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# Community-Based Environmental Practices for Daily Sustainability in Subang Jaya

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## Article Information

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## Abstract

This study examines the level of community-based environmental practices for their contribution to daily sustainability among residents of Subang Jaya, Selangor. Using a quantitative cross-sectional design, data were collected from 156 residents through a structured questionnaire measuring daily sustainable behaviours such as waste segregation, energy and water conservation, sustainable consumption, transportation choices, and participation in community environmental activities. Responses were analysed using descriptive statistics, and the instrument demonstrated good reliability with a Cronbach's alpha value of 0.840. The findings indicate that community-based environmental practices in Subang Jaya are practiced at a moderate level, with an overall mean score of 3.439, suggesting that while residents show awareness and willingness to engage in sustainable behaviours, consistent participation remains limited. Challenges such as inadequate infrastructure, uneven community involvement, and varying levels of motivation highlight the need for stronger municipal support. The study concludes that enhanced collaboration between local authorities and communities, along with continuous environmental education, improved green infrastructure, and supportive policies, is essential to strengthen daily sustainability practices and promote sustainable urban living in Subang Jaya.

## INTRODUCTION

Environmental sustainability is defined as the responsible use and management of natural resources to ensure that current human needs are met without compromising future generations' ability to meet their own (Omar Abdulwahhab Khalaf et al., 2023). It focuses on maintaining ecological balance by preserving biodiversity, eliminating pollution, and ensuring that development occurs within the Earth's carrying capacity. Environmental sustainability enhances human well-being by ensuring clean air, safe water, and a stable climate, all of which are essential for social and economic success (Mohamed et al.,2025).

In everyday life, sustainability is built through small but meaningful actions. These actions are often described under several main components, such as waste management, energy conservation, water conservation, sustainable consumption, sustainable transportation, and eco-friendly lifestyle practices. Together, these habits form what is known as daily sustainability (Basri et al.,2024). Even simple efforts such as turning off lights when not in use, washing vehicles with minimal water, or reusing containers can reduce environmental impact. Over time, these actions help create a community that values and protects its surroundings. For instance, Tennakoon et al. (2024) found that when local partnerships and awareness campaigns are in place, community-driven sustainability efforts can reduce household waste by up to 30%. In addition to improving environmental conditions, these community initiatives encourage social responsibility and environmental consciousness among locals.

Community-based environmental initiatives go a step beyond simply encouraging people to act together, these initiatives actively involve residents, local councils and organisations working together to green their neighbourhoods and communities. Collectively, recycling, planting trees, or engaging in clean-up have all been attempted to varying degrees of success. Being active in the community helps create awareness and motivates longer-term behavioural change. Hidayati Ramli et al. (2024) demonstrate that when individuals understand the impact of their actions, they are more inclined to save energy, modify their consumption patterns, and consider sustainable living in urban areas.

Nonetheless, environmental issues in Subang Jaya have persisted over the last five years, exacerbated by urban sprawl and a growing population. Issues such as excessive water consumption, poor waste management, and over-reliance on private vehicles continue to hinder daily sustainability efforts. It should be emphasised that household water use in Selangor, including Subang Jaya, is higher than the national average due to low levels of conservation behaviour. Ponrahono et al. (2023) noticed that congestion-related vehicular traffic has also negatively impacted air quality and carbon emissions. These trends necessitate an evaluation of Subang Jaya's daily sustainability context, focusing on community-based environmental behaviours and practices that could increase daily sustainability, and on how to raise public participation for a greener, more sustainable city.

## LITERATURE REVIEW

Studies emphasize urban community stewardship in Subang Jaya through civic ecology practices such as composting. According to the (Kamaruddin et al., 2019) explained that an urban composting program in Subang Jaya, applying practice theory to understand how competencies, meanings, and resources shape sustainable behavior. Social networks like family and friends, collaboration, and civic consciousness emerged as vital motivations supporting program sustainability indicating that community engagement is critical for the adoption of daily sustainability routines such as food waste composting. These relational and social dimensions fostered a sense of collective responsibility and reinforced the normalization of sustainability-oriented routines, particularly in food waste management.

Although awareness of waste segregation and composting is relatively high in urban settings such as Subang Jaya, active participation remains limited due to various constraints, including inadequate infrastructure, limited access to facilities, and insufficient motivational incentives. Previous studies have emphasized the need for enhanced community education, awareness campaigns, and infrastructural support to improve participation rates and strengthen the long-term effectiveness of these sustainability initiatives. Waste segregation through recycling and composting activities in both urban and suburban contexts is intrinsically connected to the broader framework of community-based environmental practices and their contribution to daily sustainability. Within Subang Jaya, these practices exemplify the extent to which residents adopt sustainable behaviors that reinforce environmental stewardship. Recycling and composting serve as tangible forms of civic ecology, enabling community members to engage directly in responsible waste management and to transform household behaviors into routine sustainable practices (Kasmuri et al., 2023).

Research conducted in Subang Jaya illustrates a growing body of evidence that underscores the importance of community-based environmental programs in promoting sustainable living practices. Studies highlight that initiatives such as composting and recycling play a central role in translating sustainability principles into everyday routines by encouraging residents to engage in environmentally responsible behaviors (Kamaruddin et al., 2019). The level of community-based environmental practice in Subang Jaya is reflected in the degree of public participation, the strength of social networks, and the presence of civic engagement that collectively sustains these initiatives. These community-driven programs not only yield tangible environmental benefits such as waste reduction and resource conservation but also contribute to the development of civic consciousness and environmental stewardship (Ramli et al., 2019). Nevertheless, the literature also reveals that despite increasing

awareness, active participation remains constrained by limited infrastructure, institutional support, and motivational incentives.

The Green Neighbourhood Initiative positions sustainability in Subang Jaya as everyday by considering physical infrastructure and programmatic reinforcement such that a pedestrian walkway, bicycle lanes, rainwater-harvesting features, household and commercial composting and communal farming all contribute to sustainability behaviour, which is the most visible and least effortful daily decision (Puziah, 2022). This strategy is not a checklist, but rather a design rationale that makes every aspect of the approach facilitate a real action so that cycling of facilities becomes possible with the help of connected lanes, and composting is possible with the help of neighbourhood hubs and the system of organised collection (Subang Jaya City Council, 2021). This framework is further institutionalised in the municipal planning documents like the Subang Jaya Local Plan 2035 and the city Voluntary Local Review, which introduce the idea of SDG principles, walkability, green infrastructure and low-carbon development into the statutory urban planning, allowing pilot projects to scale to the long-term practice of management (Subang Jaya City Council, 2021; Urbanice Malaysia and MBSJ, 2021).

Keng et al. (2020) strengthens the claim that community practices require both enabling infrastructure and active local programs where the contexts demonstrate that technical feasibility (composting systems, collection logistics) must be combined with social measures (resident training, 3R education, neighbourhood champions) in order to achieve long term food waste diversion out of landfill. Similarly, Mohd Nor and Sahrir (2024) demonstrate that carefully planned urban public space and pedestrian networks can significantly enhance daily green behaviours such as walking, informal community farming and the usage of green stormwater features. Such results contribute to the argument that neighbourhood-scale planning, in case associated with outreach and management, changes the everyday routine towards sustainability.

The research emphasizes community participation is critical for turning sustainability infrastructure into real, everyday practices. Kamaruddin et al. (2019) found that civic-ecology practices depend not just on resources, but on competencies, meanings and physical resource to define sustainable behaviour where the community must know how to compost, see value in it, and have access to the right tools. Amran et al. (2025) demonstrates that a core 3R (Reduce-Reuse-Recycle) behavior in a household composting adoption is determined by four key factors which are education and knowledge, community engagement and social norms, policy and institutional support, and socioeconomic and demographic context which highlighting that composting is a socially embedded behaviour shaped by community networks and institutional backing.

Nonetheless, Nazuri et al. (2025) demonstrates that when local stakeholders consisting of residents, community leaders, municipal bodies collaborate in urban agriculture projects, these initiatives can enhance environmental stewardship, social empowerment, and long-term sustainability behaviour, showing that community gardening and green-space initiatives deliver real empowerment and participation outcomes. Putting together, these indicators of practice reveal that community stewardship is not a dream, but it has tangible results on the sustainability.

Municipal community collaboration positions place sustainability as a collective action whereby, the local authorities are the ones who give planning, infrastructure, and enabling policies and yet communities take the active part and uphold practices. Khair et al. (2020) demonstrates that waste management facilities like waste-separation systems, composting bins, and the urban green spaces when associated with outreach and participatory planning and equipped by the municipalities would make waste governance more effective and accepted in the society. Moreover, urban agriculture studies, Nazuri et al. (2025) also establish that the partnership between municipalities and residents benefits the green cover, local food production, social empowerment, and community ownership of their sustainability efforts, demonstrating the alignment of upstream and downstream efforts makes sustainability efforts more viable in the long term.

Nonetheless, Qingbiao et al. (2024) note that uneven distribution of infrastructure such as bicycle lanes, green space, and varying levels of community awareness or engagement can hamper the reach and effectiveness of initiatives. Qingbiao et al. (2024) highlights that resource constraints, funding gaps and the complexity of coordinating diverse stakeholders consisting of public, private and community, affect the implementation of green-community retrofit projects showing sustainable city-building requires constant coordination, transparent governance and commitment. Furthermore, theoretical work by Khair et al. (2020) claims that community-based monitoring in which residents are included in continuous environmental monitoring, feedback and decision-making empowers the collaboration of the municipal communities by providing citizens with a voice in the city planning and increasing their sense of ownership of the environmental outcomes. Subang Jaya's sustainability success depends on municipalities providing infrastructure and participatory planning frameworks, while communities maintain active engagement in the green neighbourhood initiatives to yield social, economic, and environmental benefits.

Whereas the green-neighbourhood frameworks in Malaysian cities have a good idea in principle, the practice is usually suffered by coordination issues, poor enforcement and discordant public awareness. Nizarudin and Zakariya (2025) finds that while policy documents emphasise green infrastructure such as parks, green corridors, ecosystem services, implementation remains inconsistent because of policy fragmentation, decentralised governance, weak enforcement mechanisms, and limited financial incentives showing that green-infrastructure commitments rarely translate into systematic, remain on paper rather than realized. Besides, Qingbiao et al. (2024) demonstrate that institutional and governance challenges of complex stakeholder coordination, unclear roles, funding constraints, and maintenance responsibility often hinder the long-term success of green community projects. Implementing green neighbourhood features requires governance complexity & stakeholder coordination to prevent this problem from arising.

Moreover, Miranda et al. (2024) studied on building-integrated green infrastructure of green roofs and vertical gardens shows that though these features bring environmental benefits like cooling and improved air quality, it rarely being adopted because of high upfront and maintenance costs, regulatory or design barriers, and low awareness or interest among building owners. These gaps point to increased multi-level planning guidelines and institutional responsibility, stronger community education and engagement not only to initiate pilot projects, but to make changes long-term and consistent. Even though the green neighbourhood framework still has its merits as a vision, to achieve the policy-practice gap, a better coordination towards the levels of government, clarity of regulatory and financing systems, and regular community outreach to create awareness and meaningful participation is necessary.

Overall, Ramli et al. (2019) provide a detailed case demonstrating the levels and effects of community-based practices in Subang Jaya's green neighbourhood initiatives. Their analysis emphasizes the symbiotic relationship between municipal actions and community engagement, highlighting measurable environmental contributions through everyday practices. This work is invaluable for understanding how urban sustainability can be grounded in local context and community participation, offering a comprehensive policy and practice background for further research. This literature forms a solid foundation to assess community-based environmental practice levels and their contribution to daily sustainability within Subang Jaya's urban development context.

## METHODOLOGY

This study employed a quantitative cross-sectional research design to examine community-based environmental practices for daily sustainability, focusing on residents of Subang Jaya, Selangor. A total of 156 respondents representing diverse demographic backgrounds from an urban area were selected using a convenient sampling method. Data was collected through a structured questionnaire administered both face-to-face and online, consisting of two sections: socio-demographic characteristics and environmental practices. The environmental practices section included ten items addressing daily sustainable behaviors such as separating household waste, reducing plastic use, conserving water, saving energy, choosing sustainable transportation, supporting community environmental rules, avoiding food wastage, limiting unnecessary purchases, reusing household items, and reducing reliance on air conditioning. Responses were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Descriptive statistics, including means and standard deviations, were employed to analyze the data, while Cronbach's alpha coefficient was used to assess the internal consistency of the instrument, with values exceeding 0.80 considered good for reliability. Ethical considerations were rigorously observed throughout the study, ensuring participants' anonymity, informed consent, voluntary participation, and the confidentiality of all collected data.

## RESULT AND DISCUSSION

*Profile of Respondents*

The demographic results show that the sample consisted of 57.05% females (n = 89) and 42.94% males (n = 67), indicating that female respondents were slightly more represented in this study. In terms of age, the majority were 21–30 years old (62.17%, n = 97), followed by those aged 31–40 years (12.82%, n = 20), while smaller proportions were below 20 years (11.53%, n = 18), above 50 years (7.69%, n = 12), and 41–50 years (5.77%, n = 9). Educational attainment was dominated by respondents with a bachelor's degree (59.62%, n = 93), while 21.15% (n = 33) held a diploma, 12.17% (n = 19) completed secondary school, 6.41% (n = 10) possessed a Master's/PhD, and only 0.64% (n = 1) had primary education. In terms of occupation, more than half of the respondents were students (53.85%, n = 84), followed by employed individuals (26.92%, n = 42), and smaller groups of unemployed (7.05%, n = 11), self-employed (6.41%, n = 10), and retirees (5.77%, n = 9).

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TABLE 1.0
PROFILE OF RESPONDENTS (N=156)

| Profile | Category | Frequency | Percentage (%) |
|---|---|---|---|
| Gender | Male | 67 | 42.90 |
| | Female | 89 | 57.05 |
| Age | Below 20 years | 18 | 11.53 |
| | 21- 30 years | 97 | 62.17 |
| | 31- 40 years | 20 | 12.82 |
| | 41- 50 years | 9 | 5.77 |
| | Above 50 years | 12 | 7.69 |
| Level of Education | Primary school | 1 | 0.64 |
| | Secondary school | 19 | 12.17 |
| | Diploma | 33 | 21.15 |
| | Bachelor's Degree | 93 | 59.62 |
| | Master's/PhD | 10 | 6.41 |
| Occupation | Student | 84 | 53.85 |
| | Employed | 42 | 26.92 |
| | Self-employed | 10 | 6.41 |
| | Unemployed | 11 | 7.05 |
| | Retired | 9 | 5.77 |

Table 1.2 presents the reliability test for the construct community-based environmental practices for daily sustainability in Subang Jaya demonstrated a Cronbach's Alpha value of 0.840 across 10 items, which exceeds the commonly accepted threshold of 0.70. This indicates that the measurement instrument possesses good internal consistency and can be considered highly reliable for assessing the targeted construct
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Table 1.1
RELIABILITY TEST

| Variable | Number of Items | Cronbach's Alpha | Reliability Assumed |
|---|---|---|---|
| Community-Based Environmental Practices For Daily Sustainability In Subang Jaya | 10 | 0.840 | Excellent |

*Mean and Standard Deviation*

The mean and standard deviation analysis provides insight into respondents' overall engagement with community-based environmental practices for daily sustainability in Subang Jaya. Respondents evaluated their level of participation and agreement using a five-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree). As presented in Table 1.4, the construct recorded an overall mean score of 3.439, which falls within the medium level range (2.34–3.67) as outlined in Table 1.3, with a standard deviation of 0.457 (N = 156). These results indicate that respondents generally demonstrate a moderate level of engagement and agreement toward community-based environmental practices in their daily lives.

The relatively low standard deviation suggests a high degree of consistency in responses across the sample, reflecting shared perceptions among residents regarding sustainability practices within the community. While the findings indicate a positive inclination toward community-based environmental efforts, the moderate mean score

implies that there remains room for improvement in strengthening active participation and sustained engagement. Therefore, enhancing community programs and increasing awareness initiatives may help elevate these practices toward a higher level of sustainability involvement.

Table 1.3
LEVEL OF MEAN SCORE RANGE

| Mean Score Range | Level |
|---|---|
| 1.00 – 2.33 | Low |
| 2.34 – 3.67 | Medium |
| 3.58 – 5.00 | High |

Table 1.4

MEAN AND STANDARD DEVIATION

| Variable | Mean | Standard Deviation | N |
|---|---|---|---|
| Community-Based Environmental Practices For Daily Sustainability In Subang Jaya | 3.439 | 0.457 | 156 |

## CONCLUSION

With a mean score of 3.439 and a high reliability value of 0.840 for the measurement tool, this study concludes that community-based environmental practices exist in Subang Jaya at a moderately positive level. According to these results, locals typically exhibit awareness of and a willingness to engage in everyday sustainable activities, such as trash segregation, energy and water saving, responsible consumption, and involvement in neighbourhood environmental projects. However, the findings and literature analysis also point to several issues that still restrict these practices' efficacy, such as inadequate infrastructure, uneven participation, and inhabitants' differing degrees of motivation and understanding. This implies that even when there is a willingness in the community, sustainable behaviour cannot be completely fulfilled without robust municipal assistance and easily available environmental facilities. In conclusion, greater cooperation between locals and local government is necessary to improve community-based environmental practices in Subang Jaya. To guarantee that sustainability becomes a regular aspect of everyday life, ongoing environmental education, enhanced green infrastructure, encouraging legislation, and active community involvement are crucial. Subang Jaya can develop into a more resilient, sustainable, and ecologically conscious urban community with concerted and sustained efforts.

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