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**TOWARDS A SUSTAINABLE FUTURE: UNDERSTANDING
AWARENESS AND SUSTAINABLE PRACTICE GAPS IN INDIA**

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Abstract

Climate change is a global issue faced by countries across the globe. Environmental sustainability ensures that the environment is preserved and used wisely, preventing it from being overused as a resource. Environmental degradation poses a pressing challenge to global sustainability, with India experiencing significant socio-economic and ecological consequences. This study explores how public awareness influences sustainable practices and climate resilience. The primary data from 146 urban students and young professionals across India were analyzed through Spearman's Rank Correlation and the findings reveal a moderate positive correlation, suggesting that while awareness supports sustainability, it is not by itself sufficient to guarantee behavioral change. While respondents recognize environmental challenges, their adoption of eco-friendly practices remains inconsistent and limited. The study highlights the persistent awareness–action gap and the need for a multifaceted approach involving strengthened environmental laws. It also highlights the need for integrated policies and global cooperation to achieve a sustainable future for India.

Keywords: Environmental degradation, climate change, sustainable practices, eco-friendly practices, awareness-action gap.

1. INTRODUCTION

Environmental degradation has intensified over recent decades, emerging as one of the greatest challenges to sustainability of global society. Rapid urbanization, industrial expansion, and unsustainable consumption patterns have accelerated climate change and degraded ecosystems worldwide (Mishra & Verma, 2024; Reinman, 2015). India ranks among the most climate-vulnerable regions, experiencing increasingly frequent floods, droughts, heatwaves, and other climate-related disruptions (Rao et al., 2021). Such environmental changes have significant implications for agriculture, water resources, public health, and economic stability (Ahmed et al., 2016). Furthermore, existing literature indicates that the disconnect between individual perception and actual environmentally friendly behavior is exacerbated by socioeconomic factors and a lack of institutional alignment (Jindal et al., 2025; Rajapaksa et al., 2018). Indeed, research suggests that despite high levels of climate literacy among younger cohorts, significant barriers—such as personal inconvenience and the perceived lack of effective incentive structures—continue to impede the translation of knowledge into consistent pro-environmental habits (Manchanda, 2024). Moreover, the reliance on top-down policy frameworks often fails to account for the localized socio-demographic variables that govern household decision-making processes (Rajapaksa et al., 2018). Consequently, bridging this divide necessitates a nuanced understanding of how subjective living conditions and social inequality influence individual choices (Rajapaksa et al., 2018). Furthermore, addressing the limitations of current environmental education is essential, as the absence of practical skill-building often prevents individuals from moving beyond mere awareness to adopting tangible pro-environmental actions (Puri et al., 2021).

Sustainable development has been globally recognized as the path toward addressing these challenges. International frameworks such as the United Nations Sustainable Development Goals (SDGs) emphasize the need to balance

economic growth with environmental protection and social inclusion. This is possible with technological and policy innovations and changes in public behavior. Individual actions—such as recycling, conserving energy, reducing plastic consumption, and supporting renewable energy—are central to building a cleaner environment again (Hampton & Whitmarsh, 2023). However, the efficacy of these micro-level interventions depends heavily on the integration of informed public participation with robust technological research and systemic monitoring of environmental indicators (Kunwar et al., 2024).

Despite rising awareness through education, media, and government campaigns, a notable “awareness–action gap” persists. Many individuals recognize the urgency of environmental problems yet fail to consistently adopt sustainable practices in their daily lives. This discrepancy often stems from external constraints—such as prohibitive costs, limited access to eco-friendly products, and entrenched social norms shaping consumption habits (Israilova et al., 2023; Maria et al., 2025)—as well as the psychological tendency to prioritize immediate gratification over long-term ecological benefits (Israilova et al., 2023). These factors underscore the need for communication strategies that clearly convey the consequences of current consumption decisions. Ultimately, addressing such impediments demands collaborative efforts among governments, industries, and local communities to drive innovation and cultivate a more sustainable economic environment (Rasoulinezhad & Taghizadeh-Hesary, 2025).

This study contributes to the discussion by exploring the relationship between awareness and sustainable practices in the Indian context. Using primary survey data and statistical analysis, it evaluates the extent to which awareness translates into sustainable behaviour, while also examining barriers, motivations, and public perceptions of India’s preparedness to face environmental challenges. The research further delineates the role of demographic variables in moderating this relationship, acknowledging that varied socio-economic backgrounds significantly influence the adoption of green technologies (Sharma et al., 2023).

2.OBJECTIVES

The objectives of this study are:

- To examine the level of public awareness regarding environmental degradation and climate resilience in India.
- To assess the extent to which individuals adopt sustainable practices in their daily lives.
- To evaluate the relationship between awareness levels and sustainable behaviour using statistical analysis.
- To identify barriers and motivations that influence the adoption of sustainable practices.
- To explore public perceptions of government efforts and the integration of sustainability in education.

3. REVIEW OF LITERATURE

1. *Climate Change in the Indian Mind, 2023.*

(Leiserowitz et al., 2024)

This study highlighted the importance of institutional capacity in enabling climate-resilient agriculture in Bihar and Odisha. By analyzing local governance structures and agricultural practices, the authors showed that effective policy frameworks and farmer training programs enhance adaptation. However, the study concentrated primarily on agriculture and governance, leaving limited attention to how public awareness and individual behaviour influence resilience.

2. *Advancing Climate-resilient Agriculture in India by Strengthening Institutional Capacity: Lessons from Bihar and Odisha.*

(Shukla et al., 2025)

Piao and Managi investigated behavioural determinants across a global dataset, demonstrating that socio-economic conditions and psychological well-being often outweigh awareness in predicting pro-environmental actions. Their findings are valuable for understanding cross-national patterns but do not fully capture the Indian context, where structural and cultural barriers also play an important role in addition to awareness.

3. *Determinants of pro-environmental behaviour: effects of socioeconomic, subjective, and psychological well-being factors from 37 countries.*

(Piao & Managi, 2024)

This study examined how environmental knowledge shapes consumer behavior in Vietnam. The results confirmed that knowledge positively influences sustainable purchasing decisions, yet barriers such as affordability and availability reduce its impact. While comparable to India, the study focuses on consumption patterns rather than broader sustainable practices.

4. *Environmental Knowledge and Sustainable Consumption Behavior: Evidence From Vietnam.*

(Trinh et al., 2025)

This paper addresses this issue by analyzing an Indian urban sample.

5. *Research on sustainable development in India: Growth, key themes, and challenges.*

Raghu Raman ^a, Vinith Kumar Nair ^a, Hiran H. Lathabai ^b, Prema Nedungadi ^c *Social Sciences & Humanities Open Volume 11, 2025.*

The study charts the rapid growth of SDG/sustainability research in India (Raman et al., 2025). This paper empirically tests that relationship using correlation methods.

4. HYPOTHESIS

H₀: There is no significant relationship between public awareness and adoption of sustainable practices.

H₁: There is a significant relationship between public awareness and adoption of sustainable practices.

Research Methodology:

- Tools: Primary data were collected using a questionnaire on the online platform.
- Sample Size: 146 respondents (students, urban residents in India). A convenience sampling technique was adopted, focusing on urban students and young professionals.
- Data Analysis: Spearman’s correlation was used to identify the relationship between familiarity or awareness among the public and adoption of sustainable practices. Spearman's rank correlation coefficient was chosen since it is best suited for ordinal and non-parametric data.
- A t-test was then conducted to find the t – statistic in order to help in the decision to accept or reject the null hypothesis.
- The responses were encoded into numeric values to enable statistical analysis using correlation:

Awareness Scale: 1 = Not familiar at all 2 = Heard of it but not sure what it means 3 = Somewhat familiar 4 = Very familiar

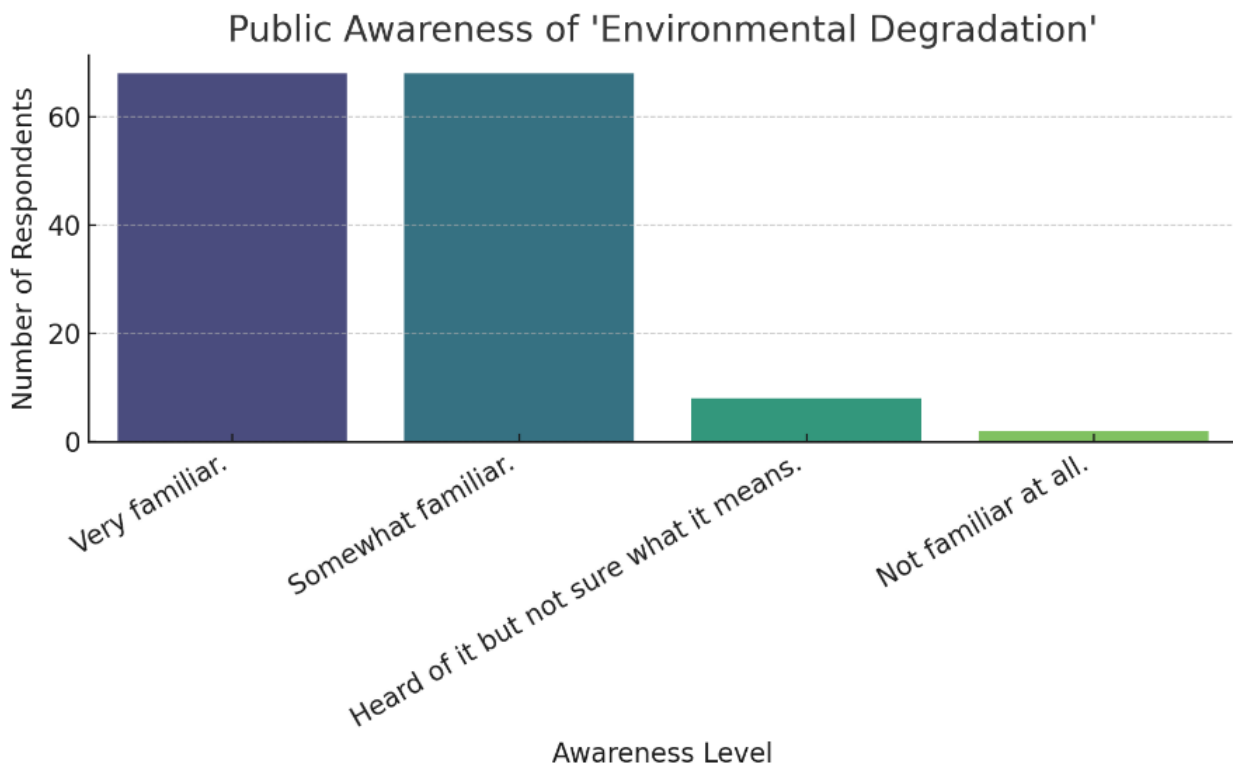
Sustainable Practice Scale: 1 = Never 2 = Rarely 3 = Occasionally 4 = Very often

Analysis:

To test the hypothesis that there is no significant relationship between public awareness and the adoption of sustainable practices, Spearman rank correlation analysis and t-test were conducted using the data collected from the questionnaire responses.

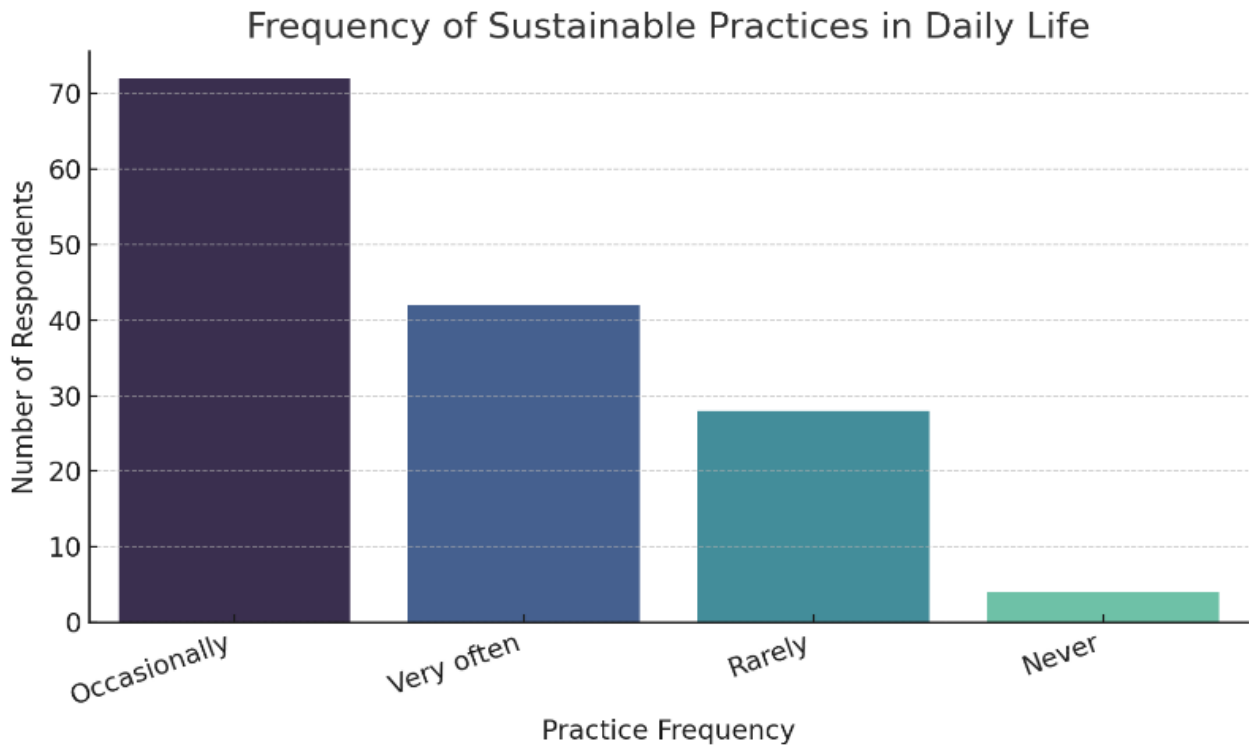
1. **Familiarity distribution among respondents:**

Awareness Response	Count
Very familiar.	68
Somewhat familiar.	68
Heard of it but not sure what it means	8
Not familiar at all	2



1. Frequency of using sustainable practices by respondents:

Sustainable Practices Response	Count
Occasionally	72
Very often	42
Rarely	28
Never	4



5. FINDINGS

- Spearman's rho: 0.322
- p-value: 0.000046

The analysis produced a Spearman Correlation Coefficient of 0.322 with a p-value of 0.000046. This indicates a moderate positive relationship between the two variables, meaning that with an increase in the respondents' familiarity with sustainable practices, their frequency of engaging in sustainable practices also increases.

At 5% level of significance, the p- value (test statistic) is less than the level of significance (0.000046 < 0.05) suggesting that the null hypothesis (there is no significant relationship between awareness and practice) is rejected, which means that there is a significant relationship between public awareness and adoption of sustainable practices. Consistent with previous findings in emerging economies, this positive association underscores that while awareness is a crucial precursor to action, the moderate correlation suggests that additional structural facilitators may be necessary to bridge the remaining behavioral gap (Tudor et al., 2016; Veckalne et al., 2022).

Discussions:

The findings of this study support the hypothesis that public awareness significantly influences sustainable practices in India. This aligns with global evidence suggesting knowledge can motivate pro-environmental behavior, but the effect is often moderate. Unlike (Piao & Managi, 2024), who found socio-economic and psychological factors more predictive than awareness, this study shows awareness remains a relevant factor in the Indian context. However, the correlation is moderate, reinforcing the idea of an "awareness-action gap" highlighted in (Raman et al., 2025). This suggests that awareness campaigns alone are insufficient unless supported by enabling infrastructure and policy incentives.

Additional Findings:

- The respondents identified climate change and extreme weather events as the most pressing environmental issues for India. Nearly all respondents agreed that environmental degradation affected their daily life.
- Most respondents cited industrial pollution, overpopulation, waste management failures, and urbanization as the leading causes of environmental degradation.

- A large proportion believed India is not prepared at all to face challenges, highlighting a gap between policy efforts and public confidence.
- Recycling, reducing water and energy consumption, planting trees, and using public transport were among the most common sustainable practices adopted. However, practices varied, with many respondents admitting to only occasionally engaging in sustainability.
- Majority of the respondents believed the government is not doing sufficient to address environmental issues. The most requested actions were waste management programs, stricter environmental regulations, and promotion of renewable energy.
- A significant number felt that sustainability and climate change education is only partially integrated, underlining the need to strengthen environmental education in schools and universities.

6.SUGGESTIONS

- Strengthen environmental education in school curriculum.
- Use regional languages in sustainability campaigns.
- Mandate ESG reporting for local businesses.

7.CONCLUSION

A sustainable future hinges on integrating climate education, strict enforcement of environmental laws, and community-based sustainability models. This study concludes that awareness campaigns and education can enhance sustainable behavior, but infrastructure, incentives, and stronger policy enforcement are equally critical. Bridging the awareness–action gap requires not only campaigns and education but also stronger institutional support, targeted incentives, and increased public confidence in government measures.

Recommendations

Based on the findings of the study, the following recommendations are proposed:

- Enhance environmental education in educational institutions and community programs.
- Implement targeted awareness campaigns that connect environmental issues to everyday behaviour of people.
- Provide economic incentives for sustainable practices, by both individuals and corporations.
- Develop infrastructure that supports sustainable living, such as recycling facilities and public transportation in all sectors of the economy.
- Encourage and mandate corporate social responsibility initiatives to amplify the reach of awareness efforts.

8. STATEMENTS & DECLARATIONS:

Use of AI Statement

The authors declare that they have not used generative artificial intelligence, specifically ChatGPT in the writing of this manuscript and/or in the creation of images, graphics, tables, or their corresponding captions

Conflict of Interest and Declarations:

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