–5 starting points per city
  - Systematic household selection using “Right Hand Rule”
- Respondent Profile:
  - Age: 18–60 years
  - Gender: Equal male-female split
  - Socio-economic class: NCCS A, B, and C
- Interview Duration: Approximately 20 minutes per respondent

1.4 Report structure and organization

This report is structured to provide a comprehensive understanding of consumer knowledge, attitudes, and practices related to packaging, waste disposal, and sustainability. It unfolds across multiple chapters,

Chapter 1: Introduction and study methodology
The opening chapter sets the context of the study, outlining its objectives, scope, and relevance. It also details the methodological approach adopted, including the sampling strategy, coverage, and data collection techniques, thereby establishing the foundation for the insights presented in subsequent chapters.

Chapter 2: Profile of respondents
This chapter offers a demographic and socioeconomic profile of the respondents, helping to contextualize the attitudinal and behavioral data that follows. It presents key characteristics such as NCCS classification, age, gender, household composition, and location type (Main City vs. Periphery), which serve as critical segmentation variables throughout the analysis.

Chapters 3 to 6: Thematic insights
The core analytical chapters of the report are thematically organized as follows:

- **Chapter 3** explores consumer preferences and perceptions around *Packaging materials*, focusing on both food and non-food categories.
- **Chapter 4** examines *Household waste disposal practices*, including

segregation behavior, infrastructural gaps, and community norms.

- **Chapter 5** delves into *Awareness and perceptions of recycled content in plastic packaging*, assessing knowledge levels, concerns, and willingness to pay.
- **Chapter 6** analyses *Shopping practices and sustainable choices*, bulk purchase, usage of shopping bags, refill packs, and refill stations.

Each thematic chapter is supported by descriptive statistics and segmented analysis. To provide a nuanced understanding of behaviors and perceptions, cross-tabulations have been consistently carried out by Socio-Economic Classification (NCCS) and location type (Main City vs. Periphery). This dual lens allows for capturing both economic and geographic variations in consumer responses, bringing out subtle but critical differences in attitudes and practices

Chapter 2: Profile of respondents and attitudinal overview

This chapter presents a comprehensive profile of the respondents who participated in the study, followed by an analysis of their attitudinal orientation toward environmental sustainability and waste management. The profile helps contextualize the representativeness and diversity of the sample, while the attitude section explores how these groups differ in terms of environmental beliefs and behavioral intent.

2.1 Profile of respondents

Quantitative survey

To ensure a representative and analytically robust dataset, the sample design adopted for this study included diverse segments across geographic, socio-economic, educational, and demographic dimensions. The respondents were drawn from four major metropolitan cities— Delhi, Mumbai, Kolkata, and Bengaluru, with deliberate inclusion of both urban cores and their peripheral localities. This allowed the study to capture variation arising from differences in urban infrastructure, access to services, and environmental consciousness.

The city-wise distribution was nearly uniform across the selected locations, with each city contributing roughly 15% to the total sample as per the plan, and peripheral areas making up approximately 40% of the total base. This segmentation aids in contrasting urban and peri-urban consumer behaviors and awareness levels.

From a socio-economic perspective, the sample was well-balanced, with NCCS A and NCCS B households comprising over 87% of the sample, ensuring representation from middle and higher- income strata. NCCS C households, representing relatively lower economic segments, accounted for 13%, enabling comparative analysis across economic ties.

The sample also reflected residential stability, with 77% of respondents residing in owned homes, suggesting a degree of settlement that supports consistent behavioral patterns and community engagement.

Educational attainment of the head of household was high overall—nearly one-third had completed graduate or postgraduate degrees, while an additional 59% had completed secondary schooling. This indicates a literate and informed population, capable of comprehending and acting upon sustainability-related information.

In terms of marital status, a large proportion (70%) were currently married, implying household- level decision-making units, while 22% were never married, often reflective of younger, independent consumers. Age distribution further supports this interpretation, with most respondents (72%) falling within the 26–45 years age range, representing economically active consumers.

Overall, the profile of respondents assures broad representativeness across relevant segments, enhancing the generalizability and policy relevance of the findings for stakeholders involved in environmental sustainability, consumer packaging, and urban waste management.

Table 1 *General profile of respondents (quantitative)*

Profile Category	Profile Dimension	N	Percent
City/location	**Delhi Urban**	154	15%
	Delhi Peripheral	100	10%

	Mumbai Urban	156	15%
	Mumbai Peripheral	101	10%
	Kolkata Urban	159	15%
	Kolkata Peripheral	103	10%
	Bengaluru Urban	155	15%
	Bengaluru Peripheral	106	10%
Socio-Economic Classification	NCCS A	451	44%
	NCCS B	452	44%
	NCCS C	131	13%
Accommodation type	Owned	798	77%
	Rented	236	23%
Education level	No Formal Education	2	0%
	Primary School (Class 1–5)	16	2%
	Middle School (Class 6–8)	72	7%
	Higher Secondary (Class 9–10)	271	26%
	Senior Secondary (Class 11–12)	342	33%
	Graduate	244	24%
	Postgraduate	82	8%
Marital status	Never Married	224	22%
	Currently Married	719	70%
	Widowed	91	9%
Age group	18–25 years	202	20%
	26–35 years	422	41%
	36–45 years	327	32%
	Above 45 years	83	8%
Total sample		**1304**	

Qualitative survey

A total of 40 in-depth interviews were conducted across four major cities: Delhi NCR, Kolkata, Mumbai, and Bangalore, including both urban and sub-urban areas. Respondents were categorized based on their environmental mindset (Evolved or Mainstream), gender, age group, and socio-economic classification (NCCS). In Delhi NCR, the urban respondents included a mix of males and females aged 18-45 years, with both evolved and mainstream environmental mindsets. The sub-urban area of Gurgaon had a similar demographic spread, with a notable presence of mainstream environmental mindset among both genders.

In Kolkata, the urban respondents were predominantly mainstream in their environmental mindset, with a balanced representation of males and females across various age groups. The sub-urban area of Rajarhat included both evolved and mainstream mindsets, with a diverse age range. Mumbai's urban respondents showed a mix of evolved and mainstream mindsets, with females being more prominent in the mainstream category. The sub-urban area of Thane had a similar demographic spread. Bangalore's respondents included both evolved and mainstream mindsets, with a balanced representation of males and females in both urban and sub-urban areas. This diverse group provides a comprehensive overview of consumer perceptions and practices related to plastic packaging across different demographics and regions. The following table gives the details of the consumers interviewed.

Table 2 *General profile of respondents (qualitative)*

Center	Urban/ Suburban	Environmental mindset	Gender	Age group	NCCS

Delhi NCR	Urban	Evolved	Male	18-25 years	A
		Mainstream	Female	26-35 years	B
		Mainstream	Male	36-45 years	C
		Mainstream	Female	18-25 years	B
		Mainstream	Female	36-45 years	A
	Sub-Urban (Gurgaon)	Evolved	Female	26-35 years	B
		Mainstream	Female	36-45 years	A
		Mainstream	Male	18-25 years	C
		Mainstream	Male	26-35 years	C
		Mainstream	Male	36-45 years	B
Kolkata	Urban	Evolved	Female	36-45 years	C
		Mainstream	Female	18-25 years	A
		Mainstream	Male	26-35 years	B
		Mainstream	Male	36-45 years	C
		Mainstream	Male	18-25 years	A
	Sub-Urban (Rajarhat)	Evolved	Male	18-25 years	B
		Mainstream	Female	26-35 years	A
		Mainstream	Female	36-45 years	B
		Mainstream	Female	18-25 years	C
		Mainstream	Male	26-35 years	C
Mumbai	Urban	Evolved	Male	26-35 years	A
		Mainstream	Male	36-45 years	C
		Mainstream	Female	18-25 years	B
		Mainstream	Female	26-35 years	B
		Mainstream	Female	36-45 years	A
	Sub-Urban (Thane)	Evolved	Female	36-45 years	B
		Mainstream	Male	18-25 years	C
		Mainstream	Male	26-35 years	A
		Mainstream	Male	36-45 years	B
		Mainstream	Female	18-25 years	A
Bangalore	Urban	Evolved	Female	18-25 years	C
		Mainstream	Female	26-35 years	B
		Mainstream	Male	36-45 years	A
		Mainstream	Male	18-25 years	B
		Mainstream	Male	26-35 years	C
	Sub-Urban (Kanakpura)	Evolved	Male	26-35 years	A
		Mainstream	Female	36-45 years	B
		Mainstream	Female	18-25 years	A
		Mainstream	Female	26-35 years	A
		Mainstream	Male	36-45 years	C

Segmentation criteria for consumers for qualitative survey

Mainstream consumer

Who: Consumers who typically follow conventional purchasing patterns and do not actively prioritize environmentally friendly products or sustainability in their decision-making.

Why: This segment is targeted to capture the prevailing attitudes and behaviors of the general population. Understanding their challenges and perceptions helps establish a baseline for designing effective interventions to improve waste management, recycling, and reuse practices

Evolved consumer

Who: Environmentally conscious individuals who actively engage in sustainable consumption practices, including waste segregation, recycling, and reuse at home.

Why: This segment is targeted to uncover the motivations and enablers behind sustainable behaviors. Insights from this group can inform strategies to increase awareness and encourage broader adoption of environmental initiatives.

2.2 Environmental attitudes of respondents

To gauge consumer orientation towards sustainability, respondents were asked to rate their agreement on five attitudinal statements using a five-point Likert scale. The following themes were assessed:

Statements:

A. I believe my individual actions can make a difference in reducing environmental pollution
B. The government should strictly enforce waste segregation and collection (via kabadiwallahs) practices
C. Brands should take more responsibility for the environmental impact of their packaging
D. I am willing to change my shopping habits to support environmentally sustainable practices
E. Educational campaigns are necessary to make people more aware of waste management and recycling

Responses to each of the above attitudinal statements were first aggregated at the group level (e.g., by city, sex, NCCS, education level) by computing mean scores. These scores were then tested using Bonferroni-adjusted pairwise comparisons and ANOVA, where applicable, to assess the statistical significance of differences across groups. This helped identify which demographic or geographic segments are more likely to agree with pro-environmental statements.

Key insights:

- Overall, there was strong agreement with all five statements, indicating high levels of environmental awareness.
- Agreement levels were consistently higher in urban areas, particularly in Delhi and Kolkata, than in peripheral and especially Bengaluru segments.
- Education had a strong influence: Households with graduate or postgraduate heads consistently reported higher levels of agreement across all statements.

- Age and NCCS showed minor variations but reinforced the trend that middle and upper socio-economic groups, as well as younger to middle-aged respondents, are more proactive in sustainable behavior.
- Gender did not show marked differences, with both male and female respondents reflecting similar environmental outlooks.

Table 3 *Mean agreement scores (selected highlights)*

Statement	Highest Mean Score (Group)	Lowest Mean Score (Group)
A. Individual action matters	Delhi Urban (4.71)	Bengaluru Urban (3.93)
B. Govt enforcement needed	Kolkata Peri (4.51)	Mumbai Peri (3.55)
C. Brand responsibility	Delhi Urban (4.57)	Bengaluru Peri (3.67)
D. Change shopping habits	Kolkata Peri (4.52)	Bengaluru Peri (3.74)
E. Need for education	Kolkata Peri (4.54)	Bengaluru Urban (3.72)

These insights will be further explored in subsequent chapters to understand how attitudes influence behavior regarding packaging choices, waste disposal, and sustainability adoption.

Chapter 3: Perception and preferences around packaging

Packaging today goes far beyond functionality—it is a crucial element in how consumers perceive product quality, brand values, and increasing environmental responsibility. In metro cities and their peripheral regions, where exposure to modern retail, digital platforms, and sustainability messaging is growing, packaging serves as a critical interface between brands and evolving consumer expectations.

This chapter explores how consumers in India's metropolitan centers and their surrounding peripheral areas engage with the packaging of food and non-food products. It examines their preferences, awareness, and attitudes across a spectrum of attributes—from visual appeal and durability to recyclability and environmental impact. As brands and policymakers push toward more sustainable packaging solutions, it becomes imperative to understand the degree of readiness and behavioral alignment among these urban and peripheral consumer groups.

The significance of this section lies in identifying how consumers in these areas balance the need for convenience, cost, and aesthetics with their environmental consciousness. By analyzing both perceptual and behavioral insights, this chapter aims to shed light on:

- The importance placed on packaging in purchase decisions
- Material preferences across product categories and contexts
- Awareness of and response to packaging-related sustainability claims (e.g., "recycled," "biodegradable")
- The perceived impact of packaging on product quality and safety
- Willingness to pay more for environmentally responsible packaging solutions

3.1 Importance placed on packaging in purchase decisions

When asked about the importance of packaging of a product in decision to purchase it, the responses indicate that consumers across metro cities and their peripheral areas generally place high importance on packaging in their purchase decisions. The mean score[1] across the total sample is 4.36, suggesting that packaging is regarded as a significant purchase factor.

These results largely align with cross-tabulated distributions and reaffirm the critical role packaging plays in shaping consumer perceptions and decisions, especially in peripheral regions, where packaging might serve as a key marker of product quality, safety, or brand value.

Table 4 *Packaging as a driver of purchase*

N = 1034	
Not Important at all	0%
Not Important	2%
Neutral	6%
Important	46%
Very important	46%
Mean Score	**4.36**

C.1. How important is the packaging of a product in your decision to purchase it?
*** Significant*

[1] Mean scores presented in this chapter are calculated from respondent ratings on a 5-point Likert scale. To ensure consistency in interpretation, all scales have been **recoded** such that **higher values indicate stronger agreement or importance**. Specifically, for positively framed statements, the coding is as follows: **Strongly agree = 5**, **Agree = 4**, **Neutral = 3**, **Disagree = 2**, and, **Strongly disagree = 1**. The **mean score** is then computed as the average of these numerical values across all respondents for a given item. Similarly for binary questions positive responses have been coded as 1, and negative as 0 (Yes-1, No-0).

3.1.1 Packaging priorities: a look into what matters to urban and peripheral consumers

Across both NCCS and urban geographies, durability, brand name, and environmental friendliness[1]* are the most influential aspects of packaging perception.

Table 5 *Packaging aspects that influence perception of the product inside it*

N = 1034	
Durability	47%
Brand Name/logo	43%
Environmental friendliness	43%
Appearance/design/ decoration/colors	37%
Information provided (e.g., ingredients, usage instructions)	35%
Material used	34%
Ease of use (e.g., reseal ability, opening)	33%
Thickness of packaging	16%

C.2 What aspects of packaging influence your perception of the product inside it? Top 3 shaded in green

Packaging matters: a qualitative exploration of visual and functional cues

Most respondents across cities are first drawn to packaging elements such as bold colors and sleek designs. For example, a respondent in Delhi shared, "The vibrant color of the packaging grabs my attention immediately."

In Bangalore, some respondents highlighted the impact of clear, transparent packaging on their purchase choices, especially for items like water and snacks.

Many participants associate durable, high-quality packaging with a sense of premiumness and brand reliability. As one respondent from Mumbai remarked, "If the packaging feels sturdy, it makes me trust the brand more."

The functionality of packaging was also a common theme, with most participants—particularly in Bangalore and Delhi—stressing the importance of easy-to-open and resealable designs. A respondent in Bangalore noted, "I prefer resealable packs for snacks because I don't have to transfer them to another container."

3.2 Perceptions of plastic packaging: balancing convenience with concern

After recoding the ranking scale so that higher scores reflect higher importance, the "Waterproof" (mean score: 5.2) emerges as the most valued quality of plastic packaging. This highlights a widespread consumer expectation for packaging

[1] The term 'environmental friendliness' was not defined by the interviewer and the results reflect the respondents own understanding of the term.

that protects contents from leakage and spoilage—a critical need in the Indian climate and for everyday usage.

Close behind are “Cost-effectiveness” (5.1) and “Durability” (4.8), reaffirming the importance of functionality and affordability in driving packaging preferences.

Attributes tied to sustainability— “Reusability” (4.7) and “Recyclability” (4.4)—rank moderately high, suggesting “eco-consciousness” among consumers, especially in urban centers. Meanwhile, features related to convenience and design, such as “Lightweight” (4.7) and “Flexible format” (4.2), also show relevance, aligning with modern lifestyle needs.

At the lower end, “Shatter/break proof” (3.0) is consistently the least prioritized attribute, suggesting that impact resistance is not a dominant concern for most consumers, possibly due to their familiarity with durable plastic formats in everyday use.

Table 6 *Plastic packaging qualities scores*

N = 1034	
Cost-effective	5.1
Durable	4.8
Flexible format	4.2
Lightweight	4.7
Recyclable	4.4
Reusable	4.7
Shatter / break proof	3.0
Waterproof	5.2

C.6 Rank the following qualities of plastic packaging in order of importance (top 3 highlighted in green)

When asked about the characteristics they associate with plastic packaging, many consumers across NCCS and geographies acknowledged both its utility and drawbacks, reflecting the dual perception of plastic in consumer consciousness. Harm to the environment emerged as the most cited association overall (59%); at the same time, convenience and availability remain key positives, each mentioned by over 50% of consumers, underscoring the everyday practicality that plastic offers. Affordability was cited by about 48% of respondents suggesting that economic considerations heavily influence plastic’s acceptability.

Table 7 *Characteristics associated with plastic packaging*

N = 1034	
Harmful to the environment	59%
Convenient / Easy to use	55%
Health hazards	53%
Easily available	52%
Affordable	48%
Strong/durable	44%
Lack of basic infrastructure (waste bins) and efficient collection	42%
Non- biodegradable	35%
Keeps products fresh for a longer time	32%
Protects products from damage and contamination	29%

Difficult to recycle	19%

C.7 Which of the following aspects do you associate with plastic packaging?

Plastic as the preferred packaging material: qualitative insights

Plastic remains the most used packaging material, primarily due to its durability and affordability. Most respondents across cities recognized its practical advantages, with one respondent from Gurgaon noting, "Plastic packaging is lightweight and easy to carry."
It is widely perceived as the most convenient material, given its waterproof and leakproof properties, which enable broader usage and enhance ease of handling in everyday contexts.

3.3 Awareness and understanding of compostable or biodegradable plastics: high interest, mixed clarity

62% of consumers reported having heard of compostable or biodegradable plastic, and among those aware, the most common understanding of compostable plastics was that they decompose within specific timeframes under certain conditions (71%), followed by the belief that they leave no toxic residue (65%) and are plant-based (62%). Interestingly, a substantial number (59%) also believed that these plastics can be recycled like regular plastics, indicating some conceptual confusion between biodegradability and recyclability. Very few consumers across groups selected *"Don't know/can't say"*, suggesting that even where awareness exists, the conceptual clarity around what makes plastic compostable remains mixed.

Table 8 *Awareness and usage of compostable or biodegradable plastic*

N = 1034	
% of consumers who have heard about Compostable or biodegradable plastic	62%
% of consumers who have purchased packaging labelled as compostable or biodegradable	48%

C.7.1 Have you ever heard of compostable or biodegradable plastic
C.7.3 Have you ever purchased packaging labelled as compostable or biodegradable?

Compostable packaging in practice: grocery and food related packaging lead the way

Among consumers who had purchased packaging labeled as compostable or biodegradable, the most purchased products were grocery bags (73%), followed by food containers and cutlery (69%) and garbage bags (60%). These results suggest that consumers are most likely to encounter compostable packaging in everyday utility items, especially those used for shopping, food consumption, and household waste disposal.

Food containers and cutlery were popular across the board, suggesting their widespread use in daily consumption and food service settings. In contrast, bottles or packaging materials were not as commonly encountered (19% overall).

Table 9 *Products purchased of compostable or biodegradable plastic*

N = 500	
Grocery bags	73%
Garbage bags	60%

Food containers and cutlery	69%
Bottles or packaging materials	19%

C.7.4. If yes (ever purchased packaging labelled as compostable or biodegradable), what type of products have you purchased?

3.4 Packaging as a quality cue: widely believed, regionally nuanced

Most consumers believe that packaging material plays a role in determining the quality of the product, with 48% stating it affects quality "to some extent" and another 40% saying it affects quality "significantly." This suggests that close to 9 in 10 consumers perceive a connection between packaging and product quality, reinforcing the idea that packaging is not just a protective layer but also a quality signal. Overall, the results highlight the role that packaging continues to play in shaping consumer perceptions – not just functionally, but in terms of trust, freshness and product integrity.

Table 10 *Packaging material and quality perception*

N = 1034	
Not Sure	5%
No, it does not affect quality	8%
Yes, to some extent	48%
Yes, significantly	40%
Mean	3.23

C.8 Do you think the packaging material affects the quality of the product?

3.5 Plastic and pollution: a widely shared concern across consumer segments

Most consumers strongly agree or agree that plastic packaging is a major contributor to environmental pollution, with a combined 85% agreement level across the total sample. This reflects broad-based environmental awareness, cutting across NCCS and cities. Such a perception could drive greater openness towards other business models, such as reuse, if reinforced with clear labelling and policy interventions.

Table 11 *Consumers' views on plastic packaging as a contributor to environmental pollution*

N = 1034	
Strongly disagree	1%
Disagree	2%
Neither agree nor disagree	12%
Agree	41%
Strongly agree	44%
Mean	4.26

C.13. How much do you agree with the statement: "Plastic packaging is a major contributor to environmental pollution

Inputs from the qualitative survey

Most evolved respondents *highlighted the environmental advantages, such as reducing plastic waste in landfills and curbing pollution. A Delhi consumer stated, "Recycled plastic helps reduce the amount of garbage burned or thrown into rivers."*

Mainstream respondents *recognized its role in reusability, with comments like, "It's better to reuse plastic than to keep making new plastic."*

3.5.1 Reducing plastic waste: consumers demand solutions

When asked what companies should prioritize to reduce plastic packaging waste, consumers showed strong support for actionable and visible changes, with the top responses being "use minimal packaging" (67%), "transition to biodegradable/compostable materials" (59%), and "invest in recycling initiatives" (61%). Overall, the insights point to a multi-pronged consumer expectation: companies must act not just through packaging innovation, but also via reduction strategies, infrastructure support and targeted communication.

Table 12 *Prioritizing action by companies to reduce packaging waste*

N = 1034	
Transition to biodegradable/compostable packaging materials	59%
Use minimal packaging	67%
Invest in recycling initiatives	61%
Take back used packaging from consumers	51%
Raise awareness about proper plastic waste management practices	47%
Others (Please specify)	0%
Don't know/can't say	4%

C.14 In your opinion, which of the following should companies prioritize to reduce plastic packaging waste?

3.6 Packaging labels as decision drivers: insights on awareness and priorities

Most consumers—72% overall—report that they usually read product labels before making a purchase, reflecting a strong interest in informed decision-making. This behavior is most prominent in NCCS A (79%) and in urban centers while significantly lower in NCCS C (55%) and some peri-urban areas (25%), highlighting both socio-economic and regional disparities in label engagement.

Table 13 *Practice of reading labels before making purchase*

N = 1034	
No	28%
Yes	72%

C.11 Do you usually read the labels on product packaging before making a purchase?

Among those who read labels, the top information sought includes expiry or "best before" dates (72%), nutritional details (62%), and ingredients or materials used (60%), showing a clear emphasis on health and safety. While recycling symbols (54%) and certifications (52%) are less commonly reviewed, they receive notable

attention in some areas, perhaps where consumers are conscious of environmental and quality elements of products and their packaging.

Table 14 *Information read on labels*

N = 745	
Ingredients or materials used	60%
Expiry or best before date	72%
Nutritional information (e.g., calories, protein, etc.)	62%
Recycling symbols	54%
Certifications or quality marks (e.g., ISO)	52%
Manufacturer or brand details	53%

C.12. If yes, what information do you typically look for on the labels?

3.6.1 Packaging aesthetics matter: visual appeal as a purchase driver

Visual appeal continues to play a significant role in consumer purchase decisions, with a combined 84% of consumers rating it as either *"important"* or *"very important."* The overall mean score is 4.15 (on a 5-point scale), indicating a strong leaning toward packaging aesthetics as a key influence at the point of purchase. Across socio-economic classes, this preference remains consistent, suggesting that visual packaging cues appeal across income levels.

Table 15 *Importance of visual appeal in purchase decisions*

N = 1034	
Not Important at all	1%
Not very important	3%
Neutral	12%
Important	49%
Very important	35%
Mean	4.15

C.15 How important is the visual appeal of packaging in your purchase decisions?

3.6.2 Willingness to pay for greener packaging: strong in cities, limited by affordability

A clear majority of consumers, 63% overall indicated that packaging which is better for the environment increases their willingness to pay more for a product, which could be taken to signal that sustainability is beginning to influence purchase behavior in meaningful ways. However, willingness varies significantly, as might be expected, across NCCS and geographies. The data highlight a key behavioural insight: while environmental consciousness is growing, the willingness to translate it into premium spending remains concentrated among higher NCCS and metro markets, underscoring the need for affordable alternatives and targeted awareness efforts in more cost-sensitive and less-informed markets.

Table 16 *Consumers willing to pay for packaging that is better for the environment*

N = 1034	
Yes	63%

No	31%
Can't Say	5%

C.16 Does packaging that is better for the environment increase your willingness to pay more for a product?

Interestingly, among those who expressed a willingness to pay more for environmentally friendly packaging (N=656), preferences are clearly skewed toward food products, with 46% stating this applies to food items, compared to only 25% for non-food products. Another 29% say they are willing to pay more for both, suggesting a broad but varied commitment to sustainability depending on the product category.

Table 17 *Preference towards willingness to pay more - food vs non-food*

N = 656	
Food product	46%
Non-food product	25%
Both	29%
Can't say	0%

C.17 If yes, is it for a food product or non-food product or both?

3.7 When packaging becomes a barrier: cost, quality, and visual appeal in consumer decisions

Nearly half of all consumers (48%) reported that they have hesitated to purchase a product because of its packaging material, highlighting growing consumer sensitivity to packaging-related concerns. This hesitation is most pronounced among NCCS A (56%) and in urban centers where consumers are more likely to evaluate packaging as part of their purchase decision.

Table 18 *Purchase hesitancy due to packaging*

N = 1034	
Yes	48%
No	47%
Can't Say	6%

C.18 Have you ever hesitated to purchase a product due to its packaging material?

Among those who hesitated (N=494), the top reason cited was concern about packaging quality and strength (85%), which was nearly universal across segments, while high price was the second most common reason (74%). A smaller segment (35%) cited a lack of visual appeal as a reason.

Table 19 *Reasons for hesitancy*

N = 494	
Higher price	74%
Quality and strength of packaging material	85%
Not visually appealing	35%

C.18.1 If yes, why did you hesitate?

These insights underscore that packaging decisions influence purchasing, and that price and quality are the most important considerations, much more so than aesthetics.

3.8 Plastic's second life: disposal patterns reflect gaps and opportunities in waste management

When asked how they dispose of plastic packaging after use, most consumers reported throwing it away with general waste (77%), followed by selling to scrap dealers/kabadiwallahs (61%), and reusing the packaging (54%).

Throwing plastic together with other kinds of waste remains the dominant behavior across all groups, pointing to persistent gaps in waste segregation practices.

Selling to scrap dealers/kabadiwallahs is relatively common (61% overall), highlighting the importance of the informal recycling economy in plastic waste management, especially in peripheral areas.

Table 20 *Disposal of plastic packaging*

N = 1034	
Reusing	54%
Throwing away with general waste	77%
Selling to scrap dealers/kabadiwallah	61%

C.19 What do you do with plastic packaging after you have used the product?

3.9 Understanding sachet usage and its environmental implications

This section delves into consumer behavior and attitudes related to sachet packaging formats widely used for affordability, convenience, and accessibility, especially in fast-moving consumer goods. Given the study's focus on plastic usage and packaging practices, sachets hold particular significance due to their single-use nature, high volume of circulation, and limited recyclability. The questions explore not just purchase behavior and frequency, but also the perceived environmental friendliness of sachets, the contexts in which they are preferred, and the potential impact of sustainable alternatives. This insight is critical to identify both the functional dependency on sachets across consumer segments and the willingness to shift toward alternative packaging that can be economically recycled or reused thus informing packaging innovation, policy direction, and consumer engagement strategies.

3.9.1 Sachet purchase: which products, on what occasions, and how often?

Sachets continue to be a staple of packaging consumption, with 89% of consumers across NCCS and geographies reporting they purchase sachets.

Consumer preferences also show strong situational dependence on sachets: 70% reported specific occasions when sachets are preferred over regular packaging. The most common drivers include travel, trial before full-size purchase, or needing smaller or more affordable options.

Table 21 *Sachet purchase frequency and occasions**

N = 1034	
% of consumers who purchase sachets	89%
% of consumers who regularly purchase sachets	36%

% of consumers who mentioned specific occasions when they prefer purchasing sachets instead of regular packaging	70%

C.22 Do you purchase sachets?
C.24 How frequently do you purchase sachets? (Regularly, Occasionally, Rarely, Never)
C.25 Are their specific occasions when you prefer purchasing sachets instead of regular packaging?

Among those who purchase sachets on specific occasions, the most cited reasons were needing a smaller option (77%) and affordability (67%), both pointing to sachets' practical role in meeting budget and portion-size needs. Travel-related use (66%) and trial before purchase (61%) were also common motivations. While unavailability of bulk packaging (49%) was a moderate factor, convenience or easy storage (21%) was far more prominent indicating that storage constraints and lifestyle needs may also drive sachet preference in specific contexts.

Table 22 *Occasions when sachets are purchased*

N = 726	
When traveling	66%
When trying a new product before buying a bigger pack	61%
When you need a smaller option	77%
When you need an affordable option	67%
When bulk packaging is not available	49%
For convenience or easy storage	21%

C.26 If yes, on which specific occasions when you prefer purchasing sachets instead of regular packaging?

When asked about the types of products typically purchased in sachet form, shampoo emerged as the most common, with 91% of consumers reporting its purchase, followed by tea or coffee (79%), sauces/ketchup (75%), and detergents (67%). Purchase of spices/seasonings (63%) and handwash/liquid soap (65%) in sachets, was also prevalent, as were skincare products (39%) and conditioners (68%).

Table 23 *Products purchased in sachets*

N = 922	
Shampoo	91%
Conditioner	68%
Hand wash or liquid soap	65%
Detergent powder/liquid	67%
Tea or coffee	79%
Sauces or ketchup	75%
Spices or seasoning	63%
Skincare products (e.g., face wash, cream, lotion)	39%

C.23 For which products do you usually purchase sachets?

3.9.2 Views on Sachets, their environmental consequences and openness to sachets in recycled plastic

Views on the environment friendliness of sachets are split. Close to 57% of consumers overall believe sachets are environmentally friendly.

Table 24 *View on sachets*

N = 1034	
% of consumers who said sachets are environment friendly	57%

C 22.1 Do you think sachets are environmentally friendly?

Among consumers who did not consider sachets to be environmentally friendly, the top concerns were that sachets are not disposed of correctly (72%) and are frequently littered (77%)—issues that were consistently raised across NCCS and geographies. Additionally, 53% felt sachets are too light and small to be collected for recycling. Nearly half (46%) also noted that sachets are not collected through regular waste management systems, with the highest concern in densely populated urban areas (about 85%).

Table 25 *Reasons why sachets are not considered environment friendly*

N = 351	
They are littered	77%
Not collected	46%
Not disposed correctly	72%
Too light and small to be collected for recycling	53%

C22.2 If no, (sachets are NOT environment friendly) why do you think so?

60% of consumers believe removing sachets from the market would affect them. The impact would mostly be felt in terms of affordability (22%), convenience (22%), and access to premium products (16%).

Table 26 *Consumers who would be affected in case of removal of sachets*

N = 1034	
% of consumers who mentioned getting affected If sachets are removed from the market completely	60%
% of consumers who mentioned unable to afford product in larger Packs	22%
% of consumers who mentioned loss of convenience (mobility)	22%
% of consumers who mentioned accessibility to premium products	16%

C28.2 If sachets are removed from the market completely, would it affect you? C28.3 If yes, how would it affect you?

Table 27 *Attitude towards environmentally conscious packaging*

	NCCS A	NCCS B	NCCS C	Total
N	**451**	**452**	**131**	**1034**
C.29 A I trust products with clear labels indicating whether they are made of recyclable materials	4.32	4.38	4.36	4.35
C.29 B I trust products with clear labels indicating whether they are made of recycled materials	3.75	4.06	3.92	3.91
C.29 C I feel encouraged to buy a product if packaging is better for the environment	3.93	4.17	4.08	4.05
C.29 D I feel encouraged to buy a product if packaging is reusable	3.91	4.10	4.05	4.01
Mean score	3.98	4.18	4.10	4.08

Color codes mean score: Dark green > …. > Red

Table 28 Attitude towards environmentally conscious packaging

	NCCS A	NCCS B	NCCS C	Total
N	**451**	**452**	**131**	**1034**
C.29 Products with recyclable packaging should not be priced higher than regular products	3.83	4.06	4.00	3.95
C.29 E Visual appeal of a packaging influences my perception of a product's value	3.88	4.15	4.11	4.03
C.29 G The design and appearance of packaging are more important to me than its environmental impact	3.85	4.11	4.11	4.00
Mean score	3.86	4.11	4.08	3.99

Color codes mean score: Dark green > …. > Red

3.10 Summary

Packaging in urban and peripheral India is no longer just functional—it has become a powerful cue for product quality, brand credibility, and environmental consciousness. This chapter explores consumers' perceptions, material preferences, and behavioral responses to packaging, revealing a shift toward more informed and sustainability-aware choices.

Across the board, packaging is rated as important in purchase decisions, with consumers consistently valuing durability, brand cues, and 'environmental friendliness'.

Material preferences show nuanced patterns—paper is widely favored for dry food and apparel, while glass dominates for liquids and toiletries. Plastic remains a mainstay, especially for cleaning and personal care, due to convenience and affordability, but is increasingly viewed with concern.

Consumers express a clear desire for companies to reduce plastic waste through minimal packaging, compostable materials, and recycling infrastructure. However, price sensitivity remains a barrier—most are willing to pay only modest premiums. Label-reading habits are high among NCCS A and urban consumers, with growing interest in expiry, materials used, and recyclability.

Sachets remain critical, especially for NCCS C and in cities like Mumbai and Bengaluru, where they are valued for affordability, trial, and travel. Yet environmental concerns loom large—many associate sachets with litter and non-collection

Disposal patterns reveal that reusing, selling to scrap dealers, and mixing with general waste are common, with informal systems playing a key role in peripheral areas.

In summary, urban and peripheral India is becoming more conscious of the environmental and aesthetic impact of packaging. However, awareness, affordability, and trust in labeling vary significantly by NCCS and geography. Bridging these gaps through better design, targeted education, and affordable innovation will be essential to drive adoption of sustainable packaging across the Indian consumer landscape.

Chapter 4: Understanding household waste disposal practices

Effective waste management is a cornerstone of sustainable urban living and environmental conservation. This chapter delves into household-level waste disposal practices, exploring not only how waste is discarded but also the underlying attitudes, awareness levels, and infrastructural constraints that shape these behaviors. The section begins with a focus on waste segregation—examining how households dispose of waste, the number of bins used, and whether segregation is practiced. It then explores motivations for and barriers to segregation, including community norms, environmental consciousness, and infrastructure availability. The chapter investigates how different waste types, including plastic packaging, are managed and perceived at the household level. Respondents' awareness of recycling protocols, knowledge sources, and preferred communication channels for promoting waste-related information are also assessed. Finally, the chapter captures perceptions of satisfaction with local waste management systems, self-assessed household responsibility, challenges faced, and suggested improvements. Collectively, these insights are critical to informing targeted interventions, driving behavioral changes, and strengthening community-level waste governance frameworks.

4.1 Patterns in household waste collection and disposal

In the localities and areas surveyed, household waste is most commonly collected by waste collectors (47% overall), and disposal into government waste trucks is the second most common method (30%). Using community waste bins is reported by 19%, while just 3% say they discard into garbage heaps.

Table 29 *Household waste disposal*

N = 1034	
Collected from my household by waste collectors	47%
Discarded into the government waste collection trucks	30%
Discarded into a waste bin in my locality	19%
Discarded in a garbage heap	3%

D.1 How do you dispose of your household waste?

Inputs from the qualitative survey

Most participants display moderate awareness of waste segregation, with examples like separating food waste (wet) from plastics and paper (dry).

Respondents in Delhi and Mumbai credited their ***children's school lessons*** *for introducing segregation practices to their households. For example, a parent in Mumbai stated, "My child keeps reminding me to use different bins because they learn about it in school."*

In Bangalore, several participants referred to ***campaigns run by municipal garbage trucks*** *that announce the need to segregate waste ➔ feel that this localized approach has increased awareness in certain neighborhoods*

4.1.1 Household bin usage and waste segregation practices

Bin usage patterns reveal distinct differences across socio-economic classes and city localities. Overall, 48% of households use a single bin, which could mean that waste is not segregated at source. 46% use two bins for wet and dry waste, indicating better adoption of segregation practices, while the use of multiple bins without segregation

remains low at 7%. These results could indicate gaps in awareness or enforcement of waste segregation.

Table 30 *Number of bins for waste disposal*

N = 1034	
One	48%
Two (wet and dry)	46%
More than one, but no segregation	7%

D.1.1. How many bins do you use for waste disposal?

4.1.2 Prevalence of waste segregation at household level

Segregation of waste at home shows considerable variation across socio-economic classes and city zones. Overall, 46% of households report always segregating waste, while 35% do so sometimes. However, 19% do not segregate at all, indicating that a significant proportion of households do not practice basic waste sorting.

Segregation is highest among NCCS A (50%) and lowest in NCCS C, where one-third (32%) never segregate—highlighting a clear socio-economic divide. Among the cities surveyed, Mumbai and Bengaluru show higher rate of segregation in comparison to other cities surveyed; suggesting better infrastructure, awareness, or municipal efforts in these areas.

These findings underscore the need for targeted awareness campaigns and stronger waste management systems in lower-NCCS areas to promote sustained behavior change. Efforts must focus not only on encouraging initial adoption but also on moving households from occasional to consistent segregation. Without improving segregation at the source, downstream recycling and waste processing efforts are significantly compromised.

Table 31 *Waste segregation practice at household*

N = 1034	
Never	19%
Yes, sometimes	35%
Yes, always	46%

D.2. Do you/any family member segregate waste at home before disposal?

Inputs from the qualitative survey

In most mainstream households, *waste disposal does not appear to be a top priority for respondents* ➔ *rather, it is viewed as a* ***burden or additional chore to be done****, rather than a civic responsibility. Thus, when it comes to waste disposal practices,* ***most run on auto-pilot*** *– adopting what is* ***most convenient, fast and easy*** *rather than thinking about right practices*

Most mainstream citizens in ***Delhi, Mumbai and Kolkata*** *do not consciously follow any waste segregation practices* ➔ *the number of dustbins in the home, depends on the size of the home and number of individuals living in the home*

*Most **2-3 BHK homes have 2 dustbins** – one in their kitchen (where waste generated while cooking such as vegetable scraps, peels and left-over food is disposed however occasionally food packaging or masala boxes etc. are also thrown here) and one dustbin for the rest of the household waste – plastic, paper, cardboard, diapers, sanitary waste etc.*

*However, in **lower NCCS homes** which are more compact, they often have **1 common dustbin** in which all waste is collected and disposed.*

*In **most homes**, the **woman of the house** takes the lead in waste disposal. In families with hired help (noted in higher NCCS segments of Delhi and Mumbai), the responsibility is often passed on to domestic workers who have limited knowledge or motivation to follow right practices*

*However, in Bangalore there is a slightly different attitude towards waste disposal ➔ **citizens mentioned comparatively higher levels of compliance due to civic enforcement**. Respondents highlighted fines imposed for non-segregation as a motivating factor. One participant shared, "The BBMP (Bangalore Municipal Corporation) checks our bins and imposes fines if they're not segregated properly."*

*In these households, while the **mother takes primary initiative, she tries to consciously involve all family members** in segregation. For example, one participant shared, "We take turns to ensure waste is separated before disposal as that way following this practice becomes easier and nobody feels burdened."*

4.1.3 Motivations for waste segregation

Among households that report segregating waste, the most cited reasons are external influence and social norms. A significant 70% said they were asked by waste collectors, while 71% mentioned that everyone in the locality does it, indicating the powerful role of peer behavior and frontline sanitation workers in shaping household practices.

NCCS C households seem most responsive to local pressure, with 69% attributing their action to local housing representatives, and 79% citing community-wide adherence. Delhi and Kolkata show high influence from housing authorities, suggesting a stronger push from resident welfare associations or housing boards in these areas.

The environmental rationale is also strong—63% across the board cite it as a reason—showing that awareness of environmental benefits is widespread.

Systemic factors, such as the availability of proper waste management infrastructure, are cited by 46% reinforcing the idea that visible and functional systems reinforce good practices. Family influence appears limited (11% overall).

These findings point to the importance of community-level enforcement, consistent messaging from waste workers, and neighborhood norms in driving sustainable segregation practices. Programs aiming to scale waste segregation must invest in training and empowering waste collectors, strengthening resident networks, and ensuring visible infrastructure, particularly in localities with weaker peer pressure or system support.

Table 32 Influencers for ensuring waste segregation

N = 834	
Asked by local housing representatives to separate household waste	53%
Asked by waste collectors to separate household waste	70%
Everyone in the locality separates their household waste	71%
Good for the environment	63%
Availability of a proper waste disposal and management system in the locality	46%
Asked by family members	11%

D.3 If yes (segregate waste at household level), why?

4.1.4 Number of waste categories segregated by households

Among households that practice segregation, separation into paper, plastic, glass, etc., is most commonly practiced (41%), followed by organic/biodegradable waste (32%). Non-recyclable waste is separated by 23% and hazardous waste segregation remains limited (4%), highlighting a gap in public awareness and safe disposal practices. The variation across cities and NCCS suggests a need to standardize waste categorization awareness, especially for hazardous waste, and to reinforce messaging on why and how to separate recyclable and organic waste more effectively.

Table 33 Waste segregation categories

N = 834	
Organic/biodegradable waste (e.g., food scraps)	32%
Recyclable waste (e.g., plastic, paper, glass)	41%
Non-recyclable waste (e.g., mixed materials, sanitary waste)	23%
Hazardous waste (e.g., batteries, chemicals)	4%

D.4. Into which categories do you segregate waste?

4.1.5 Barriers to waste segregation at the household level

Among households that do not segregate waste (excluding subgroups with base <30), the most cited reason is that all waste ends up getting mixed after collection, despite household level segregation (54%). **This suggests a systemic challenge where backend waste handling undermines segregation efforts at household level.**

Lack of resources (42%) is the second most reported barrier, indicating that lack of space to store waste or absence of dedicated bins is a challenge. A significant 39% report not knowing how to segregate, pointing to an awareness and education gap underscoring the need for focused outreach in these areas.

Meanwhile, 31% say they weren't asked to separate waste, and 29% point to the absence of a proper waste management system, suggesting that external cues and visible infrastructure play a crucial role in encouraging segregation.

These findings reinforce the importance of strengthening collection systems, ensuring segregated collection at source, and improving communication and infrastructure support. Without visible follow-through and supportive logistics, even willing households may not find it meaningful or feasible to segregate waste.

Table 34 Reasons for not segregating waste

N	200
I don't know how to separate my household waste	39%

I don't have the resources (bins, space, time)	42%
I wasn't asked to separate my household waste	31%
There is no proper waste management/collection system in my locality	29%
All waste is collected together in my locality	54%

D.5. Why don't you separate your household waste?
** Base too low*

Inputs from the qualitative survey:

*Key **detractors from adoption of segregation** include:*

- ***Belief that individual efforts are ineffective due to shortcomings in waste management systems***
  - *Many households feel disheartened by the lack of visible impact from their waste segregation efforts ➔ driven by frequent observations of municipal workers mixing segregated waste during collection, reinforcing a sense of futility. A Delhi respondent remarked, "It feels like no matter what we do, it all ends up in the same landfill." A Mumbai participant explained, "Even if I separate my waste, it's pointless if the system doesn't support it."*
  - *In **Bangalore**, while urban areas are more systematic, **peri-urban respondents** reported inconsistencies in collection practices. Similarly, **Kolkata participants** highlighted the absence of reliable infrastructure or long-term campaigns to build trust in the system. A Kolkata resident shared, "Why should I put in extra effort when the garbage truck just combines everything again?"*
- ***Weak enforcement and accountability***
  *The absence of consistent enforcement mechanisms diminishes motivation to segregate waste. **Many respondents** feel that segregation is encouraged as an optional activity rather than a mandatory rule. A Peri-Urban Bangalore participant noted, "We know about the fines, and in some places, they are strict, but they're rarely implemented in our neighborhood."*
- ***Uncertainty about segregation guidelines***
  - ***A widespread lack of clarity** on what constitutes wet, dry, or recyclable waste continues to hinder segregation efforts. **Many respondents** admitted they couldn't confidently categorize certain types of waste, such as food wrappers or soiled materials. A Delhi respondent shared, "I'm not sure if items like milk packets should go with dry waste or wet."*
  - *In **Mumbai and Kolkata**, this issue is compounded by the limited reach of educational initiatives. A Kolkata participant admitted, "No one in our area talks about how to do it right." In contrast, **Bangalore respondents**—especially in urban areas—demonstrated better awareness thanks to more frequent campaigns, though nuanced categories like hazardous or e-waste remain a grey area.*
- ***Convenience often trumps awareness***
  - *Even among households that recognize the importance of waste segregation, **practical challenges** often take precedence. For instance, tight schedules, festivals, or a lack of immediate incentive led many to prioritize ease over adherence. A Mumbai respondent explained, "On busy days, sorting waste becomes a low priority."*

- *Separating waste is more effort than it's worth."*
- *In **Gurgaon**, even some **evolved respondents** noted that despite their intentions, lapses occur during peak seasons or when routines become hectic. Conversely, in **Kolkata**, many mainstream households expressed outright resistance, with one participant stating,*

- ***Resistance to behavioral change***
  *Domestic help also plays a crucial role in this resistance, with **some respondents** noting that housekeepers often revert to old habits, undoing segregation efforts. A Mumbai participant shared, "Even if I separate it, my maid mixes it again because that's how she's always done it."*

- ***Limitations in space and financial resources***
  - *For **lower-income households** or those living in compact housing, the logistical challenges of maintaining separate bins for wet and dry waste are significant. A Mumbai respondent noted, "We barely have space for one bin, let alone two."*
  - *In **Gurgaon**, **some participants** flagged the additional expense of buying multiple bins and covers as a barrier, particularly for families already managing tight budgets.*

Among households that currently do not segregate waste, awareness campaigns emerge as the most influential motivator, highlighting the role of mass communication in shifting attitudes.

Financial incentives (36%) and free supply of waste bins (42%) are also strong motivators, indicating that tangible benefits can effectively drive behavior change. Penalties and enforcement could also work: 32% cite fines, and 33% say waste not being collected would compel them to act. These indicate that system-level reinforcement and consequences are crucial in many localities.

Other softer motivators like training (34%), peer pressure (24%), and family influence (28%) show moderate influence, varying by NCCS and region. Notably, 15% say nothing could motivate them, pointing to a segment resistant to change.

These findings suggest a multi-pronged strategy is needed—combining awareness, economic nudges, and visible systems-level action. Policy design should focus on making segregation easier, rewarding compliance, and showing consequences for non-participation to nudge the unwilling segment.

***Table 35** Possible push suggested for ensuring waste segregation*

N = 200	
Substantial fines imposed by the municipality/housing association/waste workers	32%
Waste not being collected from the house	33%
Waste collectors seem to collect waste separately/seen to have separate waste containers	21%
Financial incentives for segregated waste	36%
Free supply of waste bins	42%
Intense widespread publicity campaigns	52%

Training/workshop/demonstration on correct practices	34%
Peer pressure (everyone does it, so I do it)	24%
Pressure from household members	28%
Nothing could force me/I don't care	15%

D.5.1. What would force you to segregate your waste?

4.2 Perceived fate of household waste after disposal

Respondents express a mixed understanding of what happens to waste after disposal. A majority believe it either goes to landfills (52%), is incinerated (56%), or is recycled/composted (55%)— indicating some awareness but also overlapping perceptions. However, 16% overall express uncertainty about what happens to waste; while a large portion of respondents believe in positive waste outcomes (like recycling or composting), the high belief in landfilling and incineration, combined with limited understanding in some regions, suggests the need for transparent communication on actual waste flows. This can help build public trust and reinforce responsible disposal behavior.

Table 36 *Awareness about post disposal of waste*

N = 1034	
It goes into a landfill	52%
It is sent to an incinerator to be burnt	56%
It is sent for recycling/composting	55%
Others (Please specify)	0%
Don't know/can't say	16%

D.5.2. What happens to waste after it is disposed of?

Inputs from the qualitative survey

In Delhi, most respondents believe waste ends up in landfills – many referring to the massive mountains of trash they see piled up on the outskirts of NCR area

In other centers, while respondents also have a similar opinion of waste going into a landfill, they also believe that eventually it is separated into paper, plastic, biodegradable waste and processed by the municipal corporation

4.3 Disposal practices with respect to plastic packaging waste

Plastic packaging waste is primarily mixed with general household waste (66%), indicating widespread lack of segregation at source. Despite this, a considerable 58% of households also report segregating plastic for recycling. Selling to scrap dealers (61%) is a common practice across all NCCS and cities, underlining the role of the informal sector in plastic recovery; 33% report burning as their disposal practice for plastic waste.

Only 5% are unaware of how plastic waste is handled.

Table 37 *Disposal practices with respect to plastic waste*

N = 1034	
Mixed with general household waste	66%
Segregated and given for recycling	58%
Sold to scrap dealers (kabadiwalas)	61%

Burnt	33%
Don't know/can't say	5%

D.6. How do you usually dispose of plastic packaging waste?

4.3.1 Perceived fate of plastic waste after disposal

Public understanding of what happens to plastic waste after disposal reveals a mixed and often contradictory perception. A majority (54%) believe plastic waste ends up in landfills, indicating that many associate plastic disposals with dumping rather than recovery. (These beliefs may not reflect actual waste treatment practices, highlighting a need for awareness campaigns on end-of-life plastic waste management)

At the same time, 58% believe plastic is recycled, suggesting some optimism—particularly in cities with visible recycling efforts. Incineration is cited by 51%, suggesting that overall, there is confusion or overlap in understanding how waste is ultimately treated.

Notably, 16% overall say they don't know and overall, the data underscores the need for clarity in public communication regarding the plastic waste lifecycle. While awareness that recycling is an end-of-life fate for plastics, the coexisting belief in landfills and incineration points to a disconnect. Strengthening transparency in waste processing and reinforcing recycling success stories can build trust and improve participation in segregation efforts.

Table 38 *Perceived fate of plastic waste after disposal*

N = 1034	
It goes into a landfill	54%
It is recycled	58%
It is sent to an incinerator to be burnt	51%
Don't know/can't say	16%

D.6.1 What happens to plastic waste after it is disposed of?

4.4 Awareness of and information-seeking on recycling and about special waste collection drives

Awareness of special collection drives for specific materials is high at 65% overall, and knowledge of recyclable plastic types also shows encouraging results, with 69% claiming awareness. Yet only 51% have ever actively searched for information on waste disposal or recycling. Relatively lower levels of active information-seeking signal the need to design engaging, accessible, and action-oriented communication—particularly for younger audiences and lower-NCCS urban households.

Table 39 *Awareness and information-seeking on recycling and special waste collection*

N = 1034	
Those who are aware of any special collection drives for specific materials	65%
Those who know which types of plastic packaging can be recycled	69%
Those who searched for any such information about waste disposal and recycling	51%

D.7. Are you aware of any special collection drives for specific materials like metal, glass, toys, flexible packaging (milk pouches, biscuit packets, chips packet)?
D.8. Do you know which types of plastic packaging can be recycled?
D.9.1. Have you ever searched for any such information about waste disposal and recycling?

4.5 Perceived household responsibility in waste management

Most respondents (84%) feel that their household acts responsibly toward effective waste management—34% significantly and 50% somewhat. Very few respondents' express apathy—only 2% say 'not much' and 1% 'not at all', indicating a generally positive mindset toward household responsibility in waste management. While self-perception of responsibility is high, the gap between "significant" and "somewhat" responsibility suggests room for behavior strengthening. Localized interventions—such as recognition programs, community-led audits, or engagement activities—can help convert passive awareness into active ownership.

Table 40 *Effective waste management self-perception*

N = 1034	
Yes, significantly	34%
Somewhat	50%
Neutral	14%
Not much	2%
Not at all	1%

D.10. Do you feel your household acts responsibly in respect of managing waste effectively?

4.6 Challenges in household waste management

Households report a range of challenges in managing waste, with lack of knowledge about segregation (59%) and insufficient space for bins (60%) emerging as the most widespread issues. In some locations, lack of knowledge was cited by 80% of respondents. Irregular waste collection (54%) is also a consistent concern, suggesting that service delivery gaps could exist even in high-density urban areas.

Limited access to recycling facilities affects 34% overall but is more pronounced among NCCS C (46%) and in Bengaluru Urban (43%), suggesting infrastructure shortfalls where segregation efforts might otherwise be feasible. Addressing these challenges will require a combination of awareness drives, urban planning that supports segregation infrastructure, and consistent service delivery. Special attention is needed in some areas among lower-NCCS groups where the convergence of informational and logistical barriers is most evident.

Table 41 *Challenges faced in household waste management*

N = 1034	
Lack of knowledge about segregation	59%
Insufficient space for separate bins	60%
Irregular waste collection	54%
Limited access to recycling facilities	34%

D.11. What challenges do you face in managing household waste?

4.6.1 Suggestions for improving waste management in localities

Respondents in households suggest a mix of awareness, service enhancement, and infrastructure to improve waste management. The most common recommendation is for more awareness campaigns (66%), highlighting a strong demand for better information and sensitization.

Improving waste collection frequency was a suggestion from 64%, while establishment of recycling centers (57%) and providing incentives for segregation (51%) were suggested in some urban areas.

The need for distribution of waste bins (36%) could reflect affordability or infrastructure limitations.

These findings point to the importance of multi-dimensional improvements—combining behavior change communication, service upgrades, and infrastructure access. Efforts should be tailored regionally.

Table 42 *Suggestions for improvement*

N = 1034	
More awareness campaigns	66%
Improved waste collection frequency	64%
Establishment of recycling center's	57%
Incentives for households practicing segregation	51%
Distribution of waste bins	36%

D.12. What improvements would you suggest for waste disposal and management in your area?

4.6.2 Behavior correlates of household waste segregation

As an extension of the primary quantitative findings, further cross-tabulations were undertaken to explore the behavioral correlates of household waste segregation. Rather than examining demographic determinants alone, this analysis adopts a behavioral lens, examining if self- reported segregation behavior is associated with:

- Other pro-environmental behaviors
- Awareness and knowledge levels (Capability)
- Physical and systemic enablers or barriers (Opportunity)
- Motivational drivers (social norms, perceived responsibility, satisfaction with systems)

This approach is informed by the COM-B (Capability, Opportunity, Motivation–Behavior) model, widely used in behavior change science.

Linkages between segregation and other pro-environmental behaviors

Households that consistently segregate waste are significantly more likely to engage in other sustainability-related practices:

Information seeking: Those who "always" segregate are more likely to have actively searched for information on recycling and waste management.

Plastic waste handling: A larger proportion of regular segregators also report separating plastic packaging for recycling or selling it to scrap dealers, rather than discarding it with general waste.

Purchase behavior: Respondents who segregate regularly show a higher tendency to check labels for recycled content and are more likely to purchase products with sustainable packaging.

These findings suggest that segregation behavior clusters with broader pro-environmental orientations and may serve as a gateway behavior for deeper engagement.

Table 43 *Segregation and other pro-environmental behaviours*

Audience	Behaviours

Behaviour	Overall	Look for Information about waste disposal (D9.1)	Look for Recycled Content(E5) * ***Always or often)***	Look at Labels (C11)	Purchase a product due to recycled content (E11) ***(Frequently or occasionally)***	Purchased packaging labelled as compostable of Bio (C7.3)
Always segregate	46%	67%	68%	81%	76%	60%
Sometimes segregate	35%	50%	63%	65%	72%	48%
Never segregate	19%	17%	24%	63%	33%	21%

Capability: knowledge and awareness correlates

Respondents who always segregate waste demonstrate significantly higher awareness about which types of plastic are recyclable and are more likely to be aware of special collection drives for flexible packaging or hazardous waste.

Those who never segregate are also more likely to report not knowing how to do so, highlighting knowledge deficits as a key barrier to adoption.

This underscores the importance of clarity in waste categorization, localized education campaigns, and consistent messaging on what constitutes recyclable or hazardous materials.

Table 44 *Capability - psychological (e.g. knowledge, psychological skills, cognition), regarding fate of waste*

Behaviour	Overall	D.5.2-What happens to waste after it is disposed (knowledge) Landfill, Incineration, Recycling/Composting, don't know				D.6.1 What happens to plastic waste after it is disposed (knowledge) Landfill, Incineration, Recycling/Composting, don't know			
		Landfill	**Incineration**	**Recycling**	**DK/CS**	**Landfill**	**Incineration**	**Recycling**	**DK/CS**
Always segregate	46%	56%	58%	56%	12%	59%	64%	49%	13%
Sometimes segregate	35%	49%	68%	64%	10%	51%	66%	60%	13%
Never segregate	19%	46%	31%	35%	36%	50%	28%	41%	32%

Table 45 *Capability - psychological (e.g. knowledge, psychological skills, cognition), regarding collection of waste and waste segregation*

Behaviour	Overall	D7. Awareness of collective drives for specific materials. (knowledge)	D8. Do you know which types of plastic packaging can be recycled (knowledge)	D5. I don't know how (knowledge or cognition)	D5. All waste is collected in my locality (knowledge)	D12. Lack of knowledge about waste segregation
Always segregate	46%	73%	71%	Not asked	Not asked	66%
Sometimes segregate	35%	59%	58%	Not asked	Not asked	53%
Never segregate	19%	41%	46%	39%	54%	53%

Motivation: social and psychological influences

Households that practice segregation were more likely to have been encouraged by housing societies or family members, indicating the importance of social norms and peer influence.

They also report higher satisfaction with waste disposal systems in their localities and are more likely to perceive segregation as a civic duty and feel motivated by visible improvements in their neighborhoods.

Conversely, households that never segregate are more likely to feel that it "makes no difference" due to perceived mixing by municipalities—suggesting disillusionment with systemic follow- through.

Reinforcing social proof, trust in the system, and creating visible community change can therefore play pivotal roles in driving sustained behavior.

Table 46 *Motivations to segregate waste: identity, values, beliefs, self-conscious intentions, and evaluations*

Behaviour	Overall	Reflective – D3. Belief in messenger, asked by local house representative to segregate	Reflective – D3. Belief in messenger asked by waste collectors to separate HH waste	Reflective – D3. Belief in messenger, asked by family members	D5. I wasn't asked to
Always segregate	46%	59%	72%	11%	Not applicable
Sometimes segregate	35%	47%	66%	11%	Not applicable
Never segregate	19%	Question not asked	Question not asked	Question not asked	31%

Table 47 *Motivations to segregate waste: identity, value, beliefs, self-conscious intentions, and evaluations*

	Overall	Reflective-Attitude-Linked to Beliefs- D5.3. A Segregating waste at home is a civic responsibility *	Reflective-Belief in consequence D5.3. B Even if I segregate waste at home, it makes no difference because the municipality mixes it later.	Reflective-Belief in consequence D5.3. C I feel motivated to segregate waste when I see visible improvements in my neighborhood	Reflective-Belief in Consequences/Personal Identity D3. Good for the Environment	Beliefs D10. How satisfied are you with the waste disposal system in your locality?				
						Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
Always segregate	46%	57%	24%	36%	63%	42%	44%	12%	3%	0%
Sometimes segregate	35%	38%	23%	31%	64%	18%	47%	29%	6%	1%
Never segregate	19%	63%	33%	41%	Question not asked	30%	44%	18%	6%	2%

Opportunity: structural and environmental factors

Interestingly, even among regular segregators, a significant proportion report facing irregular waste collection, showing that systemic gaps do not always deter pro-environmental actions but could limit long-term consistency.

Among non-segregators, lack of bins, irregular collection, and absence of infrastructure are cited more frequently as barriers—suggesting that physical opportunity continues to shape behavioral choices. To unlock widespread adoption, behavioral intent must be supported by reliable systems and visible public infrastructure.

Table 48 *Physical opportunity to segregate waste at source (triggers, prompts, space/time, location/services)*

Behaviour	Overall	Physical D5. I don't have the resources (bin, space, time)	Physical D5. No proper waste management collection system in my locality	Physical D5.3 (D) - Segregating waste is inconvenient and time-consuming	Physical - Use of service - D1. - How to dispose of waste from household	Physical D3. Availability of proper waste disposal and management system in the locality	D12. Irregular waste Collection	D12. Limited Access to recycling facilities	Social D3. Descriptive Norm-Everyone in the locality separates their household waste
Always segregate	46%	Didn't ask question	Didn't ask question	30%	56%	46%	50%	31%	69%
Sometimes segregate	35%	Didn't ask question	Didn't ask question	22%	29%	45%	66%	38%	73%
Never segregate	19%	42%	29%	34%	61%	Didn't ask question	45%	34%	Didn't ask question

Segregation is a keystone behavior—those who segregate waste also report higher adoption of other pro-environmental habits, greater label-reading, and stronger sustainability intent.

Knowledge gaps remain a major barrier: awareness of recyclable plastic types and correct segregation methods is significantly lower among non-segregators.

Motivational triggers such as social proof and civic pride are effective in driving behavior; campaigns that position segregation as a community norm or civic responsibility show promise.

System-level credibility matters: perception that waste is eventually mixed by authorities discourages sustained effort; improving transparency and backend processes is essential.

Infrastructure and services must align with intent: even willing households struggle when faced with irregular collection or lack of bins; targeted interventions are required in underserved areas.

4.7 Sources of information on waste and recycling practices

Households access information on waste disposal and recycling through a variety of channels, with government or municipal campaigns (60%) and social media or online resources (64%) emerging as the most frequently mentioned sources. Government campaigns are particularly impactful among some sections indicating that official outreach remains effective, especially in peripheral areas and among lower NCCS.

Digital platforms play a major role in information dissemination, especially in areas where tech-savvy urban segments might be found; this highlights the increasing importance of online and mobile-first strategies.

Community meetings and events (52%) and educational institutions (46%) were also frequently cited pointing to the relevance of institutional and community-based engagement in driving awareness.

Friends and family (49%) serve as key informal channels in certain geographies, underlining the importance of peer influence and word-of-mouth in promoting waste management practices in these contexts.

Only a small portion (5%) reported that they did not know or could not say where they received information from, indicating a lack of access to information.

Table 49 *Source of information regarding waste disposal and recycling practice*

N = 1034	
Government or municipal campaigns	60%
Social media or online resources	64%
Educational institutions	46%
Community meetings or events	52%
Friends or family	49%
Others (Please specify)	0%
Don't know/can't say	5%

D.9. Where do you get information about waste disposal and recycling practices?

4.8 Sources of information on plastic waste management currently used by respondents

When it comes to actual media usage for learning about plastics and their management, TV (77%) and social media (70%) are the most used sources. These figures closely mirror the channels respondents would prefer to be used for mass messaging, reaffirming the prominence of these two media platforms.

Radio (25%) has a more limited but regionally strong presence, while newspapers (47%) and brochures/posters (32%) are also relevant; these suggest that print materials continue to have utility, especially where internet penetration may be lower or reading habits are strong.

Websites (22%) and in-person campaigns/workshops (23%) remain less frequently used, indicating some niche relevance for digital or face-to-face strategies among more informed groups.

The overlap between channels used currently and preferred for messaging suggests a high alignment between information habits and communication expectations, reinforcing the need for a multi-platform communication strategy centered on TV and social media, supported by local outreach and print materials where appropriate.

Table 50 Channels used for daily news and information about plastics and their proper management

	NCCS A	NCCS B	NCCS C	Total
N	**451**	**452**	**131**	**1034**
Social media (FB, YouTube, Instagram, X, etc.)	70%	71%	65%	70%
TV	72%	81%	82%	77%
Radio/FM Channels	26%	24%	28%	25%
Newspapers	49%	47%	40%	47%
Brochures / pamphlets / posters	41%	26%	22%	32%
Websites	33%	13%	14%	22%
In-person campaigns/workshops	28%	18%	22%	23%
Others (Please specify)	0%	0%	0%	0%
Don't know/can't say	3%	5%	13%	5%

D.9.2. What channel do you use for your daily news and information about plastics and its proper management?

Table 51 Channels preferred for information dissemination on plastic waste management

	NCCS A	NCCS B	NCCS C	Total
N	**451**	**452**	**131**	**1034**
Social media (FB, YouTube, Instagram, X etc.)	76%	71%	73%	73%
TV	75%	84%	87%	80%
Radio/FM channels	27%	25%	31%	27%
Newspapers	56%	46%	47%	50%
Brochures / pamphlets / posters	45%	26%	26%	34%
Websites	31%	13%	15%	21%
In-person campaigns/workshops	32%	23%	31%	28%
Others (Please specify)	0%	0%	0%	0%
Don't know/can't say	1%	2%	4%	2%

D.9.3. What channel do you think should be used if messages about plastics and its proper management are to be spread to all citizens in the country?

4.9 Attitudes toward waste segregation[2]

Attitudinal responses toward waste segregation reflect a generally positive orientation, with several statements scoring above 4.0 on a 5-point scale across most segments. The highest agreement is observed for the belief that "segregating waste is a civic responsibility" (mean score: 4.4 overall); this shows a widespread moral framing of waste segregation.

Interestingly, there is also considerable agreement with the barrier-oriented statement that *"even if I segregate, it makes no difference because the municipality mixes it later"* (mean: 3.8), highlighting public skepticism and the need to build trust in backend municipal processes.

Motivational cues are evident as well: the statement *"I feel motivated to segregate when I see visible improvements in my neighborhood"* scores 4.1, pointing to the importance of local success stories and visible change.

The view that *"segregating waste is inconvenient and time-consuming"* received a moderate agreement score of 3.9, indicating perceived practical challenges, which could act as a deterrent to consistent practice.

Lastly, the belief that children's education influences household waste management scores strongly at 4.1, underscoring the role of educational institutions and youth-led advocacy.

The index findings point to a dual challenge—strengthening belief in systemic efficacy, while also amplifying community-level motivators and addressing practical inconveniences. Campaigns should reinforce segregation as a civic duty, visibly showcase positive local outcomes, and involve schools to build intergenerational impact.

Table 52 Attitudes towards waste segregation

	NCCS A	NCCS B	NCCS C	Total
N	**451**	**452**	**131**	**1034**
D.5.3.A. Segregating waste at home is a civic responsibility	4.3	4.5	4.4	4.4
D.5.3.B. Even if I segregate waste at home, it makes no difference because the municipality mixes it later	3.6	4.0	4.1	3.8
D.5.3.C.I feel motivated to segregate waste when I see visible improvements in my neighborhood	3.9	4.2	4.2	4.1
D.5.3.D. Segregating waste is inconvenient and time-consuming	3.8	4.0	4.1	3.9
D.5.3.E. Children's education plays a critical role in influencing waste management practices at home	3.9	4.2	4.2	4.1

[2] Mean scores (1–5) were computed for each attitudinal statement based on a 5-point agreement scale. Higher scores indicate stronger agreement. Differences across groups were tested using independent t- tests to assess statistical significance.

4.10 Summary

Effective waste management is fundamental to sustainable urban living. This chapter presents a detailed analysis of how households manage waste, shedding light on disposal behaviors, segregation practices, motivations, barriers, and perceptions. It also explores the levels of awareness and the attitudinal undercurrents that shape waste management behaviors at the household level.

Key findings:

- Collection and disposal: Waste is most collected by waste collectors (47%), especially in peripheral zones and NCCS C households. Use of community bins is limited (19%).
- Bin usage and segregation: Only 46% of households use two bins (wet/dry), while 48% use a single bin, indicating limited segregation at source. Consistent segregation is practiced by 46% of households, while 19% never segregate. NCCS A respondents and cities like Mumbai Urban and Bengaluru Peripheral show better segregation outcomes.
- Motivations and influencers: Segregation is driven by social norms (71%) and directives from waste collectors or housing representatives. Environmental concern motivates 63% of respondents. However, community enforcement and peer behavior appear more influential than family or personal conviction.
- Barriers: The most common reasons for not segregating include all waste being mixed during collection (54%), lack of resources like bins or space (42%), and lack of knowledge (39%). These systemic and information barriers are particularly severe in NCCS C and peripheral areas.
- Plastic waste practices: Plastic is often mixed with household waste (66%), but 58% also report segregating it. Selling to scrap dealers (61%) plays a strong

role for the informal sector. Alarmingly, 33% report burning plastic, particularly in NCCS C and Mumbai Urban, posing environmental risks.

- Post-disposal perceptions: There is significant ambiguity about the fate of waste. While many believe in recycling (55%), a majority also cite landfilling (52%) and incineration (56%), indicating limited clarity.
- Awareness and information-Seeking: 65% are aware of special collection drives; 69% know which plastics are recyclable. However, only 51% have sought out such information. This gap is widest in NCCS C and eastern cities, indicating the need for targeted outreach.
- Channels for communication: Households rely most on TV (77%) and social media (70%) for information about plastics and waste management. These also emerged as the most preferred channels for national messaging campaigns.
- Satisfaction and perceived responsibility: A majority are satisfied with local waste services (76%), though satisfaction varies sharply by city. Most respondents (84%) believe they act responsibly, but there's a noticeable gap between “somewhat” and “significantly” responsible self-perceptions.
- Attitudes toward waste segregation:
    - Segregation as civic duty: Widely endorsed (mean score: 4.4)—a promising lever for campaigns.
    - Skepticism about system efficacy: Many agree that segregation is pointless if municipalities mix waste (mean 3.8), underlining a need to rebuild trust in backend systems.
    - Local impact as motivator: High agreement with “I feel motivated when I see visible improvements” (mean 4.1).
    - Inconvenience as a barrier: Moderate agreement with “segregation is inconvenient” (mean 3.9) suggests that reducing friction and making segregation easier can enhance adoption.
    - Role of education: Strong belief that children’s education shapes household behavior (mean 4.1), indicating potential for school-based interventions.

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Chapter 5: Awareness, attitudes, and perceptions in relation to recycled plastics

As environmental concerns and sustainable consumption practices gain momentum globally, the role of recycling and use of recycled content in plastic packaging has emerged as a focal point in both policy and consumer discussions. This chapter presents an analysis of the knowledge levels, perceptions, and behavioral tendencies associated with recycled plastic, per se, and its use in packaging, among consumers. It explores how familiar individuals are with the concept, their sources of information, and the extent to which this awareness translates into preferences or actions—such as checking product labels, making conscious purchase decisions, or discussing the topic with peers.

The section further probes the perceived benefits linked to recycled plastic usage, from environmental impact and durability to safety and cost implications. Additionally, it investigates public expectations from brands, such as transparency in labeling and disclosure on use of recycled content.

By unpacking these insights, the chapter aims to highlight the current landscape of consumer awareness and trust, assess readiness for behavior change, and identify communication gaps or opportunities that stakeholders—including policymakers, brands, and environmental advocates— can leverage to promote responsible plastic use.

5.1 Awareness and understanding of recycled plastic and recycled content

This section explores consumer familiarity with the words, 'recycled plastic' and their understanding of "recycled content" in plastic packaging. The findings highlight noticeable variations across socio- economic segments and between urban and peripheral populations in four major Indian cities.

5.1.1 General awareness of recycled plastic

At an overall level, 44% of respondents had heard of recycled plastic, while 43% had heard about it, but lacked detailed knowledge. About 13% said they were not aware of it at all. Among NCCS A respondents, more than half had heard of recycled plastics, while in the NCCS C category, this number was 31%. 26% of respondents reported not being aware at all. Awareness was highest in urban areas. These results indicate potential for improved communication and awareness efforts.

5.1.2 Understanding of "recycled content" in packaging

When asked whether they understood what "recycled content" in plastic packaging means, 49% of respondents said they fully understood the term, while 38% had a general idea. Around 13% admitted they had no understanding of it. The data reveals that while the concept of recycled plastic is well-known, a gap remains in the deeper understanding of what constitutes recycled content in packaging. Bridging this gap—particularly among NCCS groups and peripheral areas—can support more informed consumer choices and foster greater support for sustainable packaging solutions.

Table 53 *Understanding of recycled content in plastic packaging*

N = 1034

Yes, fully aware	48%
I have heard about it but don't know much	38%
Not Aware	13%

E.2 Do you know what "recycled content" in plastic packaging means?

Inputs from the qualitative survey

Most respondents *recognize recycled plastic as a form of "used plastic" or "not fresh plastic." Mainstream participants frequently describe it using terms like "old plastic" or "cheap plastic made from waste." For instance, a Delhi consumer stated, "It's plastic that has already been used and remade."*

Bangalore and Delhi emerge as cities where ***evolved respondents*** *display higher familiarity with the concept. For example, one Bangalore respondent noted, "Recycled plastic is processed waste plastic, commonly used for making buckets or other household items."*

In Mumbai, ***some mainstream respondents*** *see recycled plastic primarily as a cheaper, less durable alternative to virgin plastic. A respondent remarked, "It's plastic that is not original, so it's not as strong."*

In Kolkata, ***few respondents*** *could articulate what recycled plastic is, with a vague explanation such as "it's some kind of waste that gets reused."*

Sources of information on recycled content in plastic packaging

Respondents reported a range of sources through which they had heard about recycled content in plastic packaging. Social media was the most frequently mentioned channel, cited by 71% of respondents, followed by news articles on television (52%) and educational campaigns (50%). Product labels (43%) and conversations with friends or family (46%) were also common sources, while very few mentioned "Others" or said they didn't know.

These findings suggest that while social media is the leading channel of awareness across the board, different cities and socio-economic groups rely on a mix of formal and informal sources. Tailoring communication strategies to these local preferences could enhance outreach and awareness efforts.

Table 54 *Source of information regarding recycled content in plastic packaging*

N = 895	
News articles or television	52%
Social media	71%
Product labels	43%
Educational campaigns	50%
Friends or family	46%

E.3 Where have you heard about recycled content in plastic packaging?

Inputs from the qualitative survey

Most mainstream respondents *rely on limited exposure, with information coming from videos, posters, or social media. A Gurgaon respondent noted, "I saw a video about recycling on Instagram, but it didn't explain much."*

In Kolkata and Mumbai, ***few respondents*** *recalled any formal awareness campaigns. This contrasts with Bangalore, where* ***some respondents*** *mentioned seeing ads or announcements from the municipal corporation*

Evolved respondents *in Bangalore cited community programs or municipal campaigns as their primary sources. One participant shared, "Our society had a workshop where they explained how plastic is recycled."*

5.2 Understanding of the plastic recycling process

Respondents were asked to describe their understanding of the plastic recycling process. 46% said they understand the full process—from collection to use of granules/pellets in new products, while 37% were aware only of the collection phase but not what happens afterward. 12% had only a basic idea, and a small share (4%) had no knowledge at all.

These results indicate that while nearly half of respondents feel confident about the end-to-end recycling process, a significant number still lack clarity beyond the collection phase—highlighting the importance of public education on what happens to plastic waste after it's collected.

Table 55 *Claimed understanding of recycling process*

N = 895	
I understand the full process, from collection to reuse	46%
I know about the collection phase but not the recycling process	37%
I only know basic concepts about recycling	12%
I have no knowledge of how it works	4%

E.4. Which statement best describes your understanding of the recycling process for plastic?

Inputs from the qualitative survey

Across cities, ***most respondents*** *demonstrated limited understanding of the recycling process.* ***Many mainstream participants*** *vaguely described it as "melting old plastic" or "breaking it into small pieces."*

Few respondents had a higher awareness, mentioning chemicals being added or plastic being converted into pellets (referred to as "daanas" in Delhi). For instance, a Delhi respondent shared, "I've seen videos where they melt plastic and turn it into small granules which is then made into new products."

5.2.1 Emotional responses to recycled content claims

An in-depth analysis of those respondents who actively look for recycled content information on product packaging—specifically those who stated they "Always" or "Often" check labels (Q.E5, N=593)—reveals a nuanced emotional landscape. While most of these environmentally aware consumers associate recycled content labels with positive emotions such as *trust* (79%) and *curiosity* (81%), a notable 60% also expresses doubt about the authenticity of these claims.

This simultaneous presence of positive engagement and skepticism suggests that consumers, even those who are environmentally motivated and engaged, require stronger assurances. For brands, this underscores the need for transparent labeling, third-party certifications, and traceability to convert curiosity and cautious optimism into consistent loyalty and trust.

Table 56 Reaction to label on recycled content

	Number of respondents	% of 'Always/Often' checkers (N = 593)
Trust in the brand for being environmentally responsible	470	79%
Curiosity about product/packaging quality	479	81%
Doubt about the claim	355	60%

Inputs from the qualitative survey

Most evolved respondents *highlighted the environmental advantages, such as reducing plastic waste in landfills and curbing pollution. A Delhi consumer stated, "Recycled plastic helps reduce the amount of garbage burned or thrown into rivers."*

Mainstream respondents *recognized its role in reusability, with comments like, "It's better to reuse plastic than to keep making new plastic."*

Some respondents*, particularly in Bangalore and Mumbai, noted its suitability for non-food products like buckets, storage containers, and detergent bottles. An evolved respondent shared, "Recycled plastic works well for everyday items that don't need high durability."*

NCCS B and NCCS C *respondents speculated that using recycled plastic would increase the brands opportunity to have a greater profit margin ➔ they felt using old plastic would be more cost effective for brands, as compared to creating the material from scratch*

5.3 Importance of recycled content in packaging

These results reinforce a strong consumer expectation across segments for brands to use and highlight recycled materials in packaging, reinforcing the value placed on visible environmental responsibility.

5.3.1 Comparing motivations: recycled content in products vs. product packaging

When examining why consumers prefer items made with recycled plastic, motivations differ slightly between durable products (e.g., buckets, mugs, chairs) and product packaging (like juice bottles, lotion bottles, dahi cups, handwash bottles).

For durable goods, product quality (78%) was the most important reason, slightly higher than for product packaging (71%). This suggests that consumers place greater emphasis on functional performance when evaluating longer-use household items.

In the case of product packaging, brand familiarity (60%) played a marginally stronger role than in durables (59%), indicating that brand trust and recognition matter more in fast-moving categories where purchase decisions are more frequent, and brand visibility is higher.

Affordability was equally influential in both categories (63–64%), reaffirming that price

remains a key factor shaping preferences for recycled content.

Environmental motivation—reducing the burden on the environment—was consistent across both (46%). This points to a shared awareness of sustainability across use cases, but it generally plays a supporting role rather than a primary one in consumer decision-making.

In summary, while quality and affordability remain dominant drivers, consumers evaluating product packaging (e.g. for food or personal care items) appear to rely more on brand cues, whereas for durable goods, the focus shifts slightly toward practicality and product performance. These insights highlight the need for category-specific messaging to effectively promote use of recycled content in a positive light and shape the decisions of consumers.

5.3.2 Perceived benefits of using recycled content in product packaging

When asked about the benefits of using recycled plastic in product packaging, consumers cited a range of environmental and brand-related reasons, with reducing plastic waste (61%) and conserving natural resources (68%) emerging as the top motivations.

The benefit of conserving natural resources was consistently recognized across NCCS and cities (68% overall), while reducing energy consumption in production (62%) and lowering greenhouse gas emissions (55%) were acknowledged by a majority but with more variability.

Fewer respondents linked recycled packaging to brand image improvement (29%) indicating that while environmental outcomes are front-of-mind, the strategic business benefits of sustainability are less visible to consumers.

IN summary, the data shows that consumers strongly associate recycled content in packaging with tangible environmental benefits, particularly waste reduction and resource conservation. However, greater efforts are needed to build awareness and to communicate how recycled packaging also contributes to brand responsibility and climate action.

Table 57 *Main benefits of using recycled content in plastic packaging*

N = 895	
Reduces plastic waste	61%
Conserves natural resources	68%
Reduce energy consumption in production	62%
Lowers greenhouse gas emissions	55%
Improves brand image for companies	29%
Others (Please specify)	0%
Don't know/can't say	3%

E.20. What do you think are the main benefits of using recycled content in plastic packaging?

5.4 Perceived impact of recycled packaging on plastic pollution

Most respondents—93%, believe that increasing the use of recycled plastic in product packaging (e.g., juice bottles, lotion bottles, dahi cups, handwash bottles) can help reduce plastic pollution.

Of these, 40% felt it would do so significantly, while 53% believed it would help to some

extent. Only 7% were skeptical, stating it would reduce pollution either "not much" or "not at all".

These findings reflect a broadly positive outlook on the role of recycled content in addressing plastic pollution, though the degree of belief varies by region and socio-economic group. Communicating real-world impact and scaling visible examples may help move more respondents from moderate belief to strong conviction.

Table 58 *Perception of how recycled content usage will impact plastic pollution*

N = 895	
Yes, significantly	40%
Yes, to some extent	53%
No, not much	7%

E.21. Do you believe that increasing the use of recycled content in packaging can reduce overall plastic pollution?

5.5 Industries that should prioritize recycled content in packaging

Consumers were asked to identify which industries should take the lead in using recycled plastic in packaging. The responses reveal a strong demand for sustainability across both essential and lifestyle categories, with food and beverages (67%) and cosmetics and personal care (68%) emerging as top priorities.

The food and beverage category received the highest endorsement across most NCCS and cities. This is likely driven by the high visibility and frequency of packaging in this segment, as well as growing concern around single-use plastic in food delivery and grocery items.

The cosmetics and personal care segment were also widely supported (68%) possibly reflecting creasing consumer expectations from brands in these categories to demonstrate environmental responsibility—especially in packaging-heavy products like shampoos, creams, and lotions.

Fashion and apparel (59%) and electronics (48%) were seen as next-tier priorities. While not top of mind for all, these categories still see substantial packaging volumes, and respondents in urban areas possibly due to greater exposure to e-commerce and tech products.

Home and cleaning products received the lowest prioritization (43%), suggesting that consumers may perceive lower packaging volumes or less urgency in this segment.

In summary, the public sees a clear hierarchy of responsibility, expecting frequent-use, high-waste sectors – particularly food, beverage and personal care brands – to lead on the use of recycled packaging. There is also rising support for broader industry adoption, especially in cities with high digital and consumer goods exposure.

Table 59 *Industrial sectors that should prioritize using recycled content in their packaging*

N	895
Food and beverages	67%
Cosmetics and personal care	68%
Electronics	48%
Fashion and apparel	59%
Home and cleaning products	43%
Others (Please specify)	0%

Don't know/can't say	1%

E.24. In your opinion, which industries should prioritize using recycled content in their packaging?

Inputs from the qualitative survey:

Most respondents *identified every day, non-food products as ideal fits for recycled plastic, such as buckets, mugs, storage containers, and detergent bottles. A Delhi respondent shared, "These items don't require high precision, so recycled plastic works perfectly."*

Evolved participants *suggested additional uses, such as furniture (e.g., chairs, stools), plant pots, and industrial components. A Bangalore consumer added, "It could be great for items like broom handles or garden tools."*

- ***Food and beverage containers***
  - ***Many respondents****, especially mainstream respondents in Mumbai and Kolkata, found recycled plastic unsuitable for food and beverage use due to safety concerns. A Kolkata participant mentioned, "I wouldn't trust it for storing milk or water because of potential chemical residues."*
  - ***Evolved respondents*** *also hesitated but suggested that better certifications and safety assurances could change perceptions.*
- ***Skincare and cosmetics packaging***
  Some respondents *questioned its suitability for beauty products, citing long shelf lives and possible reactions with the material. A Gurgaon respondent remarked, "For products that stay on shelves for months, recycled plastic might not hold up well."*
  - ***High-durability products***
    Items like electronics and furniture requiring structural integrity were flagged as non-fits by ***many participants****. A Mumbai respondent shared, "Recycled plastic doesn't seem strong enough for heavy-duty use."*

Perceptions of brands using recycled plastic packaging

- *Brands that use recycled plastic packaging* ***evoke a younger imagery*** ➔ *consumers feel that these are brands wishing to bring about a change and do not stick to the older, known methods of doing things*
- *However, amongst NCCS B & C some with lower awareness about recycled plastic felt that brands using recycled plastic* ***may be trying to cut costs and increase profit*** ➔ *as they expect recycled plastic to be a cheaper material than virgin plastic*
- ***Evolved consumers appreciate such brands*** ➔ *feel that they are responsible, and have higher inclination to adopt such brands*

Drivers of persuasion for adoption

- ***Trust in brands****:*
  - ***Most respondents*** *emphasized the importance of trusted brands leading the adoption. A Bangalore respondent explained, "If brands like Hindustan Unilever or ITC use recycled plastic, it would reassure me about the quality."*
  - ***Few mainstream participants*** *mentioned government initiatives as a potential driver, but many felt private brands were more reliable.*
- ***Transparency and certifications***
  Many evolved respondents *sought visible certifications or labels on products. A Delhi participant suggested, "A QR code that explains the recycling process and safety standards would make me more confident."*

- ***Environmental impact***
  Evolved respondents*, particularly in Bangalore and Delhi, valued quantifiable environmental benefits. A participant noted, "If I know how much waste I'm helping reduce, it adds meaning to my purchase."*

- ***Awareness campaigns***
  Suggested platforms included:
  - *Social media campaigns featuring relatable celebrities – making engaging reels that help make the concept more relatable*
  - *QR codes linking to videos about the recycling process*
  - *Door-to-door campaigns in peri-urban areas to educate less informed respondents*

5.6 Attitudes toward recycling and recycled plastic – perception summary

Respondents expressed strong and largely positive attitudes toward recycling and the use of recycled plastic across various dimensions, though nuances emerged based on context, product type, and region.

The statement *"Using recycled plastic is an effective way to reduce plastic waste"* received one of the highest mean scores (4.33 overall), reflecting broad agreement but also indicating opportunities for awareness building. Consumers displayed confidence in using recycled products if certified by a trusted organization, with a mean agreement of 4.06. reinforcing the value of independent verification and visible labeling in driving consumer acceptance. The belief that brands using recycled plastic are genuinely committed to sustainability received moderate to strong agreement.

Table 60 *Attitude towards recycling and recycled plastic*

	NCCS A	NCCS B	NCCS C	Total
N	**451**	**452**	**131**	**1034**
Using recycled plastic is an effective way to reduce plastic waste	4.22	4.40	4.46	4.33
I am concerned about the safety of recycled plastic used to package food products	3.73	4.06	4.09	3.92
I am concerned about the safety of recycled plastic used to package non-food products (personal care and homecare products)	3.80	4.12	4.07	3.97
Products made from recycled plastic should be priced lower than those made from virgin / fresh plastic	3.83	4.13	4.11	4.00
I feel confident in using products made from recycled plastic if they are certified by a trusted organization	3.93	4.18	4.09	4.06
I believe brands using recycled plastic are genuinely committed to sustainability	3.87	4.06	4.00	3.97

E.25 I will read out a few statements about recycling, and I'd like to understand your views. Please respond by indicating your level of agreement, ranging from Strongly Disagree to Strongly Agree

5.7 Understanding concerns and perceptions around recycled plastic packaging

To explore both the concerns and attitudes toward recycled plastic packaging, we analyzed two sets of data:

- E.22 captured specific concerns like product safety, quality, cost, and lack of transparency.
- E.25 assessed overall agreement with broader statements on recycling, using a 5-point Likert scale to measure sentiment across themes like effectiveness, trust, and brand credibility.

This dual approach helped us examine not just what people worry about, but also how much they believe in recycling's value and brand responsibility.

Key findings

- High belief in recycling's environmental value: Most respondents agreed that using recycled plastic helps reduce waste (mean 4.33), especially in urban areas like Delhi and Bengaluru.
- Strong concerns remain:
  - 67% cited quality and durability as a concern.
  - 61% highlighted the lack of transparency in recycled content claims.
- Trust drives confidence: Respondents showed stronger confidence in using recycled products if they are certified by a trusted organization (mean: 4.06). Certification and visible labeling can directly address concerns around safety and authenticity.
- Price sensitivity persists: While environmental intent is high, 42% cited increased cost as a concern, and most expect recycled products to be priced lower than virgin plastic (mean agreement: 4.00).
- Brand trust is mixed: Though many believe brands using recycled content are committed to sustainability, the belief is stronger in urban centers and weaker in some peripheral areas, where skepticism around brand motives is higher.

Consumers are positive but cautious. While there is widespread support for recycled plastic in packaging, it must be matched with credible information, visible certifications, and pricing reassurance. Building trust and addressing key concerns—especially around safety and performance—will be critical for scaling adoption.

5.8 Summary

This chapter offers a comprehensive overview of consumer awareness, attitudes, and behaviors related to the use of recycled plastic content in packaging. Drawing from a wide base of respondents across different socio-economic segments and urban-peripheral localities in key Indian cities, the findings illuminate both the potential and the barriers in promoting sustainable packaging choices among the public.

Awareness and understanding

Awareness of recycled plastic and the concept of "recycled content" is widespread—over 4 in 10 respondents claim full awareness. However, a similar proportion reports only a surface-level understanding, and about 1 in 8 are not aware of it at all.

Respondents largely recognize post-consumer plastic and industrial waste as key sources of recycled material, though knowledge gaps remain in some peripheral zones. Social media, television, product labels, and educational campaigns emerged as the top information sources, underscoring the need for a multi-pronged communication strategy.

Perceived value and trade-offs

Consumers generally associate recycled packaging with benefits like reduced plastic waste (61%), conservation of natural resources (68%), and lower energy usage and emissions. However, concerns persist—67% worry about product quality and durability, 61% cite lack of transparency, and 55% raise safety concerns, particularly for food packaging.

Understanding of the plastic recycling process remains limited for many, only 46% report knowing the full process. Clear knowledge gaps exist, particularly beyond the collection stage and in lower NCCS and peripheral zones.

Preferences by product category

Consumer preferences for recycled packaging vary by product type: product quality, affordability, and brand trust are the top drivers for choosing recycled content across categories, while environmental concerns play a reinforcing role. This points to a hierarchy in decision-making—where practical and brand-related factors take precedence, and sustainability enhances but does not override them.

Outlook and implications

The chapter reveals a consumer base that is broadly supportive of recycled plastic packaging but cautious—demanding assurance on quality, safety, and price competitiveness. There is strong interest in visible certification, credible labeling, and brand transparency. To deepen engagement and drive behavior change, brands and policymakers must:

- Strengthening awareness and education efforts, especially in peripheral and lower-NCCS markets.
- Make recycled content labeling more prominent and standardized.
- Reinforce the environmental and performance benefits of recycled packaging through trusted endorsements.
- Balance sustainable design with price sensitivity to increase adoption in cost-conscious segments.

The findings highlight a growing readiness among consumers to support sustainability—provided it aligns with trust, affordability, and quality expectations.

Chapter 6: Understanding household shopping practices and their role in sustainable packaging and waste management

This chapter explores household shopping behaviors with a focus on practices that influence packaging consumption, waste generation, and adoption of sustainable alternatives. It captures a wide spectrum of consumer choices—from where and how frequently households shop to the kind of packaging they prefer (loose, packed, or refilled), and their willingness to adopt refill stations or reusable packaging options.

The data gathered under this section is crucial for contextualizing the downstream outcomes related to waste disposal patterns and plastic recycling behaviors discussed in earlier sections. For instance, the type of store frequented and preference for packaged or loose products directly affect the volume and recyclability of packaging waste generated. Similarly, bag-carrying habits and motivations for using (or avoiding) refill options provide a lens to understand attitudes towards single-use plastics, which are a persistent environmental concern.

By assessing what consumers own (e.g., cloth or jute bags), what they aspire toward (e.g., reusable packaging), and the barriers they face (e.g., hygiene concerns, limited access to refill stations), this section helps bridge behavioral intentions with practical challenges in the journey toward sustainable consumption.

Furthermore, this chapter probes consumers' perception of their own impact, their responsiveness to store-level sustainability promotions, and their openness to paying a premium for eco- conscious retail experiences. These insights are valuable for policymakers, retailers, and brands alike, offering a roadmap for designing effective nudges, infrastructure interventions, and communication strategies aimed at reducing the environmental footprint of household consumption.

Ultimately, shopping practices form the entry point to the consumer-packaging-waste loop. Understanding these behaviors allows us to trace how daily decisions at the point of purchase translate into broader patterns of plastic usage, waste generation, and potential for circularity— key themes that cut across the entire report.

6.1 Primary responsibility for grocery shopping

Understanding who in the household takes responsibility for routine grocery shopping offers valuable context for shaping sustainable shopping interventions. These insights can help tailor communication and awareness strategies toward the actual decision-makers, whether individuals, families, or support staff—across different socioeconomic groups and city types.

Self-shopping is most common among higher NCCS, with 48–49% of respondents in NCCS A and B reporting that they personally do the household grocery shopping. This drops to 35% in NCCS C, where greater reliance is placed on family members. Spouse or family members emerge as a key group involved in grocery shopping across all NCCS, particularly in NCCS C (63%).

The role of house help is relatively minor overall (7%) but shows variation by city; urban centers like Delhi Urban report the highest proportion of self-shoppers (71%), suggesting higher individual autonomy or preference for direct control in shopping decisions. In contrast, peripheral zones generally show a more distributed shopping responsibility.

Table 61 Responsibility of grocery shopping

N = 1034	
The respondent	47%
Spouse/family members	46%
House help	7%

F.1 Who does the daily/weekly grocery shopping at your household?

6.2 Preferred shopping channels by product type

Where consumers choose to shop plays a crucial role in shaping the volume and types of packaging that enter households. This section explores consumer preferences for shopping locations—online platforms, supermarkets, or local grocery shops—across a range of commonly purchased products. These choices influence not just access to packaged versus loose goods, but also the likelihood of exposure to sustainable options such as bulk packs, refill stations, or recyclable packaging.

Local grocery shops remain the dominant shopping channel across product categories, with over 70% of respondents using them for items like loose food products (78%), beverages (74%), and toiletries (68%). The preference is even higher in peripheral areas, with usage nearing or exceeding 90% in some locations. Supermarkets play a strong secondary role, especially in urban centers and among NCCS A and B.

Online shopping is still niche but growing, with urban consumers showing greater adoption of supermarkets and online channels. Peripheral consumers rely heavily on local stores, with relatively low engagement with modern trade or e-commerce. Also, the presence of multiple purchase channels for the same product types indicates overlapping behaviors. For instance, a household may buy milk from a local store, but source snacks or personal care items from a supermarket or online—reflecting differentiated priorities based on price, convenience, trust, or packaging format.

Table 62 Preferred shopping channel by product type

N = 1034	
Loose food products (pulses, lentils, masalas)	
Online	27%
Supermarket	41%
Local grocery shops	78%
Liquid food products (sauces, jams, cooking oils)	
Online	12%
Supermarket	48%
Local grocery shops	66%
Beverage (milk, juice, soft drinks)	
Online	13%
Supermarket	36%
Local grocery shops	74%

Cleaning products (floor cleaner, disinfectant, glass cleaner)	
Online	15%
Supermarket	46%
Local grocery shops	69%
Laundry supplies (detergent powder/liquid, fabric softener, laundry soap)	
Online	17%
Supermarket	43%
Local grocery shops	74%
Toiletries (shampoo, body wash, oil)	
Online	19%
Supermarket	47%
Local grocery shops	68%
Cosmetics (lipstick, face creams, skincare products)	
Online	22%
Supermarket	48%
Local grocery shops	72%

F.2 Where do you usually shop for the following products from?

Inputs from the qualitative survey

- *Across cities, respondents rely on a mix of platforms tailored to specific needs.* ***Amazon and Big Basket*** *dominate for monthly stocking or grocery needs, while* ***quick-commerce platforms like Blinklt, Zepto, and Swiggy*** *are commonly used for instant requirements or weekly perishables such as milk, fruits, and vegetables.*

  In ***Mumbai*** *and* ***Delhi****, quick commerce has particularly gained traction among NCCS A, where a respondent in Delhi mentioned, "I use Blinklt to avoid last-minute runs to the market for essentials like milk or bread."*

- *Offline shopping remains relevant across NCCS groups but is often incidental. Respondents tend to shop offline when they are already out, encounter a store, or have specific needs better fulfilled by a local vendor.*

  - *In* ***Kolkata****, for instance,* ***NCCS B respondents*** *frequently purchase fruits, vegetables, and milk from neighborhood vendors, citing better quality control and opportunities to haggle on prices. As one Kolkata respondent noted, "I trust my local vendor for fresh produce more than an app."*
  - *Similarly, in* ***Mumbai****, certain NCCS B respondents prefer local dairies for milk due to perceived freshness and reliability.*

- ***NCCS C respondents****, across cities, predominantly shop offline, favoring local kirana stores or grocers. This preference is rooted in cost considerations and the ability to purchase items like pulses, atta, and milk in smaller, more affordable quantities.*

  In ***Bangalore****, NCCS C respondents also highlighted the familiarity and trust they share with local shopkeepers, with one respondent sharing, "I know the grocer; he understands my needs and even lets me buy on credit if required."*

- *Awareness of alternative shopping methods, such as refill and zero-waste stores, remains low across all NCCS groups. While **some respondents in Bangalore** recalled refill stores being available, these formats are not widely recognized or utilized in cities like **Delhi**, **Mumbai**, or **Kolkata**. A Delhi respondent stated, "I've never seen refill stores here; we usually stick to traditional shopping methods."*

6.3 Preferences for loose, packed, and refilled product formats

This section explores consumer preferences for product packaging formats—specifically loose, packed, and refillable options—across different product categories. These choices significantly influence household waste generation, the nature of packaging consumed, and openness to circular or low-waste alternatives such as refill stations.

Loose formats remain popular for dry groceries like pulses and masalas, suggesting that familiarity and affordability may drive loose product consumption in some segments. Packed options dominate in most product categories, particularly for liquid food products like sauces and oils (76%) and beverages (74%).

A preference for packaged products is especially strong in urban NCCS A and B groups and cities likely due to brand familiarity, hygiene assurance, and ease of handling.

Refillable formats have a niche but promising foothold with around one-fourth of respondents express a willingness to buy refills across product categories. There is lower preference for liquids and perishable items (like beverages or oils) in loose, or refill formats compared to packed, likely due to hygiene concerns, spillage risks, and limited awareness about safe refill options.

***Table 63** Consumer preferences for loose, packed, and refilled formats by product category*

N = 1034	
Food products (pulses, lentils, masalas)	
Loose	70%
Packed	59%
Refilled	26%
Liquid food products (sauces, jams, cooking oils)	
Loose	24%
Packed	76%
Refilled	24%
Beverage (milk, juice, soft drinks)	
Loose	33%
Packed	74%
Refilled	28%
Cleaning products (floor cleaner, disinfectant, glass cleaner)	
Loose	24%
Packed	74%

Refilled	28%

F.21 Which of the following products would you prefer to buy as loose / packed / refilled?

6.4 Carrying own shopping bags

Carrying one's own shopping bag is a simple yet powerful behavioral marker of sustainable consumption. This section explores how often consumers bring their own bags when visiting stores, a habit that directly influences the generation of single-use plastic waste. Overall, the findings reflect a promising trend, with most respondents indicating frequent engagement with this practice.

Across the total sample, 35% of respondents reported 'always' carrying their own shopping bag, while another 34% said they 'often' do so, together comprising nearly seven in ten consumers. These areas may benefit from reinforced communication on the environmental and cost implications of using store-provided bags or policies that further restrict their availability.

The findings suggest that although a sizable share of the population is already engaged in responsible bag-carrying practices, the consistency of this habit varies across cities and socio- economic groups. There remains potential to further normalize this behavior, especially among consumers in urban areas who shop at modern trade outlets where bag usage is more regulated, but convenience-driven habits may prevail.

Table 64 *Frequency of carrying shopping bags*

N = 1034	
Always	35%
Often	34%
Sometimes	23%
Rarely	4%
Never	4%

F.3 How often do you carry your own shopping bag when visiting the following types of stores?

6.4.1 Factors influencing the decision to carry a shopping bag

Consumers cited a mix of environmental awareness, cost-saving, and habit as reasons for carrying their own shopping bags. Financial savings emerged as the top motivator overall (67%), where store-bought bags may carry visible costs.

Awareness of the environmental impact of plastic was cited by 64% of respondents, with higher mentions likely to indicate stronger environmental consciousness in the capital. Habit or routine was also a key driver (62%), showing that sustainable behavior is increasingly becoming second nature to many consumers.

Social or peer pressure was mentioned by over one-third of respondents (36%), and very few respondents selected "Don't know" or gave no reason, reflecting overall clarity in what motivates this choice.

Table 65 Factors influencing decisions to carry shopping bags

N = 1034	
Awareness of environmental impact of plastic	64%
Financial savings from not buying bags at the store	67%
Habit or routine	62%
Social or peer pressure	36%
Don't know/can't say	3%

F5. What factors influence your decision to carry your own bag?

6.5 Acceptability of reusable packaging by product category

Consumers show strong acceptance of reusable packaging across a wide range of product categories, particularly for everyday essentials. An overwhelming 90% of respondents expressed willingness to accept reusable packaging for daily groceries such as rice, flour, and cooking oil.

Snacks and beverages also received a fair level of support (71% overall), though acceptance varied more widely, possibly due to concerns around freshness, hygiene, or inconvenience in handling. For cleaning and personal hygiene products, two-thirds of respondents (66%) were open to reusable packaging.

In contrast, reusable packaging for clothing and fashion accessories was less popular, with only 28% of respondents expressing acceptance. The relatively lower preference likely stems from expectations of newness, aesthetics, and premium packaging in fashion-related purchases.

Overall, the findings highlight strong potential for promoting reusable packaging in grocery and household product segments. However, building confidence in such formats for processed foods and personal care items may require targeted messaging around quality assurance, hygiene, and ease of use.

Table 66 Product categories acceptable for reusable packaging

N = 1034	
Daily groceries (e.g., rice, flour, cooking oil)	90%
Snacks and beverages (e.g., chips, soft drinks)	71%
Cleaning and personal hygiene products (e.g., shampoo, detergents)	66%
Clothing or fashion accessories	28%

F6. If a product is offered in reusable packaging, which of these categories of products would be acceptable?

6.5.1 Factors influencing preference for reusable packaging

Consumer preference for reusable packaging is shaped by a combination of environmental, practical, and brand-related considerations. Respondents rated six different factors on a scale from 1 (Not at all important) to 5 (Very important), and the overall results suggest that motivations are both rational (cost, quality) and value-driven (environmental impact, brand trust).

The environmental impact of packaging emerged as one of the strongest influences, with an overall mean score of 4.13. Quality of packaging (4.03) and

the quality of the product inside reusable packaging (3.94) were also rated highly, indicating that perceptions of durability and product integrity are key to driving consumer confidence in reuse formats.

Brand reputation for sustainability (mean score: 4.00) plays a crucial role in influencing trust, reinforcing the importance of brand-led initiatives and transparency in promoting circular packaging solutions.

Cost considerations, with a mean score of 3.97, also ranked among the top influences. This factor was consistently important across cities, suggesting that consumers expect sustainable packaging to be cost-neutral or offer long-term value.

Finally, aesthetics of recyclable packaging, while slightly lower (mean: 3.89), still held relevance for many consumers pointing to the growing role of design in shaping consumer perceptions of sustainability.

Overall, the findings confirm that while environmental values drive consumer openness to reusable packaging, its adoption is closely linked to practical expectations around quality, cost, and brand credibility.

Table 67 *Average scores of the various factors influencing preference for reusable packaging*

N = 1034	
Environmental impact	4.13
Aesthetics of recyclable packaging	3.89
Quality of packaging	4.03
Quality of the product inside recyclable packaging	3.94
Brand reputation for sustainability	4.00
Cost considerations	3.97

F.9 How much do the following factors influence your preference for reusable packaging? (Rate on a scale of 1–5, where 1 = Not at all important and 5 = Very important)

6.5.2 Difficulty in identifying reusable packaging

While interest in reusable packaging is high, many consumers continue to face challenges in identifying or understanding such packaging in practice. Nearly seven in ten respondents (69%) reported some level of difficulty—26% frequently and 43% occasionally—highlighting a significant gap between intention and informed action. It could also be indicative of the fact that labeling clarity and packaging cues are not sufficient.

Only 23% of respondents overall said they had never faced such difficulty, indicating possible disengagement or lack of awareness. These findings underscore the importance of improving on-pack communication, standardized labeling, and consumer education, especially if reusable packaging is to scale effectively and meaningfully in the Indian market.

Table 68 *Ever faced difficulty understanding or identifying reusable packaging*

N = 1034	
Yes, frequently	26%
Yes, occasionally	43%
No	23%
Haven't actively tried to identify reusable packaging	9%

F.10. Have you ever faced difficulty understanding or identifying reusable packaging?

6.6 Shopping at stores offering refill stations

Refill stations represent a key step toward reducing packaging waste by enabling repeated use of containers for products such as groceries and cleaning liquids. Encouragingly, most respondents (83%) reported having shopped at refill stations to some extent, with 24% doing so 'always' and 37% often. This signal growing engagement with reuse-based retail models, although the frequency of use varies across locations and socio-economic groups.

At the same time, 10% of respondents overall said they 'never' shop at refill stations, with barriers such as availability, convenience, or familiarity possibly playing a larger role. This highlights the need for wider access, clearer benefits, and stronger incentives in markets where refill culture is still emerging.

Overall, the findings point to a positive momentum in refill adoption but also reinforce the need for a more consistent and scalable infrastructure, particularly in locations where such models are still limited or underutilized.

Table 69 *Acceptance of shops selling refills*

N = 1034	
Always	24%
Often	37%
Sometimes	22%
Rarely	8%
Never	10%

F.11. Do you shop at stores that offer refill stations for products (e.g., grocery items, cleaning liquids)?

6.6.1 Avoidance of refill options

While the adoption of refill options is gaining momentum, a significant share of consumers still reports actively avoiding such alternatives. As per the findings, more than half of respondents (52%) indicated that they have at some point avoided refill options, pointing to the presence of practical or perceptual barriers that may limit uptake.

Table 70 *Avoidance of refill options*

N = 854	
Those who had avoided refill at some point	52%

F.13 Have you ever avoided refill options? (Out of those who shop at such stores at least sometimes)

Reasons for avoiding refill options

Among those who reported avoiding refill options, the reasons cited reflect a combination of practical inconvenience, product trust issues, and limited availability of which point to key challenges in mainstreaming refill models.

The most cited barrier was the inconvenience of carrying refill containers, mentioned by 84% of respondents overall. This could be indicating that ease

of mobility, lifestyle pace, and transport constraints may act as deterrents.

Concerns about hygiene and product quality were raised by 63%, highlighting the importance of trust, transparency, and packaging standards in refill formats—especially for food and personal care items.

Another major reason was the unavailability of the right products in desired quantities or brands, reported by 71% overall; this underscores the need for better product assortment, consistent supply, and brand participation in refill ecosystems.

A negligible number of respondents selected “don’t know” or “others,” indicating that most barriers are well-identified and actionable.

Together, these findings highlight that while the intent to use refills is visible, successful adoption will require systemic improvements—such as retail-led container solutions, brand-standard refill interfaces, and improved consumer assurance on safety and quality.

Table 71 *Reasons for avoidance of refill options*

N = 442	
Concerns about hygiene or product quality	63%
Inconvenience of carrying refill containers	84%
Limited/lack of availability desired products in desired quantities and brands	71%
Don’t know/can’t say	2%

F.14 If yes, why? (Those who have shopped at refill stores at least sometime and had avoided refill options at some point)

6.6.2 Willingness to use refill stations if made more accessible

Despite the practical challenges reported with refill models, consumer openness remains strong— 73% of respondents overall said they would be willing to use refill stations if they became more accessible in their locality. This finding reinforces the idea that accessibility is a key enabler in shifting consumer behavior toward reuse systems.

Willingness was particularly high in urban areas and among NCCS A respondents (77%), indicating that infrastructure readiness and location-specific retail innovation could catalyze greater adoption of refill-based shopping.

While willingness was slightly lower elsewhere, the figures still point to a meaningful base of consumers who are ready to shift behavior if convenience and trust barriers are addressed.

These findings support the case for expanding refill access points across retail touchpoints, especially in high-traffic residential zones, and ensuring that refill models align with consumer expectations for ease, quality, and product variety.

Table 72 *Willingness to opt for refill options*

N = 1034	
Those willing to use Refill stations if they become more accessible in their locality	73%

F.15 Are you willing to use refill stations if they become more accessible in your locality?

Inputs from the qualitative survey

Model 1 – Refill-at-home

Perceptions

- ***Most respondents*** *across cities are familiar with this model, particularly for products like handwash, dishwash, and floor cleaners.*
- ***Mumbai and Delhi*** *participants found this model highly convenient, with one respondent mentioning, "I've been refilling my handwash for years—it's easy and fits into my routine."*
- ***All, esp. Kolkata*** *respondents appreciated the cost savings of refill sachets but noted concerns about the availability of refills for certain products.*
- *In* ***Bangalore****, evolved respondents highlighted its alignment with eco-friendly habits, stating, "Refilling at home helps me reduce waste while staying organized."*

Fit categories

- *Non-perishable items with longer shelf lives, such as cleaning supplies, toiletries, and laundry products.*
- ***Bangalore respondents*** *suggested expanding this model to products like oil and masalas for better adoption.*

Non-fit categories

Most participants *raised concerns about perishable items like milk and juices, citing issues with tracking expiry dates.*

Model 2 – Refill-on-the-go

Perceptions

- *Seen as a* ***relatively new concept****, in Delhi, Kolkata and Mumbai. A Mumbai respondent shared, "I've never seen this in stores, but it sounds interesting for everyday items."*
- *In* ***Bangalore****, awareness was higher, with some participants recalling refill stations at eco-friendly stores. "I've seen stations where you refill grains or detergent—it's an exciting concept," said one respondent.*
- *Respondents emphasized the need for trusted grocery chains to adopt this model to ensure product quality and authenticity.*

Fit categories

- *Frequently purchased loose items like grains, pulses, masalas, and cleaning liquids – purchased in smaller quantities, and would be easier to transport back home*
- ***Bangalore and Gurgaon*** *participants saw potential for extending this model to pet food and fertilizers.*

Non-fit categories

Kolkata and Mumbai *respondents were hesitant about food and beverage items, citing trust issues with storage hygiene.*

6.7 Buying products in bulk to reduce packaging waste

Buying products in bulk is a widely recognized strategy to reduce packaging waste, especially for staples and household essentials. The survey finds that 67% of respondents reported buying in bulk either 'always' (29%) or 'often' (38%), reflecting a significant degree of eco-conscious behavior or practical motivation to reduce packaging use.

While only 2% of respondents said they never buy in bulk, occasional engagement ('sometimes') was reported by 26% overall, suggesting potential to convert occasional buyers into more regular participants through better access and awareness.

These findings suggest that bulk buying is already an embedded habit for many, particularly in households seeking cost-efficiency or minimal packaging. However, broader promotion and availability of bulk formats across store types and locations could help scale this low-waste practice further.

Table 73 *Frequency of bulk purchase of products*

N = 1034	
Always	29%
Often	38%
Sometimes	26%
Rarely	4%
Never	2%

F.16. How often do you buy products in bulk to minimize the packaging waste?

6.7.1 Types of products commonly bought in bulk

When consumers choose to buy bulk, they primarily do so for staple goods and high-consumption items. The most frequently purchased category in bulk is dry groceries such as rice, flour, and lentils, with 81% of respondents indicating this behavior.

Beverages came next, with 71% of respondents buying large bottles or multipacks. Cleaning products such as detergent and dishwashing liquid were bought in bulk by 67% overall.

Personal hygiene products were the least commonly bought in bulk (30%), possibly due to cost efficiency in multipacks or family usage patterns.

These patterns reinforce the role of bulk-buying as both a cost-saving and waste-reduction strategy, particularly for dry and durable household goods. Expanding access to bulk options across more product categories could encourage further reduction in packaging waste.

Table 74 *Type of products bought in bulk*

N = 1034	
Dry groceries (e.g., rice, flour, lentils)	81%
Beverages (e.g., large bottles or multipacks)	71%
Cleaning products (e.g., detergent, dishwashing liquid)	67%
Personal hygiene products (e.g., shampoo, soap)	30%

F.17. What types of products do you generally buy in bulk?

6.7.2 Motivations for buying in bulk

Consumers cited multiple motivations for purchasing products in bulk, with a combination of practical benefits and environmental concerns shaping their choices. The leading factor was the convenience of buying less frequently, selected by 67% of respondents overall, suggesting that timesaving and planning efficiency are key drivers of bulk-buying behavior.

Cost savings were cited by 58% of respondents, and data by NCCS indicates that affordability remains a central factor in purchasing decisions, particularly in high-consumption households or among cost-conscious consumers.

Environmental considerations were also significant—61% said reducing packaging waste influenced their decision to buy in bulk, pointing to growing sustainability awareness, especially among higher NCCS and metro consumers.

Lastly, availability of larger quantities was a motivator for 43% of respondents, suggesting that where bulk packs are offered, they are viewed as value-adding and convenient.
Together, these motivations reflect a blend of economic, practical, and environmental concerns, with different consumer segments responding to different triggers for adopting bulk-buying practices.

Table 75 *Motivation for buying in bulk*

N = 1034	
Cost savings	58%
Reduced packaging waste	61%
Convenience of buying less frequently	67%
Availability of larger quantities	43%

F.18. What are your key motivations to buy in bulk?

6.7.3 Challenges faced in bulk buying

While bulk buying offers both economic and environmental benefits, consumers face several practical barriers that affect its consistent adoption. The most reported challenge was the initial higher cost of bulk packs, cited by 61% of respondents. This suggests that upfront affordability remains a significant concern, even though bulk buying may offer long-term savings.

Difficulty in transporting large quantities was another widely reported issue (61% overall), highlighting a logistical constraint that may disproportionately affect those who walk or use public transport for shopping.

Storage limitations at home were cited by 55% of respondents reflecting a typical urban challenge where limited kitchen or pantry space may discourage purchase of large-sized packs.

Lastly, the risk of spoilage or wastage was reported by 44%, with consistent mentions across cities and NCCS. This concern may be particularly relevant for products with shorter shelf life or in households with lower consumption frequency.

These findings suggest that while motivations to buy in bulk are strong, structural and practical constraints continue to limit uptake. Addressing these challenges—such as through smaller bulk formats, better packaging design for storage, or store-led support for home delivery—could enhance adoption of this low-waste shopping strategy.

Table 76 *Challenges in bulk buying*

N = 1034	
Storage issues at home	55%
Initial higher costs compared to smaller packs	61%
Difficulty in transporting large quantities	61%
Risk of wastage or spoilage	44%

F19. Have you faced any challenges in bulk buying?

6.8 Practices to make shopping more environment-friendly

When asked about practices they would adopt to make their shopping more environmentally friendly, most respondents expressed a willingness to take concrete action, indicating broad awareness and intent across socio-economic segments and locations.

The most cited behavior was carrying one's own shopping bag, mentioned by 71% of respondents, with consistently high mentions across all NCCS.

Choosing products with minimal or recyclable packaging was also a popular choice (62%), in cities, where modern trade stores and visible packaging cues may influence consumer decisions.

A sizable proportion (58%) said they would adopt refill options suggesting growing comfort with circular consumption models in cities where such infrastructure is emerging.

Supporting brands that practice sustainability was endorsed by 54%, pointing to the growing importance of brand-led eco-positioning in influencing consumer loyalty.

Avoiding single-use plastic products, while critical from a policy standpoint, was cited by only 29% overall. This lower prioritization may reflect either lack of viable alternatives or habituation to certain formats.

In summary, bag-carrying, packaging choices, and refill options appear to be the most accepted sustainable shopping behaviors, while single-use plastic avoidance and brand alignment may require further reinforcement through incentives and awareness efforts.

Table 77 *Practices to adopt to make your shopping more environmentally friendly*

N = 1034	
Choosing products with minimal or recyclable packaging	62%
Carrying your own shopping bags	71%
Using refill options for products	58%
Supporting brands that practice sustainability	54%
Avoiding single-use plastic products	29%

F20. Which of these practices would you adopt to make your shopping more environmentally friendly?

6.8.1 Perceived impact of sustainable shopping practices

While many consumers engage in sustainable shopping practices, their perception of the actual environmental impact of these actions varies. Overall, three in four respondents (77%) believed their behavior has an impact—26% said "Yes, absolutely", and 51% said "Yes, to some extent." This reflects a reasonably high level of conviction, though with room to strengthen belief in the collective value of such individual efforts.

Confidence in making a significant difference was highest in certain urban areas where visible waste challenges or more established eco-retail environments may reinforce perceived impact. Interestingly, NCCS A (33%) was more likely than other groups to strongly believe in the environmental value of their practices.

Half of the respondents (51%) took a more measured stance, saying they believed their behavior helps, "to some extent." This indicates that while the link between personal action and environmental outcome is acknowledged, it may not always be seen as transformational.

Notably, 19% said they follow sustainable habits for personal satisfaction rather than environmental impact, suggesting that internal motivation or lifestyle values may be as important as external environmental messaging.

Only a small minority (3%) said they didn't think their actions made any difference pointing to possible disengagement or lack of feedback on visible outcomes.

These insights underscore the importance of reinforcing the link between individual choices and broader environmental goals, through both public awareness campaigns and retailer-led visibility into impact.

Table 78 *Perceived impact of sustainable shopping practices on the environment*

N	1034
Yes, absolutely	26%
Yes, to some extent	51%
No, but I do it for personal satisfaction	19%
No, I don't think it makes any difference	3%

F.21. Do you believe your sustainable shopping practices make a significant environmental impact?

6.8.2 Store-level promotion of sustainable practices and willingness to pay a premium

Visibility of sustainable practices at the store level plays a crucial role in reinforcing environmentally responsible behavior. Across the sample, 58% of respondents reported noticing stores that promote sustainable shopping practices, such as offering refill stations or not providing plastic bags. This visibility was highest in urban areas suggesting that modern trade and organized retail environments are playing a leadership role in promoting low-waste shopping norms.

In contrast, where awareness of such store initiatives was notably lower there could be potential gaps in outreach or implementation in these areas. Differences by socio-economic class suggested that exposure to eco-friendly

retail practices may be influenced by shopping location and store type.

Encouragingly, 65% of respondents overall said they would be willing to pay a small premium to shop at stores that actively promote sustainable practices suggesting that consumers value visible sustainability efforts and may reward them through loyalty or spending.

The data also reveals a clear gradient by NCCS—72% of NCCS A and 63% of NCCS B expressed willingness to pay more, compared to 48% of NCCS C, pointing to the role of disposable income in translating sustainability intent into purchase behavior.

These findings highlight both the importance of in-store cues in shaping sustainable shopping habits and the market potential for retailers to lead with environmental initiatives, especially when supported by credible communication and product availability.

Table 79 *Visibility of sustainable shopping and willingness to pay a small premium*

N = 1034	
Those stores noticed promoting sustainable shopping practices (e.g., refill stations, no plastic bags)?	58%
Those who would pay a small premium to shop at a store that actively promotes sustainable practices?	65%

F.23.Have you noticed stores promoting sustainable shopping practices (e.g., refill stations, no plastic bags)?
F.25 Would you pay a small premium to shop at a store that actively promotes sustainable practices?

Inputs from the qualitative survey

Role of brands

- **Innovative packaging solutions**
  - **Most respondents** believe brands should focus on creating sustainable packaging by using recycled materials and designing reusable or refillable options. A Bangalore respondent shared, *"Brands should promote refillable pouches that are made of recycled plastic like shampoo sachets to reduce waste."*
  - In **Mumbai**, participants suggested that brands include visible indicators, like “100% recycled material,” to build trust in their efforts.
- **Awareness and education**
  - **Many participants** emphasized the need for brands to actively educate respondents about sustainable practices. In **Delhi**, one respondent stated, *"Brands can use their packaging to educate people—like including instructions for waste segregation."*
  - **Bangalore respondents** suggested that brands could organize workshops or campaigns in schools to instill eco-conscious habits from an early age.
- **Transparency**
  Respondents across cities emphasized the importance of transparency in sustainability claims. A Gurgaon respondent noted, *"Brands should prove their claims about recycled materials by showcasing the process or certifications."*

- **Product accessibility**
  In **Mumbai and Kolkata**, **many respondents** mentioned that brands need to make eco-friendly products more affordable and accessible. One Kolkata respondent remarked, *"If sustainable options are too expensive, people won't buy them."*

6.9 Areas consumers wish to improve for more sustainable shopping

When asked which aspect of their shopping behavior they would most like to improve to be more sustainable, carrying their own bag consistently emerged as the most common response (30% overall).

Switching to products with recyclable packaging was the next preferred area of improvement (28%). This reflects growing awareness of packaging-related waste, particularly in cities with greater access to modern retail formats and branded goods.

Increasing the use of refill options was chosen by 23% of respondents, indicating openness to circular consumption where such infrastructure is emerging or already in place.

Supporting local 'eco-friendly' brands was a less frequent response (14%), but still held some appeal, suggesting that localization and sustainability can be complementary in certain consumer segments.

A small share (5%) of respondents were unsure about which habit to improve, indicating potential gaps in awareness or clarity around sustainable alternatives.

These findings provide a roadmap for prioritizing behavior change interventions, with bag- carrying, packaging awareness, and refill adoption emerging as the most actionable and relatable areas for consumer-led sustainability.

Table 80 *One practice which consumers would like to improve in their own shopping habits*

N = 1034	
Carrying my own bag consistently	30%
Switching to products with recyclable packaging	28%
Using refill options more often	23%
Supporting local eco- friendly brands	14%
Don't know/can't say	5%

F.22. If you could improve one aspect of your shopping habits to be more sustainable, what would it be?

6.9.1 Sustainability beliefs vs desired behavior change

To understand the relationship between belief and behavioral intent, we cross-tabulated consumers' responses to two questions: (1) whether they believe their sustainable shopping practices have a meaningful environmental impact (Q.F21), and (2) what changes they would most like to make to shop more sustainably (Q.F22).

The analysis reveals a clear link between conviction and action orientation. Respondents who *strongly believe* in the impact of their actions are significantly

more likely to choose habit-driven improvements such as *consistently carrying their own bags (43%)* and *using refill options (27%)*. On the other hand, those who believe their efforts have little to no impact are more likely to choose options like *supporting eco-friendly brands (27%)* or *opt for recyclable packaging (17%)*—possibly indicating a more passive or symbolic engagement.

Table 81 *Sustainability beliefs vs desired behaviour change*

Sustainable shopping practices have a meaningful environmental impact	**Carrying my own bag**	**Using refills**	**Recyclable packaging**	**Supporting local brands**	**Don't know**
Yes, absolutely (N=272)	43%	27%	24%	5%	1%
Yes, to some extent (N=530)	29%	19%	35%	14%	3%
No, but for satisfaction (N=199)	17%	28%	17%	27%	11%
No, it makes no difference (N=33)	24%	12%	3%	21%	39%
Total (N=1034)	**30%**	**23%**	**28%**	**14%**	**5%**

These results reinforce the importance of **reinforcing belief in personal efficacy** and **normalizing simple behaviors** (like bag carrying and refilling) in public campaigns and brand messaging.

6.10 Attitudes toward refill and return shopping models

Consumers were asked to share their views on various statements related to refill-at-home and return-based shopping models, which are considered key innovations in reducing packaging waste. The responses, measured on a 5-point agreement scale, reflect an overall positive orientation toward such models, with important nuances around trust, convenience, and perceived impact.

Across the sample, respondents expressed strong agreement with the convenience of refill-at- home models, with a mean score of 4.18. suggesting that both urban and peripheral consumers see potential value in such solutions if designed for ease of use.

Trust in brand-led sustainability also plays a key role. The statement *"I would adopt refill or return models if promoted by trusted brands"* received an overall mean score of 3.79, indicating that brand endorsement can be a key lever for behavior change in these geographies.

However, logistical challenges remain a barrier. The belief that *"Returning used containers is inconvenient"* received a relatively high score of 3.89. This suggests that even if consumers are open in principle, they may hesitate if systems require extra effort or time.

Trust in the operating retailer is also a significant factor, with a mean score of 3.88 for the statement *"I would trust refill stations only if operated by well-known retailers."* This sentiment pointed to the need for institutional or brand credibility to build confidence in the safety and quality of refill experiences.

There was broad agreement that refill and return models can reduce waste, with an average rating of 3.91, reinforcing the belief that waste reduction remains a

recognized benefit, even where practical challenges persist.

Taken together, these attitudes highlight a growing openness to reuse-based shopping, provided there is adequate support in terms of convenience, brand trust, and system reliability.

Table 82 Attitude towards refill and reuse shopping models

N = 1034	
Refill-at-home models are convenient and practical for my lifestyle	4.18
I would adopt refill or return models if they were promoted by trusted brands	3.79
Returning used containers is inconvenient and requires too much effort	3.89
I would trust refill stations only if they are operated by well-known retailers	3.88
Refill and return models can significantly reduce the amount of waste generated	3.91

F.26 I will read out a few statements about some shopping /delivery models, and I'd like to understand your views. Please respond by indicating your level of agreement, ranging from Strongly Disagree to Strongly Agree

6.11 Summary

This chapter explored the shopping behaviors of households and their implications for packaging choices, waste generation, and adoption of sustainable alternatives. The analysis reveals a growing awareness of environmental issues and willingness to engage in low-waste practices, although actual behaviors are often shaped by convenience, trust, and access.

Nearly half of all respondents (47%) reported doing the household grocery shopping themselves, with another 46% relying on a spouse or family member. House help also plays a notable role in purchase decisions. Local grocery stores continue to dominate as the preferred shopping channel for most daily-use categories, particularly for loose food items (78%) and toiletries (68%). However, modern trade and online channels are increasingly used for products like cosmetics and cleaning supplies, especially by NCCS A and B consumers in metros like Mumbai and Bengaluru.

Preferences for packaging formats vary by product type. Loose formats are preferred for dry groceries (70% overall), particularly among NCCS C (80%). Packed options dominate for liquids and personal care items, while refill formats, though niche (26–30%), can generate interest, with acceptance reaching as high as 69% for toiletries and 63% for cleaning products.

Carrying reusable bags is widely practiced, with 69% of respondents saying they 'always' or 'often' do so. Yet, when a bag is forgotten, 63% fall back on store-provided single-use plastic, while 57% purchase recyclable or paper bags. Cloth or jute bags are widely owned (76%), but ownership of paper bags remains lower (38%), and 6% of respondents report owning no shopping bag at all.

The key drivers for carrying one's own bag include financial savings (67%), awareness of environmental impact (64%), and habit (62%), with social pressure playing a lesser role (36%). When refused a bag by a shopkeeper, 66% feel sorry for not bringing one, while 40% feel cheated and 50% believe the

refusal is unfair.

Reusable packaging is highly acceptable for daily groceries (90%), and moderately so for snacks (71%) and cleaning products (66%), while only 28% would accept it for clothing or accessories. Factors influencing this preference include environmental impact (4.13 mean score), quality of packaging (4.03), and cost considerations (3.97), alongside trust in brand reputation. However, 69% of respondents reported difficulty in identifying reusable packaging, highlighting the need for better labelling and consumer education.

Refill stations are already used by 61% of respondents (always or often). Willingness to use refills further increases if they are made more accessible, with 73% saying they would adopt them. Despite this interest, 52% have avoided refill options in the past. The main reasons cited were the inconvenience of carrying containers (84%), concerns about hygiene and product quality (63%), and unavailability of preferred brands or pack sizes (71%).

Bulk buying is a common strategy among Indian households, with 67% doing so always or often driven by convenience (67%), cost savings (58%), and reduced packaging waste (61%). Dry groceries (81%) and beverages (71%) are the most purchased in bulk. However, storage constraints (55%), transport difficulties (61%), and initial high costs (61%) limit wider adoption.

When asked which sustainability practice they would like to improve, the most common response was carrying their own bag more consistently (30%), followed by switching to recyclable packaging (28%) and using refill options more frequently (23%). Despite some doubts, 77% believe their sustainable practices do have an environmental impact, and 19% continue these practices for personal satisfaction regardless of broader effects.

At the retail level, 58% of respondents have noticed stores are promoting sustainable practices, and 65% are willing to pay a small premium to support such efforts.

Finally, attitudes toward refill and return models are largely positive. Most respondents find refill- at-home models convenient (4.18), believe such models can reduce waste (3.91), and are more inclined to use them if promoted by trusted brands (3.79) or operated by well-known retailers (3.88). However, the effort involved in returning containers is still seen as a barrier (3.89).

In conclusion, this chapter underscores that while sustainable shopping behaviors are gaining ground, widespread adoption will depend on reducing consumer effort, ensuring consistent access to sustainable options, and reinforcing trust in product quality and safety. Shopping practices form a foundational link in the packaging waste chain—addressing them through smart design, behavioral nudges, and retailer partnerships offers a high-leverage opportunity to advance sustainability outcomes.

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About the India Plastics Pact

The India Plastics Pact (IPP), a CII initiative, was launched in 2021, and unites businesses, governments, NGOs and citizens to create a circular economy for plastic packaging in India. The CII-ITC Centre of Excellence for Sustainable Development (CESD) anchors the India Plastics Pact, within CII. The work of the Pact covers all plastic resins at all stages of the plastics packaging value chain. The India Plastics Pact is the first Plastics Pact in Asia and part of a global network of 13 Plastics Pacts. As of March 2026, 55 organisations were signatories to the India Plastics Pact.

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About the CII-ITC Centre of Excellence for Sustainable Development

The CII-ITC Centre of Excellence for Sustainable Development (CESD) is the ecosystem creator for sustainable development in India. As a 20-year-old Industry-led institution within CII, the Centre drives sustainable, environmental, inclusive and climate-friendly transformation among stakeholders through research, data-driven digital tools, frameworks, collaborative initiatives and capacity development.

CESD works towards bringing local and global macro challenges to the centre stage; building policy consensus on critical issues; strengthening stakeholders' awareness and representation on policy & regulatory reforms and enabling actions that positively impact the environment, nature and communities.

With a vision to drive transformation towards sustainable development, CESD continues to play a focal role in Government-Industry dialogues on national regulations; articulating stakeholders' discourse on global policies; putting forth Indian Industry's stand on macro-economic issues and accentuating the need for sustainable and inclusive transformation.

CESD focuses on six transformational pathways: Advancing Creation of a Circular Economy; Facilitating an Enabling Ecosystem for ESG Reporting; Accelerating Nature Positive Actions; Enhancing Solutions for Clean Air; Building Climate Resilience and Low-Carbon Economy and Fostering Dialogues, Engagements & Knowledge Exchange.

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About the Confederation of Indian Industry

Confederation of Indian Industry

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For 130 years, CII has been engaged in shaping India's development journey and works proactively on transforming Indian Industry's engagement in national development. CII charts change by working closely with the Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialised services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

In the journey of India's economic resurgence, CII facilitates the multifaceted contributions of the Indian Industry, charting a path towards a prosperous and sustainable future. With this backdrop, CII has identified "Accelerating Competitiveness: Globalisation, Inclusivity, Sustainability, Trust" as its theme for 2025-26, prioritising five key pillars. During the year, CII will align its initiatives to drive strategic action aimed at enhancing India's competitiveness by promoting global engagement, inclusive growth, sustainable practices, and a foundation of trust.

With 70 offices, including 12 Centres of Excellence, in India, and 9 overseas offices in Australia, Egypt, Germany, Indonesia, Singapore, UAE, UK, and USA, as well as institutional partnerships with about 250 counterpart organisations in almost 100 countries, CII serves as a reference point for Indian industry and the international business community.

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