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Public Cleanliness Satisfaction Survey 2023

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Executive Summary

The Singapore Management University undertook the sixth wave of the Public Cleanliness Satisfaction Survey (PCSS) with 2,010 Singapore residents providing responses to the survey from November 2023 to January 2024.

Similar to the findings from the 2022 wave of PCSS, the 2023 wave of the PCSS continued to reflect an overall satisfaction with public cleanliness in Singapore. Majority of survey respondents (94%) were satisfied with the cleanliness of public spaces that they had recently visited, which was an increase of 2% from 2022. Satisfaction with the cleanliness of food outlets saw the largest increase (by 3%) among all location types, to 85%. Satisfaction for public events showed the largest decrease (by 6%) from 94% in 2022 to 88% in 2023.

Regarding the cleanliness of public toilets in various establishments, 84% of respondents were satisfied, a 3% increase from 2022. Despite a 7% increase from 2022 (from 53%), coffeeshops still had the lowest satisfaction out of all the places, with 60% of respondents indicating that they were satisfied. The satisfaction with the cleanliness of public toilets in hawker centres increased from 63% in 2022 to 70% in 2023.

The study also examined public opinion about personal responsibility for public cleanliness. Questions were asked regarding tray return and table cleaning practices at various food outlets, and the maintenance of cleanliness in neighbourhoods. On average, 94% of respondents would return their trays and crockery all the time, a 1% decrease from PCSS 2022. Of the various food establishments, tray and crockery return rates in schools and staff canteens were the lowest (90%). These were largely attributed to the tray and crockery return rack/station was either not within visible sight or unavailable. 95% of respondents were supportive of the new tray and crockery return requirement including enforcement against table littering introduced in 2021, with 95% being aware of it overall. In addition, 80% of respondents felt that individual diners using the tables were primarily responsible for tray return, as compared to 84% in 2022.

For table cleaning, 81% of respondents indicated that they go the extra mile to clean up spills or wipe down the tables after use. Social responsibility was the top reason cited by respondents who cleaned up their tables after use. On the other hand, majority of those who did not clean their tables after use cited not possessing the appropriate equipment as the top reason for not doing so.

Although there was a 4% decrease from 2022, the majority of survey respondents still agreed that residents should take responsibility for the cleanliness of their shared environment; with 72% of respondents stating that they had disposed of all litter properly in the past 4 weeks. 95% of respondents agreed that residents should bring their litter to another disposal area rather than add to the full bins. Respondents also stated personal responsibility for the environment as a top reason for why they would dispose of trash properly. On the other hand, despite 98% of respondents agreeing that residents should be encouraged to help maintain the cleanliness of the neighbourhood, only 64% indicated a willingness to actually do so (a decrease from 66% in 2022).

The results also indicated that reliance on cleaning services remains high, with 91% of respondents acknowledging that Singapore is clean only because of the efficiency of its cleaning services. Nevertheless, a majority (98%) of respondents agreed that residents must work together with cleaners to keep the neighbourhood clean.

Lastly, 72% of respondents believe that it is the government's responsibility to keep Singapore clean, a 5% decrease from 77% in 2022. 81% of respondents are supportive of pausing public cleaning for one day, and 84% support the implementation of a litter-picking exercise in their housing estate.

FINDINGS FROM THE PUBLIC CLEANLINESS SATISFACTION SURVEY (2023)

Introduction

The Singapore Management University (SMU) undertook the sixth wave of the Public Cleanliness Satisfaction Survey[1]. The study was led by Professor Paulin Tay Straughan, Professor of Sociology (Practice) at SMU and Dr Mathew Mathews, Principal Research Fellow at the Institute of Policy Studies, National University of Singapore. The survey was conducted from November 2023 to January 2024 and sought the views of about 2,000 Singapore Citizens and Permanent Residents[2] aged 21 years and above. The first wave of this study was conducted between October 2016 to March 2017, the second wave from August 2018 to December 2018, the third wave from December 2019 to April 2020[3], the fourth wave from February 2021 to May 2021, and the fifth wave from July 2022 to October 2022.

The 2023 wave of the PCSS continues to reflect an overall satisfaction with public cleanliness in Singapore. Satisfaction with cleanliness and cleaning services has generally remained consistent across almost all domains, with some domains even showing an increase in satisfaction compared to the previous year. This wave also further examined the attitudes and perceptions towards table clearing in food establishments, by adding new items that look at how individuals handle unwanted food items and spills, and the motivations behind such behaviors.

Satisfaction with the Cleanliness of Public Spaces

Respondents were asked to rate their satisfaction with the cleanliness of 20 public spaces they frequented in their everyday lives, on a scale of "1" (not satisfied at all) to "4" (very satisfied). To construct the Index, we used a weighted average[4] of our respondents' responses regarding the satisfaction with cleanliness in the 20 public spaces.

Survey results revealed that there was a high level of satisfaction with the cleanliness of public spaces in Singapore. Based on our Public Cleanliness Satisfaction Index ("Index"), 94% of the respondents[5] were satisfied with the cleanliness of public spaces that they had recently visited, with satisfaction being slightly higher than in 2022[6] (see Table 1 for details). While the results were similar to those of 2022 and 2021, whereby transport and leisure spaces continued to draw the greatest satisfaction, post public event venues saw a comparatively lower level of satisfaction. Though food outlets continued having the lowest

[1] This study was made possible through funds from the Ministry of Sustainability and the Environment (MSE).
[2] We refer to Singapore citizens and permanent residents in this report as Singaporeans.
[3] The fieldwork period *coincided with the Covid-19 pandemic and concluded before circuit breaker measures.*
[4] A weighted average takes into account that some indicators may not have the same weight. In the case of the PCSS, a substantial portion of respondents have no experience of some public spaces. We did not include a respondent's opinion about a public space if s(he) stated that s(he) had never been to that space.
[5] This includes respondents who indicated that they are "satisfied" or "very satisfied".
[6] We use only responses of those who had visited a place recently (i.e., not more than two weeks before responding to the survey). This is to counter recall biases and ensure that responses accurately reflected the opinions of only those who had used particular spaces. Those who had visited a place a long time ago may not be able to accurately rate the level of cleanliness in that space. This was our practice in the previous versions of PCSS.

cleanliness satisfaction, they showed an improvement in 2023. Details of the results can be found in Annex A.

Additionally, it was observed that respondents who are unsatisfied belonged to the older age groups, specifically those aged between 34-64 years old.

Table 1: Public Cleanliness Satisfaction Index

<table>
<tr><th>Domains / Spaces</th><th>Proportion Satisfied (%)</th><th>Overall Satisfaction (%) [Public Cleanliness Satisfaction Index]</th></tr>
<tr><td>Transportation
(roads, bus stops, bus interchanges, MRT/LRT stations)</td><td>Slight increase
• 2023: 98.3% ↑
• 2022: 96.9%
• 2021: 96.3%
• 2019: 98.4%
• 2018: 94.9%
• 2017: 93.4%

Most significant change from bus stops (+2.8% to 98.2%)</td><td rowspan="4">2023: 94%
2022: 92%
2021: 92%
2019: 93%
2018: 84%
2017: 82%</td></tr>
<tr><td>Leisure
(parks/park connectors, shopping malls in housing estates, playgrounds)</td><td>Slight increase
• 2023: 96.9% ↑
• 2022: 95.4%
• 2021: 97.3%
• 2019: 97.1%
• 2018: 89.4%
• 2017: 88.9%

Most significant change from parks/park connectors, (+2.1% to 96.5%)</td></tr>
<tr><td>Food Outlets
(coffeeshops, air-conditioned food courts, hawker centres, wet markets)</td><td>Slight increase
• 2023: 85.2% ↑
• 2022: 82.7%
• 2021: 84.8%
• 2019: 88.5%
• 2018: 71.4%
• 2017: 68.9%

Most significant change from coffeeshops (+4.0% to 80.4%) & hawker centres coffeeshops (+4.0% to 81.9%).</td></tr>
<tr><td></td><td>Slight increase
• 2023: 93.4% ↑</td></tr>
</table>

Neighbourhood (HDB town centres, void decks, corridors, lifts and lift lobbies)	• 2022: 91.2% • 2021: 89.7% • 2019: 89.5% • 2018: 79.3% • 2017: 78.8% Most significant change from HDB town centre (+2.7% to 97.5%).	
Commuter Paths (pavements, walkways, overhead bridges, foot bridges, underpasses, roadside drains, grass patches next to pavements)	**Slight increase** • **2023: 95.2% ↑** • 2022: 93.6% • 2021: 91.7% • 2019: 92.8% • 2018: 84.8% • 2017: 82.6% Most significant changes from underpasses (+2.3% to 97.0%).	
After Public Events (public spaces after events such as National Day Parade (NDP), concerts, sporting events etc)	**Decrease** • **2023: 88.1% ↓** • 2022: 94.1% • 2021: 94.1% • 2019: 87.9% • 2018: 74.3% • 2017: 62.6%	

Shopping malls in Downtown/CBD areas were excluded from the count as it was a new item added in the 2022 wave of PCSS. Note: The fieldwork period for PCSS 2019 coincided with the start of Covid-19 and concluded before circuit breaker measures.

Transportation

Respondents were mostly satisfied with the level of cleanliness at transport spaces such as roads, bus stops, bus interchanges and MRT/LRT stations. An average of 98% of respondents reported that they were satisfied or very satisfied with the levels of cleanliness in transport spaces, an increase from 97% in 2022 and 96% in 2021, being the same satisfaction level of 98% in 2019, and higher than in 2018 (95%) and 2017 (93%). The largest change in satisfaction was found for bus stops, with many respondents (98%) in 2023 compared to 95% in 2022, 97% in 2019, 91% in 2018 and 87% in 2017) who were satisfied or very satisfied with the cleanliness of bus stops.

Commuter Paths

More respondents were satisfied with the cleanliness of commuter paths such as pavements/ walkways, overhead bridges/foot bridges, underpasses, roadside drains and grass patches next to pavements. An average of 95% of respondents reported that they were satisfied or very satisfied with the levels of cleanliness of commuter paths, an increase from 94% in 2022 and the new highest among all other years since 2017 (94% in 2021, 93% in 2019, 85% in 2018, and 83% in 2017). Satisfaction levels rose slightly for all domains of commuter paths. The largest increases in satisfaction seen for underpasses, rising to 97% from 95% in 2022.

Neighbourhoods

Satisfaction with cleanliness of neighbourhood spaces such as HDB Town Centres, void decks/corridors/lift lobbies and lifts to homes increased slightly to 93% from 91% in 2022, reaching the new highest satisfaction since 2017 (79% in 2017 and 2018). Following a decrease in satisfaction from the previous year, more respondents were now satisfied with the cleanliness of HDB town centres, an increase from 95% in 2022 to 98% in 2023. 94% of respondents were satisfied with the cleanliness of lifts to their homes, an increase from 92% in 2022.

Leisure and Public Events

Levels of satisfaction with the cleanliness of leisure spaces such as parks, playgrounds and shopping malls in housing estates remained high - an average of 97% of the respondents reported that they were satisfied or very satisfied with the cleanliness of such spaces, an increase from 95% in 2022, and similar to the score obtained in 2021 (97%). There was a higher frequency of respondents who visited malls in housing estates in the 2023 wave. Despite this, respondents consistently rated that they were satisfied with the cleanliness of these shopping malls, akin to previous waves (98% in 2023 & 2022). There was a slight increase in satisfaction of cleanliness at playgrounds by 2.1%, from 93% in 2022 to 95% in 2023, lower than in 2021 (97%), but higher than in 2018 (83%) and 2017 (82%), and being the same satisfaction level in 2019 (95%).

88% of respondents reported satisfaction with the level of cleanliness after public events (e.g. National Day Parade, Concerts, Sporting events etc.) This was a decrease from 94% in 2022, but identical to the score observed in 2019 (88%). Nonetheless, the figure is still significantly higher than the 74% found in 2018 and the 63% reported in 2017. The significant drop in satisfaction for public events in 2023 could be due to a larger scale of public events, leading to more noticeable littering and news reports of littering at public events, compared to 2021 and 2022, when various COVID-19 restrictions were in place.

Food Outlets

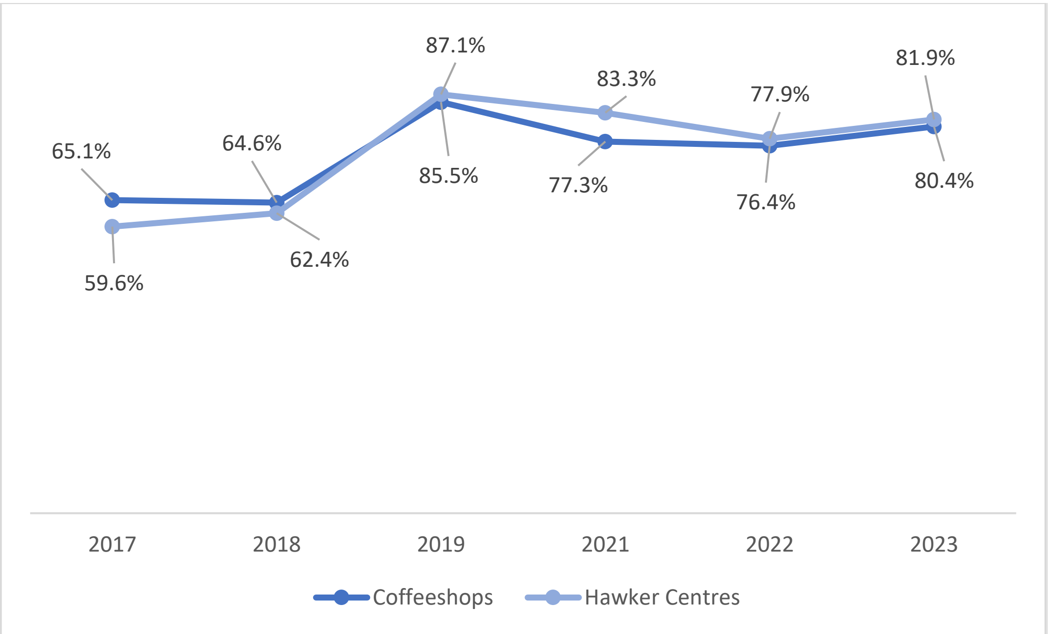
On average, about 86% of respondents reported that they were satisfied or very satisfied with levels of cleanliness of food outlets, higher than almost all previous years (83% in 2022, 85% in 2021, 71% in 2018 and 69% in 2017). This includes coffeeshops, hawker centres, air-conditioned food courts and wet markets.

Compared to 2022, there was an overall increase of 2.9% in cleanliness satisfaction in food outlets, with a 4% increase in both coffeeshops and hawker centres. Although the overall satisfaction for food outlets is still slightly lower compared to 2019 scores (86% in 2023 vs 89% in 2019), this increase in satisfaction for food outlets is nevertheless the first observed increase for this category since 2019 (see Figure 1).

In contrast with findings from previous waves, coffeeshops, hawker centres and wet markets showed the largest improvement in cleanliness satisfaction; with proportion of respondents who were satisfied with such food outlets increasing from 76%, 78% and 81% in 2022 to 80%, 82% and 84% in 2023 respectively.

There has been a decline in satisfaction of cleanliness of coffeeshops and hawker centres since 2019, though still significantly higher than that in 2018 and 2017. However, the increase in satisfaction for such outlets in the 2023 wave of the PCSS could indicate that the various measures taken to ensure cleanliness in coffeeshops and hawker centres have started to take effect amongst the public. The mandatory tray and crockery return policy and enforcement against table littering which commenced in 2021 could have contributed to this gradual change in social norms and thus was reflected in the survey findings.

Figure 1: PCSS comparisons for hawker centres and coffeeshops (2017-2023)



PCSS 2019 was conducted during Covid-19 and concluded before circuit breaker measures.

Theme 2: Efficiency of Cleaning Efforts in Public Spaces

Public's Satisfaction Regarding Public Cleaning Services

The 2023 wave of survey sought respondents' feedback on the efficiency of public cleaning efforts across various public spaces such as common areas in their neighbourhood, hawker centres and coffeeshops, and along public pavements/walkways (see Figure 2 for details).

For each of these public spaces, respondents reported on the thoroughness and frequency of cleaning as well as the sufficiency of trash bins. Respondents were asked whether cleaning efforts were insufficient, adequate or excessive for each of these areas (see Table 2 for details).

Respondents reported that the thoroughness of cleaning was mostly adequate with the highest proportion reporting this for MRT/LRT stations (94%), and the lowest for coffeeshops (74%).

Overall, we see a lower number of respondents indicating that cleaning efforts were insufficient compared to that reported in 2022. The proportion indicating 'insufficient' decreased in all domains, especially for frequency of cleaning. The decreases were by 3% for thoroughness of cleaning, by 2% for number of trash bins, and by 4% for frequency of cleaning respectively.

For thoroughness of cleaning, 7% of respondents said that this was insufficient, especially at hawker centres (16%), coffeeshops (23%) and wet markets (19%). Few people reported that thoroughness of cleaning was insufficient at shopping malls in housing estates (2%), shopping malls in downtown/CBD areas (1%), and at MRT/LRT stations (2%).

On average, 10% reported that the number of trash bins was insufficient. The highest proportion reported that the number of trash bins was insufficient at wet markets, where 21% reported so.

The vast majority found the frequency of cleaning in most places sufficient, with just 8% reporting that it was insufficient. Higher proportions indicated that frequency of cleaning at hawker centres (16%), coffeeshops (21%) and wet markets (20%) was insufficient, while fewer respondents reporting this within MRT/LRT stations (2%) and shopping malls in downtown/CBD areas (2%).

Figure 2: Thoroughness of Cleaning Services across Public Spaces

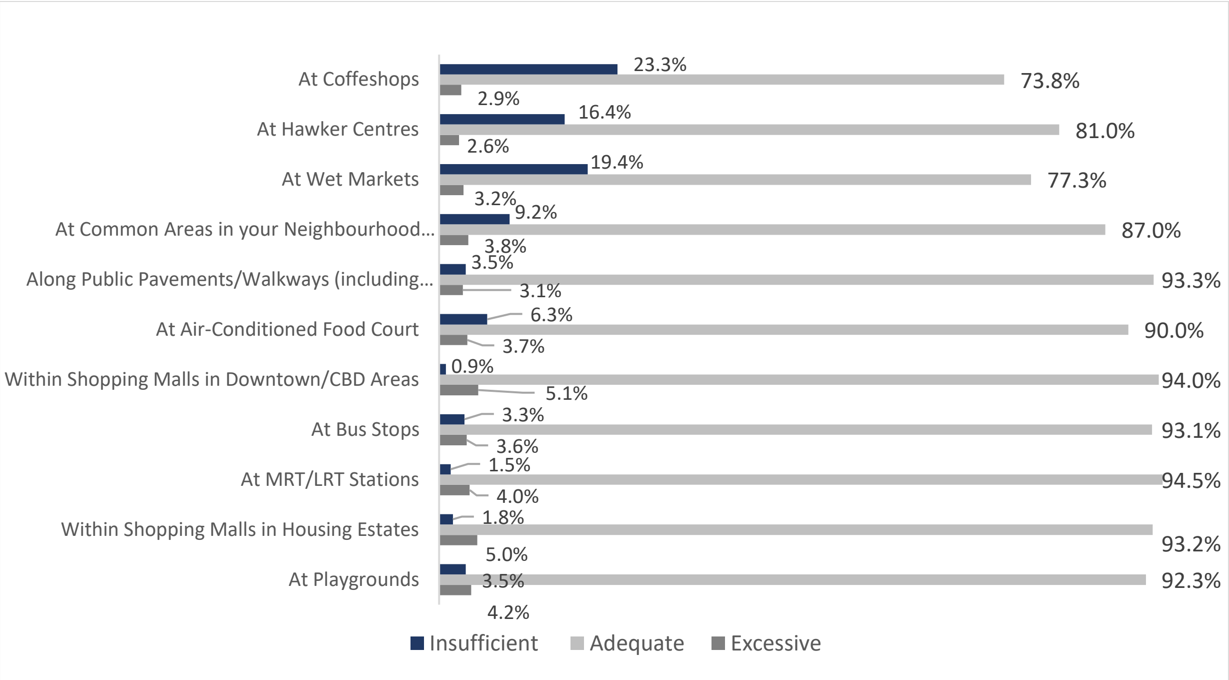


Table 2: Efficiency of Cleaning Efforts across Public Places

Domain	Average proportion indicating insufficient	Public Places deemed most insufficient	Public Places deemed least insufficient
Thoroughness of cleaning	**7.3% ↓** ***(11.3%)***	At Coffeeshops **23.3%**	At MRT/LRT Stations **1.5%**
Number of trash bins	**10.4%↓** ***(11.9%)***	At Wet Markets **21.2%**	At shopping malls in Downtown/CBD Areas **5.0%**
The frequency of cleaning	**8.4%↓** ***(10.3%)***	At Coffeeshops **21.2%**	At MRT/LRT Stations **1.8%**

Figures bolded and without the parenthesis refer to proportions from the 2023 wave of PCSS. Figures bolded and italicised in parenthesis refer to the comparable average proportions from 2022.

Theme 3: Attitudes and Perceptions on Keeping Public Toilets Clean

In the 2023 wave, respondents were once again asked about their satisfaction with the cleanliness of toilets in various establishments. Overall, 84% of Singaporeans reported feeling satisfied or very satisfied with public toilets in various establishments[7] (see Table 3 for details).

Of all the establishment types, public toilets in shopping malls at downtown/CBD areas yielded the highest satisfaction rates from respondents (97%), despite experiencing a 1% decrease from 2022 (98%). On the other hand, similar to 2022, the respondents were least satisfied with the cleanliness of public toilets in coffeeshops (60%) and hawker centres (70%). Nevertheless, despite being the lowest, the satisfaction rates for public toilets in coffeeshops and hawker centres both showed an increase in satisfaction levels compared to the scores reported in 2022; with toilets in both places showing a 7% increase from 53% and 63% respectively.

When asked who respondents thought was primarily responsible for the cleanliness of public toilets, 62% responded that individual users were responsible. This was a 2% increase from 60% in 2022. The remaining respondents were split between citing either cleaners (14%), or operators of public toilets and of premises where public toilets are located (7%). Only 2% of respondents felt that the government was responsible for the cleanliness of public toilets.

[7] We use only responses of those who had visited a place recently (i.e., not more than two weeks before responding to the survey). This is to counter recall biases and ensure that responses accurately reflected the opinions of only those who had used particular spaces. Those who had visited a place a long time ago may not be able to accurately rate the level of cleanliness in that space.

Table 3: Satisfaction of Cleanliness of Toilets

Establishment Toilets are located in	Proportion Satisfied (%)	Overall Satisfaction (%)
Shopping Malls in Housing Estates	93.7%	83.7%
Shopping Malls in Downtown/ CBD Areas	97.2%	
Hawker Centres	70.1%	
Coffeeshops	60.2%	
MRT Stations	86.5%	
Bus Interchanges	87.3%	
Outdoor Parks	85.8%	

Theme 4: Attitudes and Perceptions on Tray and Crockery Return Behaviours

In this wave, specific questions were asked regarding personal responsibility for public cleanliness. The survey sought to understand (a) Singaporeans' tray and crockery return habits in hawker centres, coffeeshops, air-conditioned food courts and school/ staff canteens, (b) what the reasons were for not returning their trays and crockery, and (c) who Singaporeans think should be responsible for tray and crockery return. In addition to these questions, the 2023 wave added several new items regarding the cleaning up of spills/wiping down of tables to ascertain the degree to which Singaporeans would take the initiative to clean up after themselves at public dining places.

Attitude and Perception on Table Littering Enforcement

As it has been two years since the table littering enforcement was introduced, we wanted to ascertain the degree to which the awareness of such a policy has been successfully ingrained into the respondents. Overall, 95% of respondents were aware that it is now mandatory for diners at hawker centres, coffeeshops and air-conditioned food courts to clear their tables of used trays, crockery and litter after their meals (see Table 4).

Table 4: Awareness of Table Littering Enforcement Measure

Locations	Aware (%)	Not Aware (%)
Hawker Centres	96%	4%
Coffeeshops	95%	5%
Air-conditioned food courts	95%	5%

95% of respondents are supportive of the tray and crockery return requirement including enforcement against table littering (see Table 5). More than 90% of respondents think that the table littering enforcement is useful[8] for ensuring quick turnover of tables for the next diner, establishing social norms to return used trays and crockery, improving bird nuisance issues, and providing cleaner tables for diners (see Table 6).

Table 5: Support for Table Littering Enforcement Measure

Not supportive at all (%)	Slightly supportive (%)	Supportive (%)	Very supportive (%)	Supportive/ Very supportive (%)
0.8%	3.9%	48.2%	47.2%	95.4%

Table 6: Usefulness of Table Littering Enforcement Measure

Statements	Not useful at all (%)	Only slightly useful (%)	Quite useful (%)	Very useful (%)	Quite useful/ very useful (%)
Ensure quick turnover of tables for the next diner(s), especially during peak dining hours.	1.4%	5.1%	47.0%	46.6%	93.6%
Establish social norms to return used trays/ crockery and dispose of litter after dining at hawker centres, coffeeshops and air-conditioned food courts.	1.0%	4.5%	51.1%	43.4%	94.5%

[8] This includes respondents who indicated that the measures were “quite useful” or “very useful”.

Improve bird nuisance issues at hawker centres, coffeeshops and air-conditioned food courts (e.g. birds feeding on leftover food on uncleared tables).	2.4%	5.2%	48.3%	44.1%	92.3%
Encourage diners to be more appreciative of cleaners' roles at hawker centres, coffeeshops and air-conditioned food courts.	1.4%	10.2%	56.5%	32.0%	88.5%
Prevent the spread of diseases such as COVID-19.	2.1%	12.5%	51.7%	33.7%	85.4%
Provide cleaner tables for diners at hawker centres, coffeeshops and air-conditioned food courts	1.6%	6.8%	53.9%	37.8%	91.6%

Furthermore, when asked about their views on returning used trays and crockery, 79% of respondents reported doing so because it was the socially responsible thing to do, while 10% did so because it is the law, and they did not want to be fined (see Table 7).

Table 7: Views About Returning Used Trays and Crockery

Statements	**%**
I return used trays and crockery because it is the socially responsible thing to do.	79.2%
I return used trays and crockery because it helps keep the environment clean and prevent bird nuisance.	10.2%
I return used trays and crockery because it is the law and I do not want to be fined.	9.5%
I return dirty trays and crockery because others are also doing it.	1.1%

A majority of respondents (93%) are of the view that the enforcement measure is effective in getting diners to return their used trays/crockery (see Table 8). Among the remaining 7% of respondents who claimed that there was limited effectiveness of the measure, a top reason cited was that the table littering measures were not actively enforced, especially in hawker centres (63%).

Table 8: Effectiveness of Table Littering Enforcement Measure

Not effective at all (%)	Slightly effective (%)	Effective (%)	Very effective (%)	Effective / Very effective (%)
0.8%	5.7%	58.5%	34.9%	93.4%

Attitudes and Perceptions on Tray and Crockery Return Behaviours

In the 2023 wave, we continued to examine personal responsibility for tray return in various food establishments (see Figure 3). On average, majority of respondents (94%) returned their trays all the time, similar to 95% of respondents in 2022. For those who did not return their tray all the time, we asked for the top three reasons for not returning the trays across the various food establishments (see Table 9).

For hawker centres and coffeeshops, the top reason for not returning trays all the time was that the trays and crockeries were too heavy for them to carry (37%), especially those who were aged 65 years old or older. While for air-conditioned food courts, the uncertainty on whether trays should be returned in this establishment was cited as the top reason for the non-return of trays (39%). These respondents tend to be older, including those aged between 50-64 years old, and 65 years old or older. For canteens, a large proportion of respondents (47%) indicated that tray return stations being out of sight or unavailable to them as the top reason.

Overall, 80% of respondents think that the primary responsibility of returning trays should belong to the individual diner using the tables, which was a decrease from 84% in 2022.
On the other hand, 7% of respondents felt that cleaners should be responsible for tray return while 8% of respondents put this responsibility on the operators of premises. Only 8% reported that it should be the responsibility of the diner who used the table after they did. In general, we can observe a slight decrease in perceptions of individual responsibility for tray return, and a slight increase in dependence on third parties, especially on diners who use tables after others (increase of 2.9% from 2022).

Figure 3: Proportion of Singaporeans Returning Trays

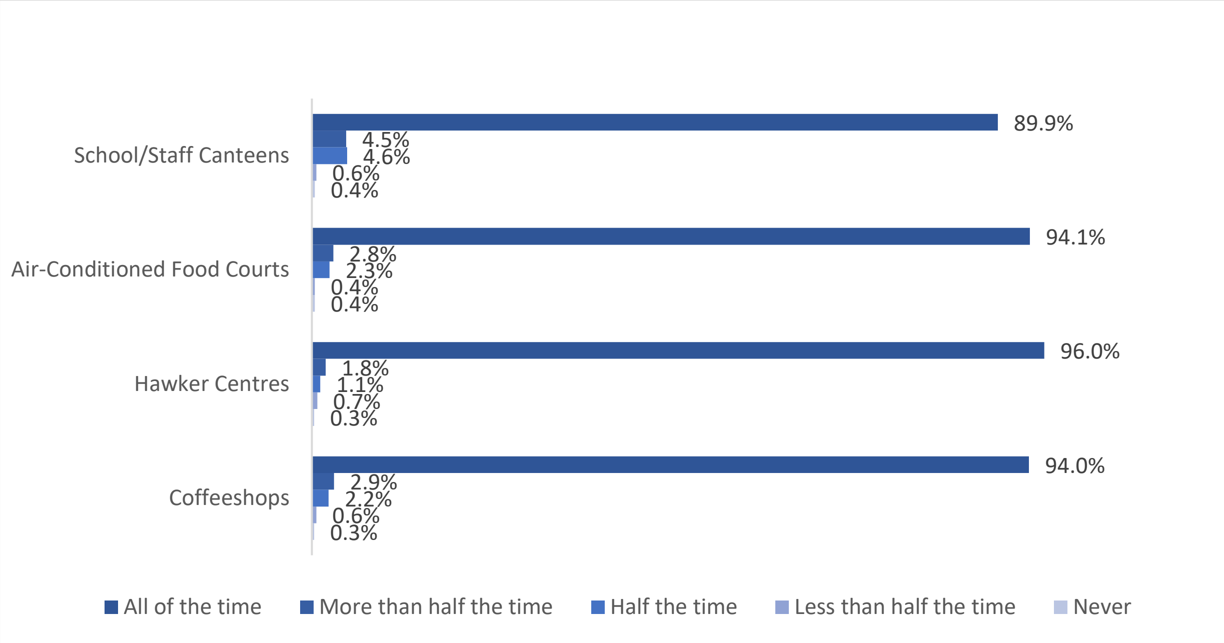


Table 9: Reasons for Not Returning Trays

Establishments	**Top 3 Most Common Reasons for Not Returning Trays**
Hawker Centres	• The trays/crockery are too heavy for me. (36.7%, n=29) • I am not sure whether I need to return my used trays/crockery. (33.5%, n=26) • The cleaner clears my tray/crockery during or after my meal, before I leave my table. (32.4%, n=26)
Coffeeshops	• The trays/crockery are too heavy for me. (37.4%, n=44) • The tray return point is either not within visible sight or unavailable. (31.3%,n=37) • I am not sure whether I need to return my used trays/crockery. (30.6%, n=36)
Air-conditioned Food Courts	• I am not sure whether I need to return my used trays/crockery. (39.1%, n=46) • The trays/crockery are too heavy for me. (35.5%, n=41) • The tray return point is either not within visible sight or unavailable. (29.7%, n=35)
School/ Staff Canteen	• The tray return point is either not within visible sight or unavailable. (46.8%, n=35) • I am not sure whether I need to return my used trays/crockery. (41.1%, n=31) • Other people do not return their used trays/crockery too. (36.8%, n=28)

Dealing with Unwanted Food Items and Spills

To ascertain the degree to which table cleaning norms have been ingrained into the public, we included five new items into the 2023 wave, all of which measure the frequency and motivation behind table cleaning behaviours of the respondents. During their meals, 96% of respondents will either place their unwanted items on their plates/bowls or on their trays. Overall, after their meals, 97% of respondents will either dispose of their unwanted items (e.g. bones, food scraps) in the rubbish bin or place them on their tray or crockery which are then returned to the tray and crockery return rack/station.

81% of respondents will go the extra mile to clean up their spills or wipe down their tables after use, with the top reasons being it was the socially responsible thing to do (84%), followed by it helps to keep the environment clean and prevent bird nuisance (11%) (see Table 9). Respondents who cite table cleaning as the socially responsible thing to do tend to be those who were aged between 21-34 years old. For those who do not clean up their tables after a meal, 54% cited not having the appropriate equipment to do so as the top reason why they do not clean up spills or wipe down the tables (see Table 10).

Table 10: Reasons for Cleaning up Spills or Wiping Down Tables

Statements	%
It is the socially responsible thing to do.	83.9%
It helps keep the environment clean and prevent bird nuisance.	10.8%
I am not sure if I will get fined if I do not do so.	4.3%
Others are also doing it.	1.0%

Table 11: Reasons for Not Cleaning up Spills or Wiping Down Tables

Statements	%
I don`t have the appropriate equipment to do so.	53.9%
It is not my responsibility to do so.	13.3%
It is too dirty.	11.6%
It is too troublesome.	10.4%
I am in a rush / I have no time.	5.1%
Others are also not doing it.	2.9%
I will not get fined if I do not do so.	2.8%

Theme 5: Attitudes and Perceptions on Littering Behaviours

In the 2023 wave of PCSS, respondents were asked about any unwanted items they did not or were not able to dispose of properly in a trash bin or another container meant for trash disposal in the past 4 weeks. 72% of respondents stated that they had disposed of all litter properly in the past 4 weeks, with 62% of respondents stating personal responsibility for keeping the environment clean as their reason for proper trash disposal (see Table 12).

Those aged between 35-49 years old were more likely to cite “It is not troublesome to do so” as their top reason for not littering. While those aged 65 years old or older mostly cite the fear of being financially fined as the main deterrence from littering.

The most common item that was not properly disposed of was used tissue paper or wet wipes and food packaging or wrappers (see Table 13). The top reason given by respondents for such actions was that there was at least 1 trash bin or disposal area nearby, but they were full, and that there was no other nearby bin or disposal area (see Table 14).

Table 12: Reasons for Proper Trash Disposal

Reasons	**%**
I am responsible for keeping the environment clean.	61.8
I care for the environment.	43.3
It only takes up a little bit of my time.	40.0
It is not troublesome to do so.	30.6
If I don’t do so, I could be fined S$300 for littering and I don’t like the pain of losing money.	24.2
I want to do my part to keep Singapore’s status as a clean city.	22.6
It is a behaviour that my family expects of me.	18.9
It would be embarrassing if I were caught by members of the public for littering.	14.3
It is a behaviour that my friends expect of me.	9.5
If I don’t do so, the chances of me being caught for littering by authorities is high.	9.3
If I don’t do so, cleaners will have to clean up after me and they will have more work to do.	6.3

Table 13: Items Not Properly Disposed Of

Item	**%**
Used tissue paper/wet wipes	12.5

Food packaging/wrappers	8.7
Leftover food and drinks	6.0
Any containers, bottles, cups, or drink cans	5.7
Pieces of paper (e.g. leaflets, junk mail, receipts, etc.)	5.2
Bodily material/fluid (e.g., snot, spit, vomit, etc.)	3.0
Plastic bags	2.9
Cigarette butts	2.8
Face masks	2.5
Broken glass and bottles	2.1

Table 14: Reasons for Improper Trash Disposal

Reasons	**%**
There was at least 1 trash bin/disposal area nearby, but they were full.	46.8
There was no nearby trash bin/disposal area.	46.5
I accidentally dropped the item/The item flew away, and I could not retrieve it.	16.6
I accidentally left the item behind when leaving the location.	10.9
A cleaner was nearby to pick up/clean up the item.	9.7
No one or few people were nearby to notice.	9.3
The item was small enough to be unnoticeable when discarded.	9.3
I accidentally dropped the item/The item flew away, and I did not want to pick it up for various reasons.	9.3
The item was dirty and I did not want to touch it.	7.0
No cleaner was nearby, but I expected one to pick up/clean up the item eventually.	5.0
It was troublesome to dispose of the item in a trash bin.	3.5
I was driving/riding in/travelling in a vehicle, and throwing it out of the vehicle was convenient.	3.1

87% of respondents reported that they would never throw litter in public spaces, which was a decrease from 2022 (91%), while 7% shared that they would do so only if there was no litter bin nearby. (See Table 15). The proportion of respondents reporting that they would only litter when there was no nearby litter bin (6.8%) was higher than in 2022 (2.5%) and the second highest after 2018 (9.3%).

Table 15: Proportion of Singaporeans Who Would Litter

	Never (%)	**Only when there is no nearby litter bin (%)**	**Only when there is no one around (%)**	**Sometimes (%)**	**Most of the time (%)**
Do you throw litter in public spaces?	**86.9** *(91.1)* 89.9 (96.1) *80.4*	**6.8** *(2.5)* 5.6 (2.6) *9.3*	**1.1** *(1.0)* 1.1 (0.5) *1.7*	**4.4** *(3.9)* 2.9 (0.6) *8.1*	**0.7** *(1.5)* 0.5 (0.2) *0.6*

Figures in italics refer to proportions from the 2018 wave of PCSS. Figures in parenthesis refer to proportions from the 2019 wave of PCSS. Figures in black ink refer to proportions from the 2021 wave of PCSS. Figures in parenthesis and italics refer to proportions from the 2022 wave of PCSS. Figures in bold refer to proportions from the 2023 wave of PCSS.

Personal Responsibility for Cleanliness in the Neighbourhood

Similar to the last three waves, we further examined personal responsibility for the cleanliness of the neighbourhood by presenting respondents with a scenario. Respondents were shown a picture of trash bins which were overflowing and given the following statement:

It is 6.30pm. You see overflowing trash bins in your neighbourhood as you return from work. It was clean in the morning when you left for work.

When asked to imagine what they would do if they were holding an empty drink bottle that they were intending to discard, 81% of respondents said that they would find another bin that was not full to discard their used drink bottle (see Table 16), with 73% doing so because there was no more space to discard the bottle in the bin (see Table 17). The remainder said they would leave their used drink bottle around a full bin (see Table 16), with 65% doing so because they trusted that cleaners would clean up the overflowing trash sooner or later (see Table 18).

Table 16: Respondents' Reactions to Discarding a Bottle at an Overflowing Bin

Statements	**%**
Find another bin that is not full to discard your used drink bottle.	80.8
Leave your used drink bottle around these bins.	19.2

Table 17: Reasons for Finding Another Trash Bin

Reasons	%
There is no more space to discard the bottle into these bins.	73.1
Leaving the bottle around these bins is considered littering.	52.7
Leaving the bottle around these bins may attract unwanted pests.	47.2
It is not troublesome to find another bin that is not full since there is adequate provision of trash bins around.	40.4
If I left the bottle around these bins, it may scatter away (e.g. due to wind) and dirty other areas in the neighbourhood.	15.7
The overflowing trash around these bins does not look pleasant, and I do not want to add on to the pile.	29.3
I do not want to make it inconvenient/difficult for cleaners to pick up the litter from the floor.	17.3

Table 18: Top Three Reasons to Leave Bottle around Overflowing Bins

Reasons	%
I trust that cleaners will clean up the overflowing trash sooner or later.	65.1
Since these bins are already full, leaving the bottle around them is not considered littering.	52.6
Finding another bin to dispose of the bottle is too troublesome.	39.4
Even if these bins are not full, I think that leaving the bottle around them is not considered littering.	34.8
I want to make it convenient for cleaners to clean up the whole pile of trash at one go.	28.5
If the residents in my neighbourhood are doing the same thing, it should be fine.	9.0

Respondents were then asked their views on a number of statements.

Most respondents believed that residents should have been responsible for the upkeep of their surroundings in this scenario, with 95% of respondents agreeing that residents should bring their litter to another disposal area rather than add to the full bins (see Table 19). Respondents who agreed that residents should be more personally involved in the upkeep of their neighbourhood's cleanliness tend to be those aged 65 years old and older.

In addition, a significant proportion of respondents (88%) felt that the situation reflected that a number of inconsiderate people lived in the neighbourhood, up from 82% in 2022, and higher than in 2019 (77%).

The results seem to indicate an increase in expectations on cleaning services to ensure cleanliness of the surroundings. Nearly all respondents (96%) expected that the authorities should demand higher standards of cleaning contractors to make sure the trash bins were always cleared promptly, a slight 0.6% decrease from 2022. Almost all respondents (94%) also expected that cleaners should clear trash throughout the day so that bins would not overflow, an increase of 3% from 2022. There has also been a large increase in the proportion of people who agree that cleaners are not efficient in their work, from 59% in 2022 to 66% in 2023. This is the third consecutive increase from 35% in 2019.

Despite an increase in reliance on cleaning services, only 75% of respondents agreed that more money should be spent on cleaning services, which was significantly down from 81% in 2022. Only 46% of respondents are willing to spend more money (e.g. Service and Conservancy Charges (S&CC fees)) for better cleaning services. These individuals tend to attribute responsibility of the upkeep of residents' neighbourhood cleanliness to cleaners and cleaning companies and tend to be those aged 35-49 years old.

Table 19: Responses to Scenario with Overflowing Trash Bins

Statement	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
The cleaners should clear trash throughout the day so that bins do not overflow.	**0.2** *1.8* 1.2 (0.6)	**5.4** *6.6* 4.8 (13.8)	**72.7** *69.5* 61.0 (72.1)	**21.6** *22.2* 33.0 (13.6)
A number of inconsiderate people live in this neighbourhood.	**1.3** *2.5* 2.3 (4.1)	**10.4** *15.4* 10.7 (19.2)	**69.3** *69.4* 46.5 (41.3)	**19.0** *12.8* 40.4 (35.5)
The cleaners are not efficient in their work.	**2.6** *3.8* 6.4 (12.3)	**31.3** *37.8* 47.2 (52.8)	**57.4** *51.6* 36.6 (32.6)	**8.6** *6.9* 9.8 (2.3)
Residents should bring their litter to another disposal area rather than add to the full bins.	**0.7** *0.9* 0.5 (0.1)	**4.3** *4.2* 8.4 (5.9)	**78.6** *74.3* 65.1 (78.3)	**16.5** *20.7* 26.0 (15.7)
The authorities should demand higher standards of cleaning contractors to make sure the trash bins are always cleared promptly.	**0.3** *0.4* 0.7 (0.3)	**3.6** *2.9* 4.6 (5.3)	**70.8** *73.7* 63.2 (64.1)	**25.3** *23.0* 31.5 (30.2)

Residents who see overflowing trash bins should contact the relevant parties (e.g., town council) so cleaners can clear the bins promptly.	**0.2** *0.5* 1.0 (0.2)	**4.8** *4.5* 11.4 (3.2)	**78.5** *78.7* 72.1 (84.4)	**16.5** *16.3* 15.4 (12.3)
More money should be spent on cleaning services.	**3.5** *1.8* 4.9 (1.5)	**21.7** *17.0* 35.5 (27.3)	**67.6** *70.8* 47.8 (57.2)	**7.2** *10.4* 11.8 (13.9)
I am willing to spend more money (e.g. higher Service and Conservancy Charges (S&CC fees)) for better cleaning services.	**11.9**	**42.6**	**43.3**	**2.2**

*Figures in parenthesis refer to proportions from the 2019 wave of PCSS, conducted during Covid-19. Figures in black ink refer to proportions from the 2021 wave of PCSS. Figures italicised refer to proportions from the 2022 wave of PCSS. Figures in bold refer to proportions from the 2023 wave of PCSS.*Note: Last item is a newly added item in the 2023 wave of PCSS.*

Further questions were posed to elicit respondents' beliefs about whether they could be personally involved in the maintenance of cleanliness in their neighbourhood, In addition, the scenario below was presented as a follow-up to the one regarding the overflowing trash bins:

Following this incident, some residents decide to form a group to ensure the cleanliness of the neighbourhood. They regularly encourage residents to pick up the trash they see, explain to litterbugs why littering is bad for the environment, and work with the cleaning crew to ensure that the neighbourhood is kept clean.

Similar to 2023, there was near unanimous support (98%) that residents should be encouraged to help maintain the cleanliness of the neighbourhood, as well as work together with cleaners to do so (see Table 20).

However, only 64% of respondents surveyed in 2023 would volunteer with such a group, a slight decrease from 66% in 2022.

On the other hand, there was an increased proportion of respondents (53%) who felt that residents should not have to work to keep the neighbourhood clean as they already pay for cleaning services, up from 51% of respondents in 2022. 53% of respondents believed that it is the job of cleaners to keep neighbourhoods clean, a slight increase (1%) from 2022.

Table 20: Responses to resident activism regarding public cleanliness

Statement	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)
I would volunteer with such a group.	**3.1** *2.9* 4.0 (0.8)	**33.4** *31.5* 41.2 (52.8)	**61.0** *59.2* 49.2 (44.4)	**2.5** *6.3* 5.6 (1.9)

Residents should not be doing this - it is the job of the cleaners to keep neighbourhoods clean.	**2.6** *4.1* 12.9 (17.3)	**44.7** *44.3* 39.2 (54.1)	**47.6** *47.0* 44.0 (28.2)	**5.0** *4.6* 3.9 (0.5)
Residents should be encouraged to help maintain the cleanliness of the neighbourhood.	**0.4** *0.5* 0.6 (0.1)	**1.4** *0.8* 1.6 (1.0)	**81.8** *81.8* 75.7 (81.9)	**16.4** *17.0* 22.1 (16.9)
Residents already pay for cleaning services and should not have to work to keep their neighbourhood clean.	**2.7** *4.6* 13.6 (16.9)	**44.0** *44.1* 38.9 (51.0)	**49.4** *47.6* 43.2 (29.1)	**3.9** *3.8* 4.3 (3.0)
Residents must work together with the cleaners to keep the neighbourhood clean.	**0.2** *0.1* 0.3 (0.4)	**2.1** *1.3* 3.1 (3.8)	**80.8** *81.1* 77.3 (76.9)	**16.9** *17.5* 19.4 (18.9)

Figures in parenthesis refer to proportions from the 2019 wave of PCSS, conducted during Covid-19. Figures in black ink refer to proportions from the 2021 wave of PCSS. Figures italicised refer to proportions from the 2022 wave of PCSS. Figures in bold refer to proportions from the 2023 wave of PCSS

Theme 6: Pride and Identity

Similar to results in the 2022 wave of the PCSS, most respondents (98%) held the opinion that Singapore is a clean city (see Table 21). Sentiments that Singapore is a clean city because of the efficiency of its cleaning services remained consistently high with 91% of respondents reporting so, remaining constant from 2022[9].

Table 21: Proportion of respondents agreeing to statements on Singapore cleanliness identity[10]

	Strongly Disagree (%)	Disagree (%)	Agree (%)	Strongly Agree (%)	Agree/ Strongly Agree (%)
I take pride in doing my part to keep Singapore clean	**0.3** 0.2 *0.2* 0.1 (0.5) *(0.6)*	**3.6** 0.5 *0.6* 0.7 (2.3) *(1.1)*	**75.1** 77.7 *60.2* 73.2 (52.6) *(58.0)*	**23.4** 21.7 *38.9* 26.0 (44.6) *(40.2)*	**98.4** 99.4 *99.1* 99.2 (97.2) *(98.2)*
Singapore is a clean city	**0.2** 0.1 *0.1* 0.2 (0.9) *(1.0)*	**1.6** 1.3 *1.9* 1.3 (4.7) *(5.1)*	**72.8** 75.8 *57.2* 60.7 (54.7) *(62.4)*	**25.4** 22.7 *40.7* 37.8 (39.7) *(31.5)*	**98.2** 98.5 *97.9* 98.5 (94.4) *(93.9)*
Other Singaporeans take pride in doing their part to keep Singapore clean	**0.3** 0.5 *0.4* 0.5 (1.3) *(1.5)*	**3.6** 3.9 *2.9* 4.3 (10.0) *(11.0)*	**82.3** 78.4 *61.1* 65.6 (55.1) *(59.4)*	**13.8** 17.2 *35.6* 29.6 (33.6) *(28.1)*	**96.1** 95.6 *96.7* 95.2 (88.7) *(87.5)*
Singapore is clean only because of the efficiency of its cleaning services	**0.3** 0.1 *1.7* 0.2 (1.6) *(1.5)*	**8.9** 9.7 *8.7* 12.9 (10.9) *(13.3)*	**79.4** 76.7 *70.4* 69.5 (54.8) *(54.5)*	**11.4** 13.5 *19.1* 17.5 (32.6) *(30.7)*	**90.8** 90.2 *89.6* 87.0 (87.4) *(85.2)*
I regularly interact (e.g., greet, talk) with the cleaners in my neighbourhood	**1.5** 1.0 *2.5* 1.3	**22.5** 19.1 *30.9* 31.1	**68.3** 70.3 *55.5* 59.0	**7.7** 9.6 *11.1* 8.5	**76.0** 79.9 *66.6* 67.5
I know how to provide feedback on the quality of cleaning services	**1.5** 1.2 *2.8* 1.3	**17.0** 10.5 *24.9* 20.3	**73.6** 78.5 *59.6* 68.3	**8.0** 9.8 *12.7* 10.0	**81.5** 88.3 *72.4* 78.3

[9] This includes respondents who indicated that they "agree" or "strongly agree".
[10] Figures in tables may not always add up to 100% because of rounding of numbers.

Figures italicised in parenthesis refer to proportions from the 2017 wave of PCSS. Figures in parenthesis refer to proportions from the 2018 wave of PCSS. Figures in black ink refer to proportions from the 2019 wave of PCSS, conducted during Covid-19. Figures italicised refer to proportions from 2021 wave of PCSS. Figures in red ink refer to proportions from the 2022 wave of PCSS. Figures in black ink and bold refer to the proportions from 2023 wave of PCSS.

A large proportion of respondents felt that Singaporeans in general took pride in keeping Singapore clean, with a great majority taking pride in doing their part (98%) and 96% agreeing that other Singaporeans also took pride in doing their part. 91% of respondents tend to attribute Singapore's cleanliness to the efficiency of cleaning services.

Compared to results from 2022, respondent's engagement with cleaners decreased by 4%, from 80% to 76% in 2023. Additionally, only 82% agreed that they knew how to provide feedback on quality of cleaning services, a decrease of 6% from 2022. The respondents who indicated as such were often aged 65 years old or older.

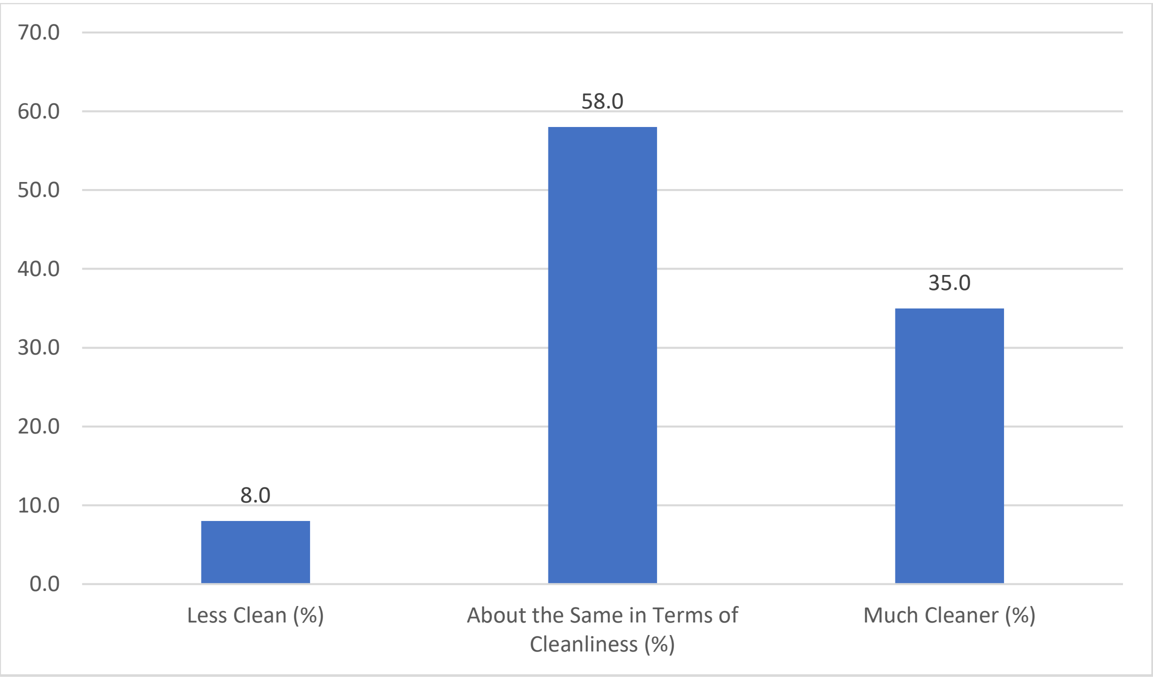
Theme 7: Strategies for Keeping Singapore Clean & Green

Perceptions of Cleanliness Now as Compared to 1 year ago

When respondents were asked to compare the cleanliness levels now to those of a year ago, 58% reported that cleanliness levels had not changed much while 35% responded that Singapore was much cleaner. Only 8% of respondents reported that Singapore was less clean (refer to Figure 4).

Additionally, 72% of Singaporeans agreed with the statement, "It is the government's responsibility to keep Singapore clean.", which was a decrease from 77% in 2022. Those who believe this tend to be individuals aged 21-34 years old.

Figure 4: Perceptions of Cleanliness Now as Compared to One Year Ago



The respondents were also asked about the usefulness[11] of two initiatives to promote keeping Singapore clean and green – pausing public cleaning and a litter-picking exercise – and whether they would be supportive[12] of both initiatives being implemented in their housing estates. Overall, 80% of respondents thought that they were useful for demonstrating how much litter is generated by the community, increasing appreciation of the importance of cleaners to keep public spaces clean, and nudging the community to do their part to keep public spaces clean (see Tables 22 & 23).

For pausing public cleaning, the following scenario was presented to respondents as an initiative to promote keeping Singapore clean and green:

A public campaign is launched to pause public cleaning at all public parks, park connectors, open areas and ground levels of housing estates for one day every 3 months of the year.

81% of respondents were supportive of pausing public cleaning for one day in their housing estate.

Table 22: Usefulness of Initiative to Pause Public Cleaning.

Pause Public Cleaning	**Not useful at all (%)**	**Only slightly useful (%)**	**Quite useful (%)**	**Very useful (%)**
Demonstrate how much litter is generated by the community in these public spaces	4.8	15.0	64.8	15.4
Increase the community's appreciation of the importance of cleaners to keep public spaces clean	5.2	15.3	61.5	18.1
Nudge the community to do their part to keep public spaces clean and dispose of their litter properly	5.6	15.7	61.8	16.9

For a litter-picking exercise, the following scenario was presented to respondents as an initiative to promote keeping Singapore clean and green:

A public campaign is launched to rally the community to conduct a mass litter-picking exercise at various public spaces every 3 months of the year.

84% percent were supportive of a litter-picking exercise being implemented in their housing estate. Respondents who thought this as so tend to be aged 65 years old or older. Compared to 2022, there was also a significant 12% increase in those willing to participate in the exercise this year (56%).

[11] This includes respondents who indicated that the measures were "quite useful" or "very useful".
[12] This includes respondents who indicated that the measures were "quite supportive" or "very supportive".

Table 23: Usefulness of Litter-Picking Exercise

Litter-Picking Exercise	Not useful at all (%)	Only slightly useful (%)	Quite useful (%)	Very useful (%)
Demonstrate how much litter is generated by the community in these public spaces	2.0	14.3	68.4	15.3
Increase the community's appreciation of the importance of cleaners to keep public spaces clean	1.7	14.9	66.0	17.4
Nudge the community to do their part to keep public spaces clean and dispose of their litter properly	1.8	15.7	66.5	15.9

Table 24: Support for Initiatives

Initiatives	Not supportive at all (%)	Only slightly supportive (%)	Quite supportive (%)	Very supportive (%)
Pause public cleaning	5.6	13.5	57.3	23.6
Litter-picking exercise	1.3	15.0	58.1	25.6

Theme 8: Public Hygiene Standards

The 2023 wave continues to pose respondents questions about *public hygiene,* questions we started asking since the onset of COVID-19 given the heightened attention to not just cleanliness but the removal of germs. Respondents were informed that while maintaining *public cleanliness* involves removing dirt/litter from public spaces, maintaining *public hygiene* is stricter; it also involves disinfecting public spaces to kill germs and minimise the spread of infectious diseases.

Respondents were asked to indicate their opinion on the level of importance and satisfaction of the current level of public hygiene in fifteen places: preschools, public schools, youth facilities, eldercare facilities, hawker centres, coffeeshops, air-conditioned food courts, canteens, restaurants, wet markets, hotels, shopping malls in housing estates, shopping malls in downtown/CBD areas, bus interchanges and MRT/LRT Stations.

Overall, 99% of respondents indicated that public hygiene was important or very important across all the domains (see Table 26). In addition, a larger proportion felt that it was very important in domains like preschools, public schools and eldercare facilities.

<u>Table 26: Importance of Level of Hygiene Across Public Spaces</u>

Domains / Spaces	Not Important at all (%)	Slightly Important (%)	Important (%)	Very Important (%)
Preschools	**0.1** *0.1* 0.0	**0.6** *0.8* 0.2	**55.5** *56.8* 34.4	**43.7** *42.3* 65.4
Public Schools (e.g. Primary and Secondary Schools)	**0.1** *0.0* 0.0	**0.8** *0.6* 0.3	**56.5** *58.4* 36.1	**42.6** *41.1* 63.6
Youth Facilities (e.g., student care centres)	**0.1** *0.0*	**0.9** *0.9*	**57.7** *59.6*	**41.2** *39.5*
Eldercare and social services facilities (e.g., sheltered homes, senior care centres)	**0.1** *0.1* 0.0	**0.6** *0.7* 0.2	**51.7** *55.7* 34.2	**47.6** *43.6* 65.6
Hawker Centres	**0.1** *0.2* 0.0	**0.7** *0.7* 0.3	**59.1** *60.6* 47.1	**40.1** *38.5* 52.6
Coffeeshops	**0.1** *0.0* 0.0	**0.8** *0.7* 0.4	**59.0** *61.6* 46.9	**40.1** *37.7* 52.8
Air-conditioned Food Courts	**0.1** *0.0* 0.0	**0.7** *0.9* 0.2	**58.5** *60.9* 47.0	**40.8** *38.2* 52.8
Canteens (e.g., school canteens, staff canteens)	**0.1** *0.0*	**0.8** *0.4*	**58.6** *60.9*	**40.6** *38.7*
Restaurants	**0.1** *0.0*	**0.6** *0.7*	**58.5** *60.6*	**40.7** *38.7*

Wet Markets	**0.1** *0.1*	**1.1** *0.8*	**58.7** *61.3*	**40.0** *37.8*
Hotels	**0.1** *0.0* 0.0	**0.9** *0.8* 0.5	**59.0** *58.8* 42.7	**40.1** *40.4* 56.8
Shopping Malls in Housing Estates	**0.1** *0.0* 0.0	**0.8** *0.6* 0.6	**60.4** *60.6* 46.2	**38.7** *38.7* 53.2
Shopping Malls in Downtown/CBD Areas	**0.1** *0.0*	**0.9** *0.3*	**60.8** *60.7*	**38.3** *38.9*
Bus Interchanges	**0.1** *0.0* 0.0	**1.0** *1.3* 0.8	**60.6** *60.7* 47.8	**38.4** *37.9* 51.4
MRT/LRT Stations	**0.1** *0.0* 0.0	**1.0** *0.8* 0.5	**61.3** *60.8* 46.5	**37.7** *38.4* 53.0

Figures in black ink refer to proportions from the 2021 wave of PCSS. Figures italicised refer to proportions from the 2022 wave of PCSS. Figures in bold refer to proportions from the 2023 wave of PCSS. Note that "Shopping Malls" in PCSS 2021 has been replaced with "Shopping Malls in Housing Estates" in PCSS 2022.

Over 90% of respondents indicated that they were satisfied or very satisfied with the level of public hygiene in all spaces except hawker centres (73%), coffeeshops (66%), air-conditioned food courts (87%) and wet markets (69%) (see Table 27). While having lower satisfaction rates than other places, hawker centres and coffeeshops saw an increase in 7% and 4% satisfaction respectively from 2022. Meanwhile, the satisfaction for wet markets further decreased by 5% compared to the previous wave's score. This could be partly due to the aftereffects of the Covid 19 pandemic, with increased foot traffic to wet markets and possibly higher standards for public hygiene and wet market practices.

Table 27: Satisfaction of current level of hygiene across public spaces

Domains / Spaces	Not Satisfied at all (%)	Slightly Satisfied (%)	Satisfied (%)	Very Satisfied (%)
Preschools	**0.4** *0.0* 0.2	**3.0** *3.0* 1.2	**85.5** *77.3* 73.5	**11.1** *19.6* 25.0
Public Schools (e.g., Primary and Secondary Schools)	**0.4** *0.2* 0.2	**2.6** *3.0* 2.8	**85.6** *78.0* 72.7	**11.4** *18.7* 24.3
Youth Facilities (e.g., student care centres)	**0.4** *0.1*	**2.0** *2.1*	**87.0** *79.5*	**10.6** *18.3*
Eldercare and social services facilities (e.g., sheltered homes, senior care centres)	**0.7** *0.2* 0.1	**3.1** *3.6* 3.9	**83.6** *78.7* 73.8	**12.7** *17.5* 22.3

Hawker Centres	**5.6** *7.1* 5.5	**21.1** *26.1* 25.3	**68.2** *60.9* 59.7	**5.1** *5.9* 9.5
Coffeeshops	**6.8** *7.5* 5.9	**27.0** *30.0* 26.7	**63.2** *58.4* 57.6	**3.1** *4.1* 9.9
Air-conditioned Food Courts	**1.1** *1.6* 0.6	**11.6** *11.6* 8.0	**80.4** *76.0* 77.6	**6.8** *10.8* 13.9
Canteens (e.g., school canteens, staff canteens)	**0.6** *0.7*	**6.6** *6.1*	**85.8** *81.9*	**7.0** *11.3*
Restaurants	**0.2** *0.4*	**2.9** *3.4*	**86.7** *79.5*	**10.2** *16.7*
Wet Markets	**9.8** *6.5*	**21.5** *20.2*	**65.8** *67.9*	**2.9** *5.4*
Hotels	**0.1** *0.0* 0.0	**1.3** *2.1* 1.5	**80.6** *73.9* 73.3	**18.0** *23.9* 25.3
Shopping Malls in Housing Estates	**0.4** *0.4* 0.1	**3.2** *3.7* 2.2	**85.0** *78.4* 77.3	**11.4** *17.5* 20.4
Shopping Malls in Downtown/CBD Areas	**0.1** *0.0*	**1.8** *2.2*	**81.7** *76.9*	**16.4** *20.9*
Bus Interchanges	**1.1** *1.1* 0.6	**5.8** *6.9* 6.9	**87.3** *81.7* 80.7	**5.8** *10.4* 11.8
MRT/LRT Stations	**1.1** *0.8* 0.5	**5.6** *5.8* 4.9	**87.3** *80.5* 79.8	**6.0** *12.9* 14.9

Figures in black ink refer to proportions from the 2021 wave of PCSS. Figures italicised refer to proportions from the 2022 wave of PCSS. Figures in bold refer to proportions from the 2023 wave of PCSS. Note that "Shopping Malls" in PCSS 2021 has been replaced with "Shopping Malls in Housing Estates" in PCSS 2022.

Conclusion

The survey findings reveal that overall cleanliness satisfaction levels are at its highest since 2019, with many areas, especially in food outlets (i.e. air-conditioned food courts, coffeeshops, hawker centres and wet markets) showing an increase in satisfaction rates.

While satisfaction of public cleanliness is still lowest for coffeeshops, hawker centres and wet markets, they have also shown improvement. Noteworthy is the improvement in perceived satisfaction of coffeeshops (+4.0% to 80.4%) and hawker centres (+4.0% to 81.9%). This could be a result of the mandatory tray and crockery return policy and enforcement against table littering which commenced in 2021 and contributed to a gradual change in social norms at such public dining places, demonstrating that collective action on the part of the public contributes to improvement in public cleanliness. Thoroughness and frequency of cleaning in coffeeshops, and the number of trash bins in wet markets continued to be an area of dissatisfaction.

There is a significant drop in satisfaction of cleanliness for public events (88% in 2023 compared to 94% in 2022). This could be due to larger scale of public events in 2023, leading to more noticeable littering and news reports of littering at public events, compared to 2021 and 2022, when various COVID-19 restrictions were in place.

Satisfaction of toilet cleanliness increased in coffeeshops and hawker centres compared to 2022, yet these areas continue to yield lower satisfaction compared to other establishments. This suggests that there is more that can be done to improve the cleanliness of these two areas. 62% of respondents think that individual users are primarily responsible for the cleanliness of public toilets, compared to 60% in 2022. This slight increase may be facilitated by public education campaigns such as NEA's Clean Public Toilets Campaign where there have been two iterations of the campaign since Oct 2022, and the launch of the LOO (Let's Observe Ourselves) @ coffeeshops campaign by Restroom Association Singapore in November 2023.

The majority of respondents are of the view that enforcement against table littering is effective. However, there is a small proportion of respondents attributing the non-return of used trays and crockery to being unsure about whether they needed to return their used trays and crockery. This was one of the top 3 reasons why respondents did not return their used trays and crockery in hawker centres, coffeeshops, air-conditioned food courts and canteens. Regarding table cleaning after meals, 81% were willing to go the extra mile to clean up their food spillages or wipe down their tables after use. The top reason cited for doing so was that it was the socially responsible thing to do. On the other hand, amongst those who were not willing to clean up their tables after spillages/use, 54% of respondents cited not having the proper equipment to clean up the table as the main reason for this behaviour.

Littering behaviours need to be addressed, as only 72% of the respondents disposed of their litter properly compared to 76% in 2022, while 87% stated that they never threw litter in public spaces compared to 91% in 2022. Most respondents recognise that the community and individual should be encouraged to keep public spaces clean. However, similar to the previous wave, an entrenched reliance on cleaning services continues to be observed; with more respondents highlighting the responsibility of cleaners to upkeep cleanliness standards. 94% of the respondents expect cleaners to clear trash throughout the day, which is a 3% increase from 2022. They also view that cleaners are not efficient. Based on a scenario of overflowing trash bins, more respondents in 2023 feel that cleaners are not efficient in their work (59% in 2022 vs 66% in 2023), However, significantly fewer respondents felt that more money should be spent on cleaning services (81% in 2022 vs 74% in 2023), or are willing to spend more of their personal money for better cleaning services (46%).

Respondents were also asked about the usefulness of two initiatives to promote keeping Singapore clean and green – pausing public cleaning and a litter-picking exercise – and whether they would be supportive of these being implemented in their housing estates. Overall, over 80% of respondents thought that both initiatives are useful for demonstrating how much litter is generated by the community, increasing appreciation of the importance of cleaners to keep public spaces clean, and nudging the community to similarly do their part. More than half of respondents (56%) said that they would participate in such exercises, a 12% increase from last year. Despite this, respondents still show a dependency on others to maintain public cleanliness. This may stem from respondents' beliefs that others were not fulfilling their part – (a) that there were inconsiderate people living in the neighbourhood (who should perhaps then be penalised for their lack of pro-cleanliness behaviour) and (b) that cleaners were not efficient and should clear the bins more often.

Respondents were also unanimous that residents and cleaners must work together to keep Singapore clean. However, 53% of respondents also felt that since residents already pay for cleaning services, they should not be obligated to work to keep neighbourhoods clean, a 2% increase from 2022.

Given the results of this survey, some interventions can be implemented to ensure cleanliness satisfaction remains high in the coming years.

Maintaining public cleanliness/hygiene is a collective responsibility. Upstream efforts to practise good hygiene and cleanliness behaviours by citizenry go a long way in keeping Singapore clean, and reducing the reliance on additional cleaning infrastructure and costs required to tackle cleanliness hotspots downstream.

A successful example would be the continual efforts to practise good hygiene at food outlets, such as the returning of trays and the cleaning of tables after meals, in order to ensure a good standard of hygiene is present in these locations. Given the improvement in perceived satisfaction of coffeeshops and hawker centres, the consistent and high rates of self-reported tray return and support for the initiative as well as the vast majority of respondents who go the extra mile to clean up spills/wipe down the tables after use, it can be inferred that the tray and crockery return policy has been successful in normalising the behaviour of tray-returning in food outlets. These findings reinforce the importance of personal responsibility and the power of collective action on public cleanliness.

Thus, while regulations are useful, more social nudges, similar to the tray and crockery return policy, should be implemented to encourage more cleanliness behaviours in Singaporeans. For public dining places, one possibility could be to further encourage the pro-social practice of cleaning up spills or wiping down tables after use. This is supported by our finding that the lack of proper cleaning equipment was the primary reason cited for not cleaning up spills or wiping down tables after meals. Food outlets could consider piloting the provision of clean tablecloths or paper tissues on dining tables for patrons to wipe down the tables after their meals. By doing so, Singaporeans will likely be more pro-active and gradually feel that they should be more responsible in cleaning up their table litter, thereby instilling this good habit and ensuring cleanliness in public dining places. Hopefully, over time, this habit will translate to other public places as well.

Additionally, 2024 being designated as the "Year of Public Hygiene" is timely to further nudge and showcase the importance of collective action, and how impactful individual cleanliness behaviours are in the long run. The government should continue with its public education efforts, specifically in rallying community members together to ensure cleanliness in neighbourhoods. Although many respondents feel that cleaners and residents should be more responsible for the cleanliness of neighbourhoods, many still indicate an unwillingness to spend more money on better cleaning services and a reluctance to take on more responsibility in cleaning their neighbourhoods. Thus, more public campaigns should be used to better inculcate a sense of increased responsibility for public cleanliness in citizens, for example by highlighting that efforts to maintain the cleanliness of spaces by cleaning up after oneself would help to reduce the downstream need for additional cleaning infrastructure and cost trade-offs for the public.

Already, schools are playing part in this effort via school campaigns to educate children on how to maintain proper cleanliness and hygiene practices. Through more school initiatives to cultivate good cleanliness and hygiene practices, such as proper trash disposal and handwashing, these practices will more likely be habituated in children, which they will carry with them in the long run.

To further ensure that such behavioural nudges are effective, they can be targeted at specific locations, for example cleanliness hotspots that need improvement. For instance, toilets at coffeeshops and hawker centres continue to have the lowest satisfaction rates amongst toilets in other public areas. To improve this, posters or visual aids that remind individuals that they have a part in keeping public toilets clean could be displayed at these hotspots. For littering hotspots, a visual aid that instructs individuals on how to properly fold up bulky wastes before disposal could potentially prevent trash bins from overflowing frequently. Providing a QR code that links to a feedback form at trash disposal areas could also encourage the public to provide timely feedback on the status of trash bins to cleaning companies. By doing so, they can better alert cleaners to any overflowing bins and can thus clean up these bins more efficiently.

Lastly, the frequency and thoroughness of cleaning in food outlets, especially in wet markets, should be increased to ensure that the cleanliness of such places are satisfactory to the public. Cleaning companies should ensure that their cleaners are adequately trained and reminded of effective cleaning processes. The adoption of cleaning technologies, such as the use of automated cleaning machines, by cleaning companies can also increase the efficiency and thoroughness of cleaning.

Methodology

This study received clearance from the Singapore Management University Institutional Review Board (IRB). The survey sample was obtained using a Department of Statistics (DOS) listing of households. The identified households were approached by interviewers from a market research company, Nexus Link Pte. Ltd. with a tablet containing the survey. The survey carried a Singapore Management University Participant Information Sheet, which assured prospective participants of the confidentiality and anonymity of their responses.

Those who agreed to participate in the study completed the survey on their own except for those who were illiterate in any official language. Upon completion, interviewers would retrieve the tablet from the respondents. In total, there were 2,010 completed responses. This provided an overall response rate of approximately 67% of eligible households. The survey sample is representative of the demographics of the Singapore resident population. Details are provided in Table 1A.

Table 1A: Profile of Respondents

Sample Characteristics	**2017 (%)**	**2018 (%)**	**2019 (%)**	**2021 (%)**	**2022 (%)**	**2023 (%)**
Age						
21-34 years old	27	25	26	26	**25**	**26**
35-49 years old	30	29	29	28	**27**	**27**
50-64 years old	28	28	28	27	**27**	**27**
65 > years old	16	17	17	19	**21**	**20**
Gender						
Male	49	50	48	45	**47**	**46**
Female	52	50	52	55	**53**	**54**
Ethnicity/Race						
Chinese	76	76	76	76	**76**	**79**
Malay	12	13	12	13	**13**	**9**
Indian	9	9	9	9	**9**	**12**
Eurasian						**1**
Others	3	3	3	3	**3**	**3**
Educational Attainment						
Secondary and below	43	41	39	38	**39**	**39**
Diploma/'A'-Levels/post sec	33	32	26	29	**28**	**30**
Degree & Prof qualification	23	25	35	34	**33**	**32**
Housing Type						
3 room or smaller HDB	27	23	26	26	**26**	**26**
4 room or bigger HDB	66	59	57	58	**62**	**56**
Private	7	19	17	17	**12**	**18**

Details of Public Cleanliness Satisfaction index

Table 2A: Public Cleanliness Satisfaction Index

Domains / Spaces		Proportion Satisfied (%)	Proportion Satisfied with Domain (%)	Overall Proportion Satisfied across all Spaces (%) [Public Cleanliness Satisfaction Index]
Transportation	Roads	**98** 97 *(94)* 98 (95) *95*	**2023: 98** 2022: 97 2021: 96 2019: 98 2018: 95 2017: 93	**2023: 94** 2022: 92 2021: 92 2019: 93 2018: 84 2017: 82
	Bus Stop	**98** 95 *(95)* 98 (92) *88*		
	Bus Interchange	**98** 98 *(98)* 99 (95) *94*		
	MRT/LRT Station	**98** 98 *(99)* 99 (98) *97*		
Leisure	Parks/Park Connectors	**97** 94 *(96)* 97 (88) *89*	**2023: 97** 2022: 95 2021: 97 2019: 97 2018: 89 2017: 89	
	Shopping Malls in Housing Estates	**98** 98 *(99)* 99 (95) *93*		
	Shopping Malls in Downtown/CBD Areas*	**99** 99		
	Playgrounds	**95** 93 *(97)* 95 (83) *82*		
Food Outlets	Coffeeshops	**80** 76 *(77)* 86 (65) *65*	**2023: 85** 2022: 83 2021: 85 2019: 89 2018: 71 2017: 69	
	Hawker Centres	**82** 78 *(83)* 87 (62) *60*		
	Food Courts (Air-Conditioned)	**95** 93 *(96)* 95 (87) *86*		
	Wet Markets	**84** 81 *(84)* 85 (73) *65*		
Neighbour-hood	HDB Town Centre	**98** 95 *(97)* 95 (90) *89*	**2023: 93** 2022: 91 2021: 90 2019: 90 2018: 79 2017: 79	
	Void decks /Corridors /Lift lobbies	**90** 89 *(86)* 86 (74) *73*		
	Lift to your home	**94** 92 *(90)* 90 (79) *79*		
Commuter Paths	Pavements / Walkways	**94** 93 *(93)* 94 (87) *87*	**2023: 95** 2022: 94 2021: 92 2019: 93	
	Overhead Bridges /Foot Bridges	**97** 95 *(91)* 97 (91) *90*		

	Underpasses	**97** 95 *(92)* 94 (88) *84*	2018: 85 2017: 83	
	Roadside Drains	**95** 93 *(89)* 89 (78) *71*		
	Grass Patches next to Pavements	**94** 93 *(93)* 91 (82) *81*		
Public Events	After Public Events (e.g. NDP, Concerts, Sporting events, etc.)	**88** 94 *(94)* 88 (74) *63*	**2023: 88** 2022: 95	

Figures in italics refer to proportions from the 2017 wave of PCSS. Figures in parenthesis refer to proportions from the 2018 wave of PCSS. Figures in black ink not bolded refer to proportions from 2019 wave of PCSS, conducted during Covid-19. Figures in parenthesis and italics refer to proportions from the 2021 wave of PCSS. Figures in red ink refer to proportions from the 2022 wave of PCSS. Figures in black ink and bolded refer to proportions from 2023 wave of PCSS.

**Shopping malls in Downtown/CBD areas were excluded from the count as it was a new item added in the 2022 wave of PCSS.*