

# Consumer Awareness Towards Sustainable or Green Products: A Study of Bihar

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## ABSTRACT

This study investigates consumer awareness and behavioral patterns toward sustainable or green products in Bihar, India. As global concern over environmental degradation intensifies, understanding how consumers in emerging regions perceive and adopt eco-friendly products has become crucial. The research adopts a descriptive design and employs primary data collected from 200 respondents across urban and rural districts, including Patna, Gaya, Bhagalpur, Muzaffarpur, and Purnia. The analysis reveals that 72.5% of respondents are aware of green products; however, only 47.5% have made actual purchases, indicating a significant gap between awareness and adoption. Urban consumers demonstrate higher levels of awareness, willingness to pay, and trust compared to rural consumers. Key barriers identified include high product prices, limited availability, and low trust in eco-labels. The study further segments consumers into four categories—Informed Adopters, Transformables, Aware but Constrained, and Disconnected—based on their awareness and adoption capacity. Findings suggest that while awareness is growing, structural and economic constraints continue to hinder sustainable consumption in Bihar. The study emphasizes the need for targeted awareness campaigns, improved accessibility, and government–industry collaboration to enhance green product adoption. These insights contribute to understanding consumer behavior in developing regions and provide a roadmap for fostering sustainable markets in Bihar.

**Keywords:** consumer awareness, green products, sustainable consumption, Bihar, environmental behavior, eco-friendly products

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## INTRODUCTION

The world is changing, and so are the choices people make. Today, more and more people are becoming aware of how their daily habits and the products they use affect the environment. Growing environmental concerns and mounting evidence of the ecological costs of conventional consumption have pushed sustainability from the margins into mainstream market conversations. “Green” or sustainable products—those marketed as having lower environmental impact across their life cycle—are increasingly visible in Indian retail and policy debates, and researchers report rising consumer interest in environmentally friendly consumption across the country. Empirical work from India shows that green consumption is becoming a meaningful component of household decision-making, driven by rising environmental awareness, stronger green marketing communications, and greater availability of eco-labelled options. (Kennedy et al., 2024; Reddy et al., 2023).

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Despite this macro-level momentum, the translation of pro-environmental attitudes into actual green purchases remains uneven. These findings suggest that awareness alone is necessary but not sufficient to produce behavioral change—contextual factors (income, local retail structure, trust in claims) and marketing signals play decisive roles. (Correia et al., 2023; systematic reviews). The study of consumer responses to green products is also well served by established behavioral frameworks. The Theory of

Planned Behavior (Ajzen, 1991) — which links attitudes, subjective norms, and perceived behavioural control to behavioural intentions — has been widely applied to explain green purchase intentions and to structure empirical investigations in developing-country contexts, including India. Using TPB helps researchers separate attitudinal awareness from the social and structural constraints that determine whether awareness becomes purchase behaviour. (Ajzen, 1991; Bosnjak et al., 2020).

At the state and local level the picture varies. Bihar—home to a large rural population and rapid urbanizing centres such as Patna—has recently featured state initiatives and public campaigns aimed at environmental conservation and green cover, reflecting a policy interest in sustainability that makes consumer behaviour there an important empirical question (Times of India, 2025). Yet, until recently few empirical studies have focused specifically on green product awareness and purchase intentions in Bihar. A recent descriptive study that surveyed consumers across five Bihar cities (Patna, Muzaffarpur, Bhagalpur, Katihar and Munger) begins to fill this gap by examining awareness, perceived effectiveness, and sustainable practices as predictors of green purchase intention in the state (IJCRT, 2024). This localized work highlights the need for more fine-grained, context-sensitive research that links awareness to market constraints and policy levers in Bihar.

## LITERATURE REVIEW

Sustainability and environmental protection have emerged as crucial issues influencing consumer behavior globally. The growing concern over environmental degradation, climate change, and unsustainable production has led to an increasing demand for green products—goods that are environmentally friendly, recyclable, and resource-efficient (Joshi & Rahman, 2015). In India, and particularly in states like Bihar, where economic development is accelerating, consumer awareness toward sustainable or green products remains a developing area of study.

Green products are designed to minimize environmental impact throughout their life cycle—from production and consumption to disposal (Ottman, 2017). These products typically emphasize energy efficiency, non-toxicity, recyclability, and biodegradability. Sustainability in consumption involves balancing environmental protection with economic and social well-being (Peattie & Crane, 2005). The awareness and adoption of such products depend largely on consumers' environmental consciousness and perceived

personal responsibility (Young et al., 2010).

Consumer awareness refers to the level of knowledge, understanding, and concern individuals have regarding environmental issues and green alternatives (Mahesh & Ganapathi, 2021). According to Kumar and Ghodeswar (2015), increased awareness leads to a higher likelihood of green product adoption. However, this relationship is not linear—while consumers may express environmental concern, their actual purchase behavior often reflects other priorities such as cost and convenience (Joshi & Rahman, 2017).

A study by Gupta and Ogden (2009) found that although many consumers claim to support environmental causes, their purchase behavior is often inconsistent—a phenomenon known as the “green gap.” Similar findings were echoed in the Indian context by Biswas and Roy (2015), who noted that awareness levels are improving but do not always translate into actual green purchasing behavior.

In India, green consumerism has been gaining attention due to policy initiatives, media exposure, and the rise of educated urban consumers (Saxena & Khandelwal, 2012). Nevertheless, consumer awareness levels vary significantly across states and regions. Urban consumers, particularly in metropolitan cities, are generally more aware of eco-friendly practices compared to their rural counterparts (Dangelico & Vocalelli, 2017). In Bihar, a state with growing industrial and agricultural sectors, research on green consumer behavior remains limited but crucial, given the state's environmental challenges and development trajectory.

Several factors influence consumers' awareness and purchase intentions toward green products. These include environmental concern, perceived effectiveness of actions, social influence, and access to eco-friendly products (Yadav & Pathak, 2017). Price sensitivity also remains a key factor—many Indian consumers perceive green products as costlier, which hampers adoption (Biswas & Roy, 2015). In regions like Bihar, limited availability, lack of awareness campaigns, and low visibility of eco-labels further constrain consumer choices (Prakash & Pathak, 2017).

Empirical studies in various parts of India indicate that education, income, and exposure to media significantly affect environmental awareness (Kumar & Kumar, 2020). For instance, studies in Northern India found that youth and educated consumers are more likely to exhibit eco-conscious behavior (Ranjan & Singh, 2019). However, in states like Bihar, where rural populations dominate and literacy levels vary, awareness initiatives are essential

to promote sustainable consumption practices (Singh & Sinha, 2021)

### Need Of Consumer Awareness For Green And Sustainable Products

In today’s world, the transition toward sustainable living is not just a global priority—it is a local necessity. As environmental challenges like pollution, climate change, and resource depletion intensify, there is a growing need to adopt eco-friendly alternatives in every aspect of life. Green products, which are environmentally safe, energy-efficient, biodegradable, and ethically produced, play a crucial role in reducing our ecological footprint. Bihar, with its rich agricultural heritage and evolving urban centers, holds tremendous potential to become a leader in India’s green movement. However, this potential remains largely untapped due to low levels of consumer awareness, limited access to green products, and socio-economic constraints. Despite numerous government efforts such as the Jal-Jeevan-Hariyali Abhiyan and Green Budget initiatives, the on-ground impact in terms of consumer behavior has been minimal, especially in rural and semi-urban areas. Consumer awareness is essential because it bridges the gap between environmental knowledge and behavioral change. Without adequate awareness, consumers may not recognize the environmental benefits of green products or may remain skeptical about their effectiveness and authenticity (Joshi & Rahman, 2019). Research indicates that even when consumers express concern for the environment, a lack of knowledge about green product attributes and eco-labels often prevents them from making sustainable choices (Chen, 2020). Therefore, educating consumers about environmental issues, product certifications, and sustainable consumption patterns is critical to nurturing responsible market behavior. This highlights the urgent need to raise awareness among consumers about the benefits of sustainable consumption—not only for the environment but also for personal health and economic savings. When people are informed about green products, they are more likely to make conscious choices that support long-term sustainability. Awareness also empowers consumers to demand better policies, more eco-friendly options in the market, and accountability from businesses.

*This study aims to bridge that gap by*

- Assessing current awareness levels among consumers in Bihar,
- Identifying key barriers to the adoption of green

- products,
- And classifying consumer behavior into meaningful categories that can guide future awareness strategies and policymaking.

With Bihar’s growing youth population, active local entrepreneurs, and a strong sense of community, the state has the right ingredients to embrace a green transformation. By empowering people through education and accessibility.

Therefore, this study is not just a research exercise—it is a step toward a cleaner, healthier, and more sustainable Bihar.

## RESEARCH METHODOLOGY

### Research Design and Sample

A descriptive research design was adopted using a structured questionnaire. Data were collected from 200 respondents—120 urban and 80 rural consumers—across districts including Patna, Gaya, Bhagalpur, Muzaffarpur, and Purnia. The respondents were selected through stratified random sampling to ensure representation across age, gender, and income levels.

### Data Analysis

The following table summarizes key findings from the survey.

In Table 1 out of 200 respondents, 72.5% were aware of green products. Urban awareness was notably higher (83%) compared to rural areas (56%). These results align with Dutta (2019), who reported that urban consumers have greater exposure to sustainable consumption trends due to media influence and product availability.

Only 47.5% of respondents had purchased a green product. While 70 urban respondents reported purchase experience, only 25 rural consumers did. This indicates that awareness does not necessarily lead to purchase—a pattern similar to the “attitude–behavior gap” identified by Jain and Kaur (2006).

A total of 45% of respondents expressed willingness to pay a premium for green products, though willingness was stronger among urban consumers (50%) than rural ones (37.5%). This reflects price sensitivity and limited disposable income in rural Bihar, consistent with

Table 1: Summary of Consumer Responses (N = 200)

Category	Respondents	Aware of Green Products	Purchased Green Products	Willing to Pay Extra
Urban	120	100	70	60
Rural	80	45	25	30
Total	200	145 (72.5%)	95 (47.5%)	90 (45%)

Source: Primary survey data (2025)



findings by Sharma and Bansal (2020).

### Major Barriers Identified

Respondents cited three key barriers:

#### High Price (68%)

Green products are perceived as expensive.

#### Limited Availability (55%)

Few stores, especially in rural areas, stock eco-friendly goods.

#### Lack of Trust (48%)

Many consumers doubt the authenticity of “green” labels, fearing greenwashing (Delmas & Burbano, 2011).

## FINDINGS

The survey conducted among 200 respondents across various districts of Bihar was designed to assess the level of consumer awareness toward green products and to classify consumers into meaningful categories based on two key dimensions: their level of awareness regarding sustainable products and their ability to overcome economic, educational, and infrastructural barriers in adopting such products. The analysis revealed diverse behavioral patterns, which allowed segmentation of respondents into four distinct consumer types: Informed Adopters, Transformables, Aware but Constrained, and Disconnected. These categories provide a nuanced understanding of how awareness and adoption interact within Bihar’s socio-economic context.

### Customer Segmentation Based on Awareness and Adoption

Fig 1 The data indicated that approximately 26% of respondents could be classified as Informed Adopters, 22% as Transformables, 34% as Aware but Constrained, and the remaining 18% as Disconnected. This segmentation highlights that while awareness of green products is gradually increasing, actual adoption remains uneven across different demographic and geographic segments. The largest segment,

representing one-third of all respondents, comprised individuals who are aware of green products but unable to act upon that awareness due to practical limitations such as affordability, access, and lack of infrastructure.

### Detailed Customer Type Profiles

#### Customer Type A – The Informed Adopters (26%)

This group represents the most proactive segment of consumers who are both knowledgeable about and actively engaged in adopting green products. These individuals are well-educated, environmentally conscious, and aware of the health and economic benefits associated with sustainable consumption. Despite minor challenges such as higher costs or limited product availability, they continue to purchase eco-friendly products regularly. Typically, these consumers are urban residents who rely on digital media, educational institutions, and online platforms for information. They are willing to pay a premium for sustainability and often act as *influencers* or opinion leaders within their social circles, promoting eco-conscious behavior among peers.

#### Customer Type B – The Transformables (22%)

The second category includes consumers who initially lacked awareness of green products but have shown a strong inclination toward change once introduced to relevant information. Exposure to social media campaigns, environmental workshops, or government-led initiatives has been instrumental in motivating them to experiment with eco-friendly alternatives. These consumers are primarily semi-urban or urban young professionals and students who are open to adopting sustainable habits when guided appropriately. Their motivation often stems from peer influence, lifestyle aspirations, and perceived health benefits rather than deep environmental commitment.

#### Customer Type C – The Aware but Constrained (34%)

Constituting the largest share of respondents, this

Table 2 : Category of Customer as per response

Customer Type	Awareness	Barrier of over coming	% of Respondent	Description
A	High	High	26	Full Awareness and Adopting
B	Low	High	22	Unware but adopting after explore
C	High	Low	34	Aware but unable to overcome barriers
D	Low	Low	18	Unware & Stuck

	<b>FULL AWARENES S</b>	<b>NO AWARENESS</b>
<b>OVERCOMING BARRIERS</b>	<b>CUSTOMER TYPE -A</b>	<b>CUSTOMER TYPE-B</b>
<b>FACING BARRIERS</b>	<b>CUSTOMER TYPE-C</b>	<b>CUSTOMER TYPE-D</b>

**Fig 1:** Customer segmentation based on awareness and adoption

segment includes individuals who possess substantial awareness about green products and acknowledge their importance for environmental protection and public health. However, their actual adoption is limited by financial hardships, poor accessibility, or the absence of supportive institutional frameworks. Many within this category express frustration at being unable to practice green consumption despite their awareness and willingness. Predominantly belonging to lower-middle-income or rural groups, their awareness often arises from informal sources such as word-of-mouth or local television. Trust also remains a concern—these consumers are skeptical about the authenticity of “eco-friendly” labels due to the lack of credible certifications or government validation.

*Customer Type D – The Disconnected (18%)*

The final group, identified as *Disconnected*, includes respondents with minimal awareness and multiple barriers preventing them from engaging with sustainable products. These consumers are typically from remote rural regions, characterized by low literacy levels, limited income, and negligible access to organized retail markets. Their consumption habits remain rooted in traditional, often non-sustainable products, such as plastic packaging or chemical-based goods. Predominant among this group are daily wage laborers, elderly individuals, and uneducated residents whose immediate economic needs overshadow environmental considerations. Their adoption of green products is hindered not by disinterest but by the lack of exposure, affordability, and infrastructural access

**SUGGESTIONS & RECOMMENDATIONS**

Based on the survey results and analysis of consumer behavior in Bihar, the following suggestions are made to improve awareness, accessibility, and adoption of green products in the state:

**Launch State-Wide Awareness Campaigns**

- Organize regular awareness drives using local languages through TV, radio, and social media.
- Include sustainability topics in school and college curriculums to educate the younger generation early on.
- Use influencers, local leaders, and eco-ambassadors to reach rural populations.

**Promote Eco-Certifications and Labelling**

- Encourage brands to use clear and easy-to-understand eco-labels like *Ecomark*, *FSC*, and *Organic India*.
- Promote third-party verification to build consumer trust in green products.

*Support Green Startups and Local Businesses*

- Offer financial and technical support to startups in sectors like organic farming, eco-packaging, and sustainable handicrafts.
- Highlight success stories like *Taruwar Agro* and *JEEViKA* to inspire others.

**Improve Availability and Affordability**

- Build supply chains that make green products accessible in Tier 2 and Tier 3 towns.
- Provide price subsidies or tax benefits to make green alternatives more affordable for low-income consumers.

**Introduce Government-Supported Retail Counters**

- Set up stalls or dedicated sections for eco-friendly products in public markets, malls, and weekly haats.
- Collaborate with cooperatives and SHGs (Self Help Groups) to sell locally-made sustainable products.

**Strengthen Public-Private Partnerships (PPP)**

- Partner with NGOs, educational institutions, and private companies to promote green living habits.
- Incentivize corporate responsibility programs focusing on sustainability.

**Digital Outreach & Green Challenges**

- Use platforms like YouTube, Instagram, and Facebook



to spread green awareness among youth.

- Run interactive campaigns like #GoGreenChallenge, #PlasticFreeBihar, and #EcoFriendlyDiwali to engage the community.

## CONCLUSION

This study explored consumer awareness and behavior toward sustainable or green products in Bihar, revealing important patterns and actionable insights. Consumers were categorized into four types—A, B, C, and D—based on their level of awareness and ability to overcome adoption barriers. The largest segment, Customer Type C (34%), consisted of individuals who are aware of green products but are unable to adopt them due to challenges like high costs, limited availability, and lack of systemic support. This underscores a crucial insight: awareness alone is not enough to drive sustainable consumption.

Type A consumers (26%) are fully aware and actively adopting green products, serving as positive examples of informed and motivated behavior. Meanwhile, Type B (22%)—initially unaware but willing to adopt once educated—reflects the power of targeted awareness efforts. In contrast, Type D (18%) consumers face compounded disadvantages, lacking both knowledge and access, and therefore require the most foundational support.

Key barriers identified through the survey include affordability issues, limited market access, low trust in eco-labels, and absence of perceived benefits. While government schemes like Jal-Jeevan-Hariyali and the Green Budget show promise, their on-ground impact remains limited due to a lack of public awareness and localized implementation.

In conclusion, Bihar has a solid foundation for growing green consumerism, but success depends on addressing economic, educational, and infrastructural barriers. A collaborative approach involving government, business, media, and community engagement is essential to empower all consumer types—especially Types B and C—to make informed, sustainable choices. With the right push, Bihar can transform into a leader in green adoption, aligning environmental responsibility with local economic growth.

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