

MEDIA RELEASE

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SINGAPORE SEES A DECADE OF PROGRESS IN WASTE REDUCTION BUT MORE CAN BE DONE FOR RECYCLING

Per capita domestic waste decreased by more than 15 per cent over past decade; per dollar GDP non-domestic waste decreased by 30 per cent over the same period. However, the recycling rate declined from 62 per cent to 52 per cent over the last ten years.

Singapore, 19 June 2024 – Singapore observed decreases in waste generated per capita and per dollar Gross Domestic Product (GDP). Domestic waste¹ per capita decreased by more than 15 per cent, and non-domestic waste² per dollar GDP by more than 30 per cent over the past decade. This indicates that households and companies have taken positive steps to reduce and reuse.

Per capita and per GDP waste generated decreased in past decade

² The daily domestic waste generated per capita decreased from 1.08 kg in 2013 to 0.88 kg in 2023.

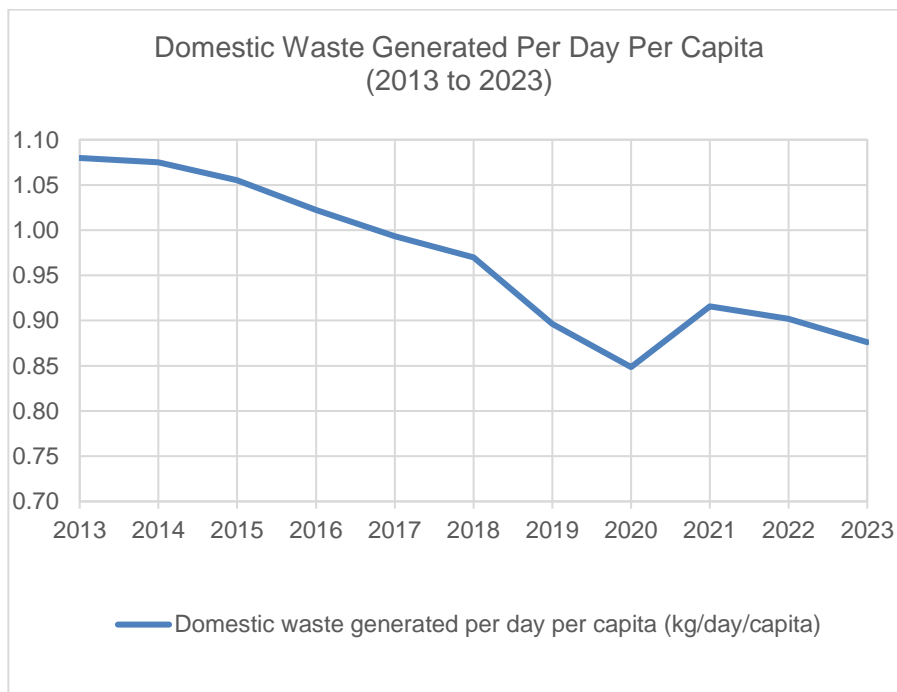


Fig. 1. A chart on the daily domestic waste generated per capita from 2013 to 2023.

¹ Domestic waste is waste collected from households and trade premises (e.g., shophouses, educational institutions, petrol stations, hawker centres and places of worship).

² Non-domestic waste is waste generated at industrial and commercial premises.

3 The daily non-domestic waste generated per dollar GDP decreased from 40 tonnes in 2013 to 26 tonnes in 2023.

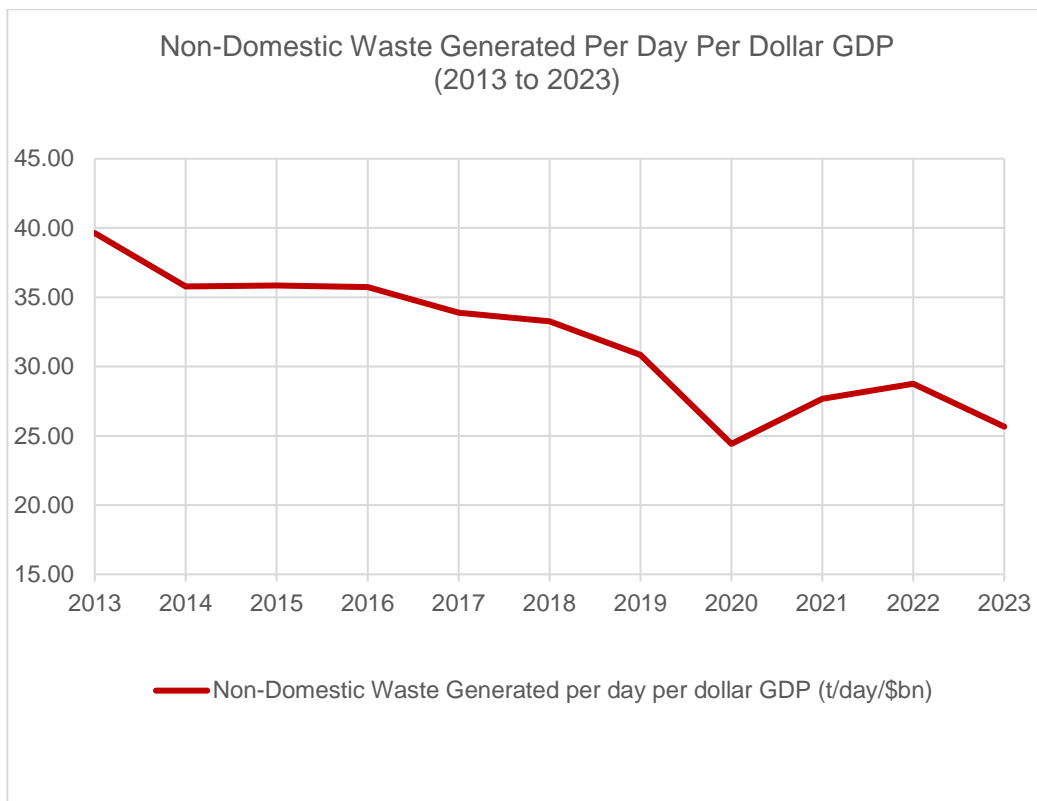


Fig. 2. A chart on the daily non-domestic waste generated per dollar GDP from 2013 to 2023.

Recycling rate declined due to structural factors

4 There was a decline in the overall recycling rate over the past decade, especially for paper and cardboard. Paper recycling dropped from over 50 per cent a decade ago to 31 per cent in 2023. This is largely due to structural factors such as freight costs and commodity prices.

5 The overall recycling rate decreased from 57 per cent in 2022 to 52 per cent in 2023, largely due to the amount of construction and demolition (C&D) waste, which is almost completely recycled, dropping significantly last year. Excluding C&D waste, the overall recycling rate in 2023 was 45 per cent, which is comparable to 2022's rate at 46 per cent.

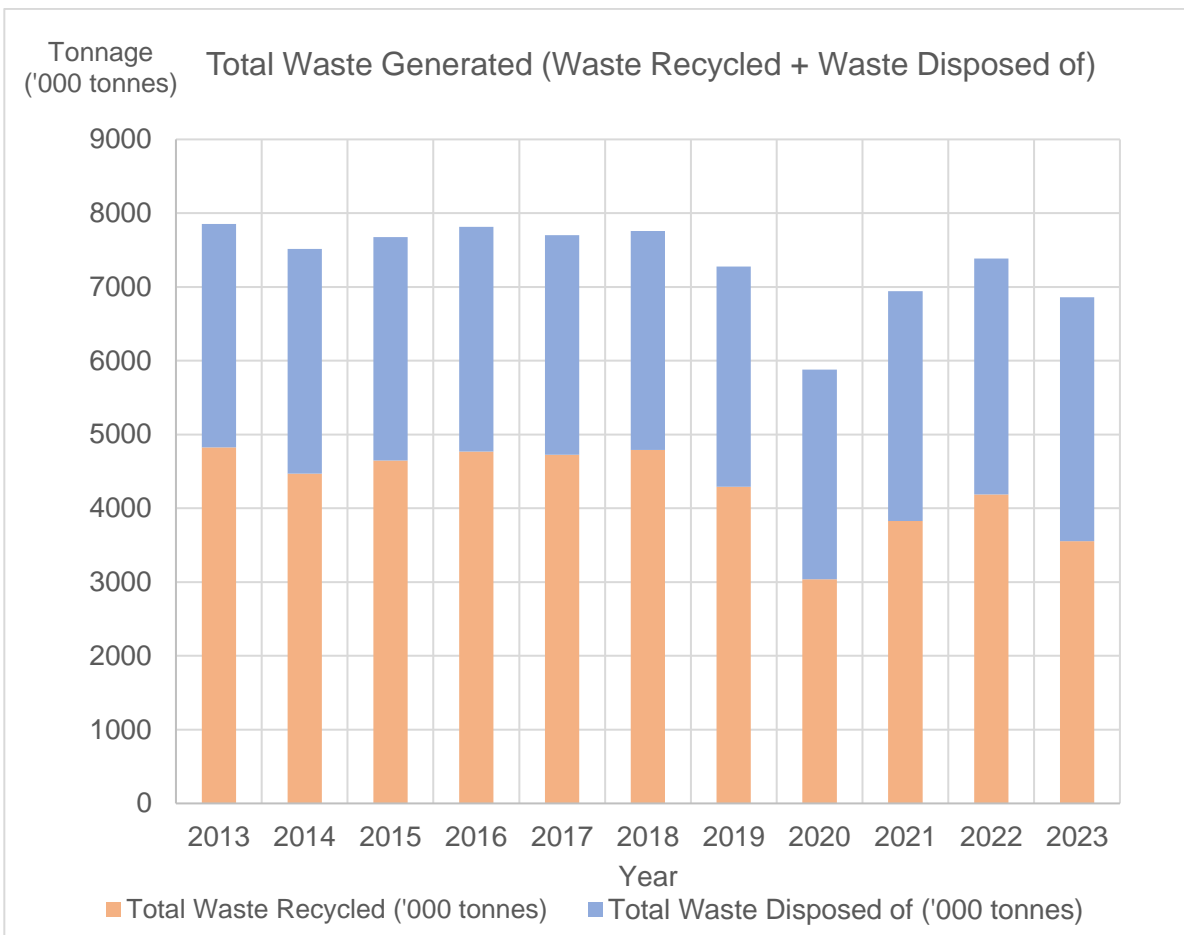


Fig. 3. A chart on the total waste generated from 2013 to 2023

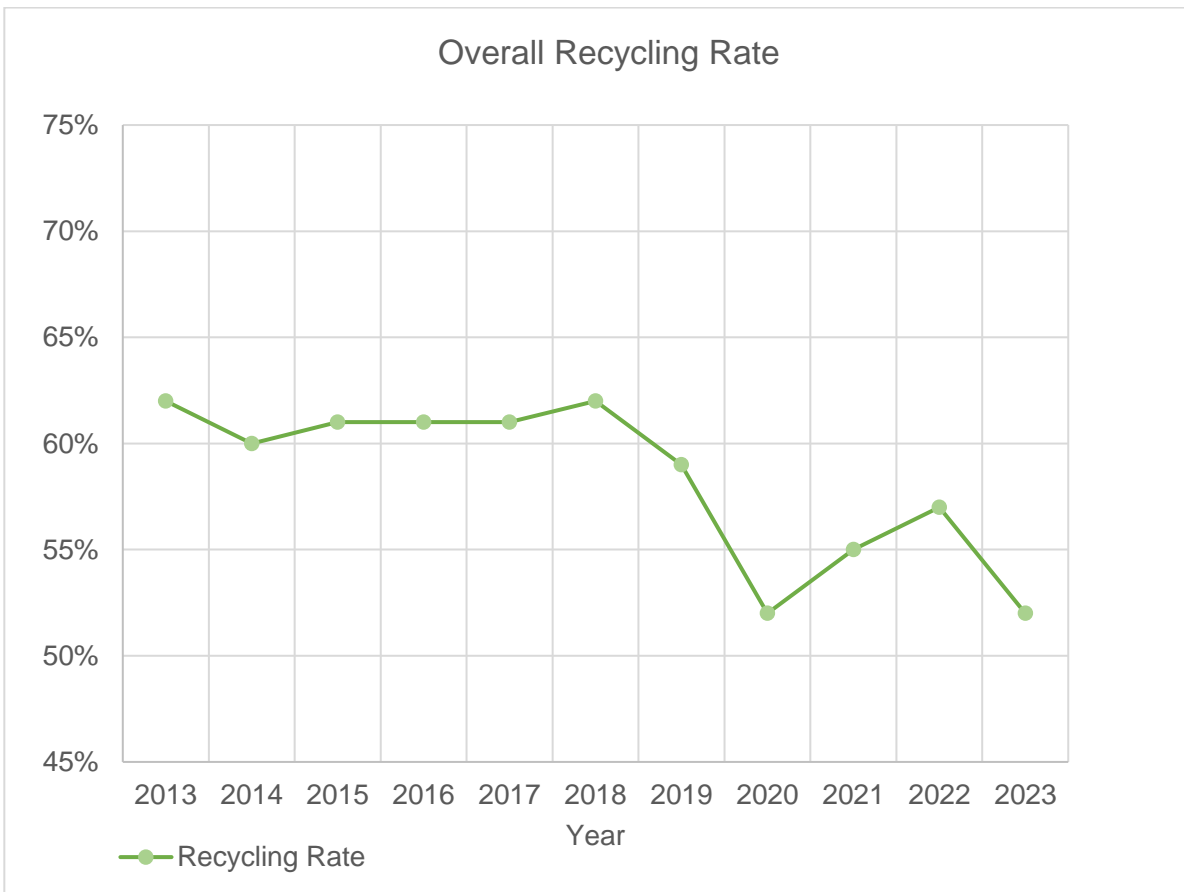


Fig. 4. A chart on the overall recycling rate from 2013 to 2023.

Redoubling efforts to improve recycling and resource recovery

6 NEA promotes the 3Rs (reduce, reuse, recycle) in working towards the goal of a Zero Waste Nation. As part of the Singapore Green Plan and Zero Waste Masterplan, we developed a suite of initiatives to shift attitudes and behaviours to make the 3Rs the norm for citizens and businesses. NEA also continues to study and develop new ways to close the various resource loops. This includes exploring the use of mixed materials from Semakau Landfill, which comprise incineration ashes and other waste materials, as reclamation fill.

7 Household recycling participation has been on an uptrend. According to NEA's 2023 survey on household recycling³, 72 per cent of households recycle compared to 64 per cent in 2021. In addition, a higher proportion of survey respondents are aware of common items that can be deposited into the recycling bins and chutes. NEA recognises that individual efforts to conserve our resources are vital, and encourages households to not just recycle more, but also to recycle right.

8 There is a greater urgency for each of us to build a sustainability culture where we reduce, reuse, and recycle. By reducing waste and recycling right, we can do our part to combat climate change and ensure that Singapore remains clean, green, and liveable.

9 The latest waste and recycling statistics can be accessed at go.gov.sg/waste-statistics-and-overall-recycling.

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³ <https://www.nea.gov.sg/media/news/news/index/72-per-cent-of-households-recycle-in-2023>

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About the National Environment Agency

The National Environment Agency (NEA) is the leading public organisation responsible for ensuring a clean and sustainable environment for Singapore. Its key roles are to improve and sustain a clean environment, promote sustainability and resource efficiency, maintain high public health standards, provide timely and reliable meteorological information, and encourage a vibrant hawker culture. NEA works closely with its partners and the community to develop and spearhead environmental and public health initiatives and programmes. It is committed to motivating every individual to care for the environment as a way of life, in order to build a liveable and sustainable Singapore for present and future generations.

For more information, visit www.nea.gov.sg

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**2013 to 2023 Overall Waste and Recycling Statistics
(with and without Construction and Demolition waste)**

The overall recycling rate decreased from 57 per cent in 2022 to 52 per cent in 2023 largely due to the amount of C&D waste, which is almost completely recycled, dropping significantly last year. Excluding C&D waste, the overall recycling rate in 2023 was 45 per cent, which is comparable to 2022's rate at 46 per cent.

C&D waste decreased by more than 40 per cent in 2023, compared to 2022, because there were fewer demolition projects. Such waste is a key industrial waste stream that is generated in large amounts. Hence, sharp Year-on-Year swings in the amount of such waste would result in huge fluctuations to the non-domestic and overall recycling rates. Excluding such waste, the overall recycling rate declined from 51 per cent to 45 per cent over the last decade.

Year	Waste Generated ('000 tonnes)	Waste Recycled ('000 tonnes)	Waste Disposed of ('000 tonnes)	Overall Recycling Rate	Overall Recycling Rate w/o Construction and Demolition waste
2013	7,851	4,826	3,026	62%	51%
2014	7,515	4,471	3,043	60%	51%
2015	7,673	4,650	3,024	61%	52%
2016	7,814	4,769	3,045	61%	51%
2017	7,704	4,724	2,980	61%	51%
2018	7,759	4,790	2,969	62%	52%
2019	7,278	4,293	2,984	59%	49%
2020	5,880	3,040	2,841	52%	44%
2021	6,944	3,826	3,118	55%	47%
2022	7,385	4,188	3,197	57%	46%
2023	6,859	3,553	3,306	52%	45%

2023 Waste Statistics and Overall Recycling Rate Table

In 2023, about 6.86 million tonnes of solid waste were generated, of which 3.55 million tonnes were recycled. Waste generated by the non-domestic and domestic sectors were 4.97 million tonnes and 1.89 million tonnes respectively in 2023.

The overall recycling rate decreased from 57 per cent in 2022 to 52 per cent in 2023. The domestic recycling rate remained stable at 12 per cent and the non-domestic recycling rate decreased to 67 per cent from 72 per cent in 2022.

Waste type	Total Generated ('000 tonnes)	Total Recycled ('000 tonnes)	Recycling Rate	Total Disposed ('000 tonnes)
Ferrous metal	1,296	1,289	99%	7
Paper/Cardboard	1,251	387	31%	863
Construction & Demolition	832	828	99%	5
Plastics	957	48	5%	909
Food	755	132	18%	623
Horticultural	256	218	85%	38
Wood	447	299	67%	149
Ash & sludge	231	32	14%	199
Textile/Leather	211	5	2%	206
Used slag	176	173	98%	3
Non-ferrous metal	106	105	99%	1
Glass	75	6	8%	69
Scrap tyres	27	26	95%	1
Others (stones, ceramics, etc.)	238	6	N.A. ¹	232
Total	6,859	3,553	52%	3,306

Note:

Figures are rounded to the nearest thousand tonnes and percentage point. Without Construction & Demolition waste, the overall recycling rate was 45% in 2023.

¹The recycling rate for the "Others" category is not meaningful as it is an aggregation of miscellaneous waste types that are managed and recycled differently.

Metals recovered from incineration bottom ash for recycling is excluded from waste disposed of.

Wood and horticultural waste recycled include 447,000 tonnes sent to facilities (e.g., biomass power plants and Sembcorp's Energy from Waste plant) for use as fuel.

2022 Waste Statistics and Overall Recycling Rate Table

Waste type	Total Generated (^{'000} tonnes)	Total Recycled (^{'000} tonnes)	Recycling Rate	Total Disposed (^{'000} tonnes)
Ferrous metal	1,338	1,331	99%	7
Paper/Cardboard	1,064	394	37%	671
Construction & Demolition	1,424	1,419	99%	5
Plastics	1,001	57	6%	944
Food	813	146	18%	667
Horticultural	221	188	85%	32
Wood	419	298	71%	121
Ash & sludge	241	27	11%	213
Textile/Leather	254	5	2%	249
Used slag	169	166	99%	2
Non-ferrous metal	92	91	98%	2
Glass	73	11	14%	63
Scrap tyres	26	25	95%	1
Others (stones, ceramics, etc.)	249	30	N.A. ¹	219
Total	7,385	4,188	57%	3,197

Note:

Figures are rounded to the nearest thousand tonnes and percentage point.

¹The recycling rate for the "Others" category is not meaningful as it is an aggregation of miscellaneous waste types that are managed and recycled differently.

Metals recovered from incineration bottom ash for recycling is excluded from waste disposed of.

Wood and horticultural waste recycled include 414,000 tonnes sent to facilities (e.g., biomass power plants and Sembcorp's Energy from Waste plant) for use as fuel. The overall recycling rate increased to 57% in 2022 largely due to the increased amounts of Construction & Demolition waste generated for recycling as a result of more demolition projects.

2021 Waste Statistics and Overall Recycling Rate Table

Waste type	Total Generated ('000 tonnes)	Total Recycled ('000 tonnes)	Recycling Rate	Total Disposed ('000 tonnes)
Ferrous metal	1,312	1,306	99%	6
Paper/Cardboard	1,136	437	39%	699
Construction & Demolition	1,013	1,011	99%	2
Plastics	982	58	6%	924
Food	817	154	19%	663
Horticultural	332	277	83%	55
Wood	310	234	76%	76
Ash & sludge	249	22	9%	227
Textile/Leather	189	7	4%	182
Used slag	182	181	99%	1
Non-ferrous metal	88	87	98%	1
Glass	74	9	13%	65
Scrap tyres	27	26	95%	1
Others (stones, ceramics, etc.)	233	18	8%	214
Total	6,944	3,826	55%	3,118

Note:

Figures are rounded to the nearest thousand tonnes and percentage point.

Metals recovered from incineration bottom ash for recycling is excluded from waste disposed of.

Wood and horticultural waste recycled include 435,000 tonnes sent to facilities (e.g., biomass power plants and Sembcorp's Energy from Waste plant) for use as fuel.

2020 Waste Statistics and Overall Recycling Rate Table

Waste type	Total Generated ('000 tonnes)	Total Recycled ('000 tonnes)	Recycling Rate	Total Disposed ('000 tonnes)
Paper/Cardboard	1,144	432	38%	712
Ferrous metal	934	930	99%	4
Plastics	868	36	4%	832
Construction & Demolition	825	822	99%	3
Food	665	126	19%	539
Horticultural	313	249	80%	64
Wood	304	195	64%	109
Ash & sludge	228	16	7%	211
Textile/Leather	137	6	4%	131
Used slag	106	104	99%	2
Non-ferrous metal	75	73	98%	2
Glass	66	7	11%	58
Scrap tyres	23	22	95%	1
Others (stones, ceramics, etc.)	193	21	11%	173
Total	5,880	3,040	52%	2,841

Note:

Figures are rounded to the nearest thousand tonnes and percentage point.

Metals recovered from incineration bottom ash for recycling is excluded from waste disposed of.

Wood and horticultural waste recycled include 406,000 tonnes sent to facilities (e.g., biomass power plants and Sembcorp's Energy from Waste plant) for use as fuel.

2019 Waste Statistics and Overall Recycling Rate Table

Waste type	Total Generated (^{'000 tonnes})	Total Recycled (^{'000 tonnes})	Recycling Rate	Total Disposed (^{'000 tonnes})
Construction & Demolition	1,440	1,434	99%	6
Ferrous metal	1,278	1,270	99%	8
Paper/Cardboard	1,011	449	44%	561
Plastics	930	37	4%	893
Food	744	136	18%	607
Wood	438	289	66%	149
Horticultural	400	293	73%	107
Ash & sludge	252	25	10%	226
Textile/Leather	168	6	4%	161
Used slag	174	171	99%	3
Non-ferrous metal	126	124	99%	2
Glass	75	11	14%	64
Scrap tyres	33	31	94%	2
Others (stones, ceramics, etc.)	210	15	7%	195
Total	7,278	4,293	59%	2,984

Note:

Figures are rounded to the nearest thousand tonnes and percentage point.

Metals recovered from incineration bottom ash for recycling is excluded from waste disposed of.

Wood and horticultural waste recycled include 458,000 tonnes sent to facilities (e.g., biomass power plants and Sembcorp's Energy from Waste plant) for use as fuel.