



國立勤益科技大學
NCUT
National Chin-Yi University of Technology

University : National Chin-Yi University of Technology
Country : Taiwan
Web Address : www.ncut.edu.tw



[SDG 12] Responsible Consumption and production 責任消費與生產

[12.3.1] Does your university as a body measure the amount of waste generated and recycled across the university??

NCUT is strongly committed to environmental sustainability through a comprehensive waste management system. Recognizing the urgency of reducing waste, conserving resources, and minimizing environmental pollution, NCUT systematically measures, monitors, and reports the amount of waste generated and recycled across its campus.

This report details NCUT's waste disposal practices, recycling policies, measurable results, and contributions to the United Nations Sustainable Development Goals (SDGs).

1. Policy Framework for Waste Management

NCUT's waste management policy is guided by four principles: compliance with laws, pollution prevention, recycling, and continuous improvement.

- **Regulation for Implementation of Garbage Reduction and Resource Recycling** ensures waste is sorted, collected, and properly processed.
- **Compliance and Oversight:** All processes align with Taichung City Environmental Protection Bureau's guidelines.
- **Student Engagement:** Each student is required to complete **54 hours of service learning**, which often includes recycling and waste sorting tasks.
- **Reinvestment of Resources:** Proceeds from recycling are allocated to support campus sustainability projects.

2. Waste Measurement and Recycling Practices

2.1 Categories of Waste

NCUT monitors the following categories:

- **Inorganic waste:** paper, plastics, PET bottles, glass, metals, aluminum foil, batteries, fluorescent tubes.
- **Food waste:** collected and partly composted.
- **Hazardous waste:** handled under strict SOPs and transferred to licensed disposal companies.

2.2 Monitoring and Infrastructure

- **Recycling Bins:** Installed in all campus buildings for clear waste categorization.
- **Daily Collection:** Cleaning staff collect waste every day for proper disposal.

- **Composting:** Food waste is converted into fertilizer for flowers and trees.
- **Compressor Installation:** A 13.8KW garbage compressor (installed in June 2022) reduces waste volume and removal frequency.

3. Waste Measurement Data

3.1 2023 Data

- Inorganic waste generated: **74,646 kg**
- Food waste collected: **876 kg** (approx. 300 kg composted)

3.2 2024 Data

- Inorganic waste generated: **64,207 kg**
- Demonstrates a **13.9% reduction** in total waste compared to 2023.

3.3 Interpretation

The year-on-year decline indicates:

- Successful implementation of plastic reduction and source minimisation policies.
- Increased awareness and behavioral change among students and staff.
- More effective recycling and resource recovery practices.

4. Recycling and Circular Economy Initiatives

- **Certified Recycling Partnerships:** Recyclable materials are transferred to government-certified recyclers.
- **Food Waste Composting:** Contributes to NCUT's circular economy by reducing landfill burden and providing natural fertilizer.
- **Student Competitions and Awareness Campaigns:** Recycling competitions reward units that recycle the most, reinforcing campus-wide participation.

5. Hazardous Waste Monitoring

- **Tracking System:** Hazardous waste is monitored via a GPS-based real-time tracking system from collection to disposal.
- **Reporting:** NCUT submits detailed reports to the Environmental Protection Administration (EPA).
- **Documentation:** Disposal companies issue certificates confirming proper hazardous waste handling.

6. Sustainability Impact and SDG Alignment

SDG 12 – Responsible Consumption and Production

- Measuring and reducing waste supports more sustainable resource use.

SDG 13 – Climate Action

- Waste minimization and recycling reduce methane and CO₂ emissions from landfills.

SDG 15 – Life on Land

- Composting practices enhance soil quality and campus biodiversity.

SDG 17 – Partnerships for the Goals

- Collaboration with local government and certified recyclers strengthens sustainability governance.

NCUT's comprehensive waste measurement and recycling strategy demonstrates its strong commitment to sustainability. By tracking annual waste data, reducing overall waste generation, and enhancing recycling and composting systems, NCUT sets a high standard for green university practices in Taiwan.

The reduction in waste from 74,646 kg (2023) to 64,207 kg (2024) underscores the effectiveness of these measures and highlights the university's leadership in responsible waste management. NCUT continues to invest in infrastructure, education, and collaboration to further its contribution to environmental protection and sustainable development.



Garbage reduction compressor: NCUT installed a 13.8KW garbage compressor (as shown in the picture) in June 2022 to reduce the number of garbage removals.



Kitchen waste bin installation location



廚餘要回收 請分 生 跟 熟

生廚餘

綠能發電



果皮類



蔬菜類



咖啡渣



茶葉渣

不回收項目

果核類、果殼類
(椰子殼、榴槤殼...)
筍殼
(筍白筍、玉米筍殼、竹筍...)
玉米芯、鳳梨冠芽
蛋殼、海鮮殼
長纖維類
(甘蔗皮、蔗渣、麻蕙莖、香茅草)
稻草、禾本科植物...
以上皆視為「一般垃圾」

熟廚餘



麵食類



米食類



豆食類



肉類



蛋類



粉狀類



罐頭類



調味類



零食類

注意事項

- 廚餘投入前應先去除水份及雜質(塑膠袋、牙籤、竹筷、衛生紙等垃圾)。
- 廚餘可自主堆肥，民眾如有設備，以不影響環境衛生為前提，可自行運用。



台中好環保



資源好康報



違反者，將依「廢棄物清理法」處新台幣1200~6000元罰鍰。

National Chin-Yi University of Technology Food Waste Recycling Statistical Table
January -December2023

Month	Quantity (kg)	Note
2023.01	42	
2023.02	42	
2023.03	46	
2023.04	44	
2023.05	48	
2023.06	41	
2023.07	47	
2023.08	48	
2023.09	52	
2023.10	43	
2023.11	49	
2023.12	50	
Total	552	

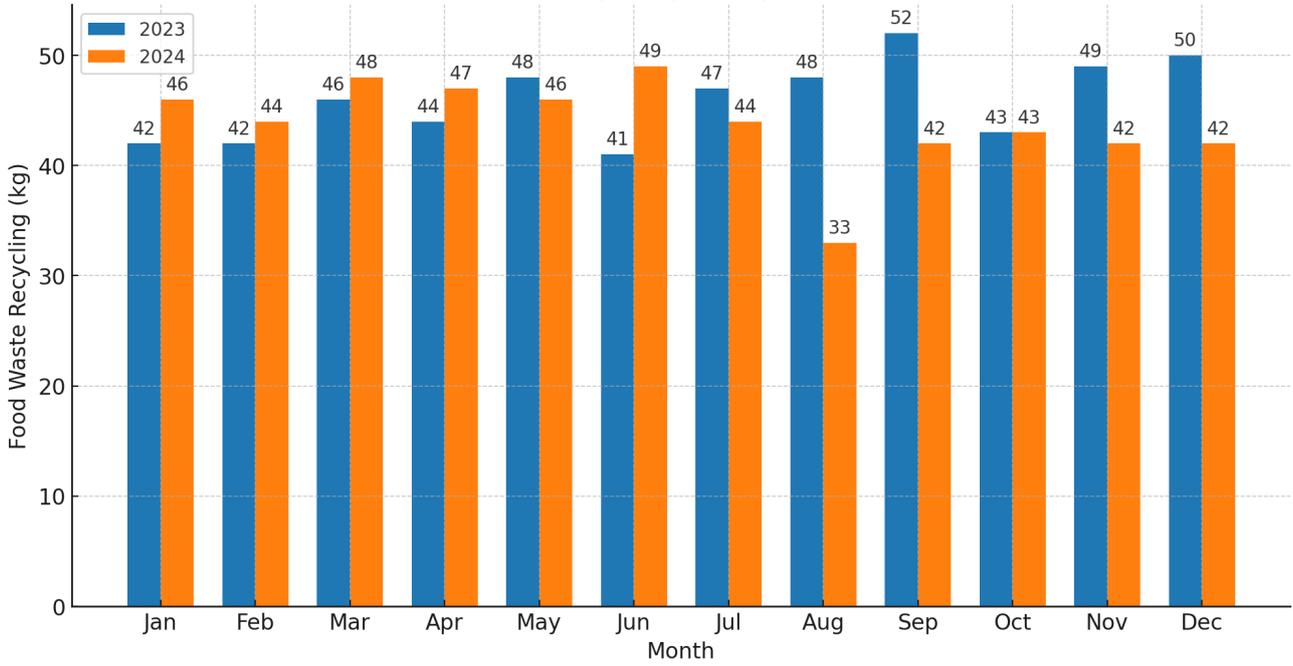
January-December 2024

Month	Quantity (kg)	Note
2024.01	46	
2024.02	44	
2024.03	48	
2024.04	47	
2024.05	46	
2024.06	49	
2024.07	44	
2024.08	33	
2024.09	42	
2024.10	43	
2024.11	42	
2024.12	42	
Total	526	

The food waste recycling initiative at NCUT is a significant step toward sustainable waste management. By implementing recycling bins campus-wide and collaborating with the Taichung City Taiping District Cleaning

Department, NCUT is actively reducing organic waste. The composting of a portion of this waste further underscores the university's commitment to environmental responsibility. This initiative complements other environmental efforts on campus, like the Source Reduction Plan and paperless policies.

NCUT Food Waste Recycling Comparison: 2023 vs 2024



Here's a **bar chart comparison** of NCUT's monthly food waste recycling for 2023 and 2024.

- **2023 Total:** 552 kg
- **2024 Total:** 526 kg



貳、資源回收

臺中市一般廢棄物應回收及試辦回收項目

紙類	紙容器類 (含鋁箔包、紙製餐具)	鐵、鋁類	玻璃類	廚餘(養豬)	光碟片	彈簧床墊	堪用傢俱
塑膠類 (塑膠容器、免洗餐具、保麗龍杯)	乾電池、鉛蓄電池	照明光源	食用油	潤滑油	二手物品	水銀體溫計	
陶瓷磚瓦	電子電器	小家電	<p>臺中市公告應回收項目 臺中市試辦回收項目</p> <p>另蠟燭玻璃罐(含蠟)亦有回收。</p> <p>部分行政區社區及市場菜葉之堆肥廚餘有回收。</p>				
塑膠袋 (不含鋁箔、紙等複合性材質且去除內容物)	舊衣 (不含枕頭、布偶、棉被)	包裝用保麗龍 (含保麗龍杯、魚箱、蛋糕盒)	輪胎				
行動電話及充電器	機動車輛	資訊物品					

貳、資源回收

「資源回收輔導團」主動出擊(2/2)

資源回收輔導團擴大參與

● 成員：環保志工、學生及環境教育志工及環保團體，參與社區輔導計畫單位者。

● 服務對象：

- 社區(機關、學校、團體)
- 便利商店(超市、量販店)
- 夜市商圈、餐飲業
- 事業(營建工地)



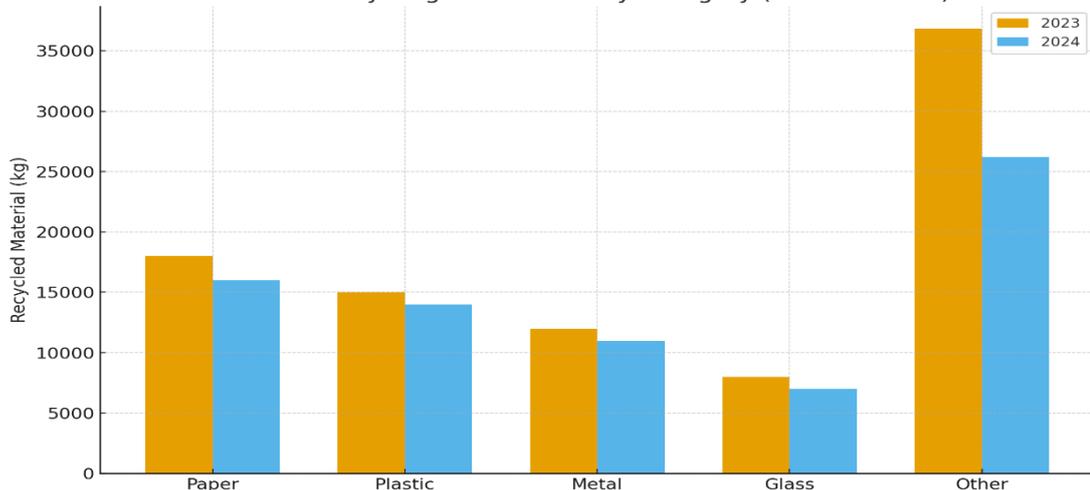
2024 Inorganic waste statistics tab

Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Paper	2221	2457	2208	1872	2219	3279	3387	6098	3630	2576	2739	3002	35688
Iron	292	480	343	372	205	176	99	700	165	175	178	186	3371
Alumium	60	11	70	86	32	21	14	3	21	35	30	32	415
electric wire	33	16	4	0	1	0	0	0	0	0	0	0	54
PET bottle	163	91	284	337	351	276	208	110	249	418	581	431	3499
Plastic (fine)	155	80	163	200	130	162	84	67	95	162	209	161	1688
Plastic (coarse)	40	120	48	31	15	30	35	23	36	17	43	29	467
Glass	180	174	142	217	152	109	100	123	142	138	175	202	1854
Keyboard	59	53	11	10	16	9	22	61	89	28	40	99	497
Aluminum foil package	236	90	344	389	430	228	118	46	194	359	364	290	3088
Bettary	2	3	0	0	0	3	0	2	0	0	0	0	10
Light tube	11	32	6	4	7	10	5	5	7	15	3	10	115
paper tableware	657	283	923	1048	1211	757	501	207	659	1274	1923	2084	11527
Plastic tableware	74	48	146	162	236	189	108	57	174	227	245	222	1888
Styrofoam container	0	0	0	1	15	1	13	0	0	1	4	0	35
CD	16	1	0	1	0	2	6	0	0	3	0	2	31
Total	4,199	3,939	4,692	4,730	5,020	5,252	4,700	7,502	5,461	5,428	6,534	6,750	64,207

2023 Inorganic waste statistics tab

Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Paper	2,470	2668	2390	1647	2085	1780	2738	4102	4456	2869	2598	2481	32284
Iron	614	493	455	417	324	452	276	1059	735	234	277	349	5685
Alumium	43.4	27.6	54.7	138.2	31	29	40	80	107	103	43	93	789.9
electric wire	93	31	122	157	53	51	0	82	41	5	15	25	675
PET bottle	280	203	407	310	456	365	190	217	384	296	280	326	3714
Plastic (fine)	173	90	149	179	191	168	116	188	208	170	168	199	1999
Plastic (coarse)	150	214	216	120	207	234	178	386	196	110	132	266	2409
Glass	196	141	196	185	142	197	146	139	162	125	191	234	2054
Keyboard	82	84	54	10	48	185	22	52	59	17	47	41	534
Aluminum foil package	308	159	476	216	392	477	139	159	346	454	505	525	4156
Bettary	0	5	3	0	0	5	8	8	28	94	3	5	159
Light tube	4	4	9	15	7	0	29	20	10	18	7	17	140
paper tableware	1243	1235	2070	1741	1913	1141	496	645	783	1145	1189	1332	14933
Plastic tableware	422	284	680	405	534	489	208	237	326	286	171	245	4287
CD	36	22	6	4	0	0	20	49	0	5	3	8	153
Plastic Bag	98	72	53	46	0	52	22	61	66	43	54	108	675
Total	6,212	5732	7340	5590	6383	5625	4628	7484	7907	5974	5683	6254	74646.

NCUT Recycling Distribution by Category (2023 vs 2024)





Resource recycling bin



