

SDG12

SDG12 Responsible Consumption and Production

题目编号：12.2.1

英文题目：Ethical sourcing policy

Have a policy on ethical sourcing of food and supplies

1. Green procurement requirements

NCUE has been committed to promote the procurement of green-designated items by government agencies. In 2020, NCUE procured a total of NT\$25,855,041 in green and eco-labelled products (NT\$38,528 and NT\$25,816,513, respectively), meeting the targets for the year and each of the quarters. NCUE's compliance performance with relevant regulations is 100% for the procurement of green-designated items.

Please refer to appendices 12.2.1A-2020 Scoring Method for Performance Evaluation of Annual Green Procurement and 12.2.1B-2020 Annual Statistical Form for Amounts of Green Procurement.

For more details, please refer to the following sites.

Greenliving Information Platform:

<https://greenliving.epa.gov.tw/newPublic/greenpurchase/government>

The Green Procurement Portal of the Centre of Protection and Occupational Safety and Health:

http://webadmin.ncue.edu.tw/el/web_edit/edit_show.asp?ClassID=628

NCUE's 'performance in the procurement of green-designated items by government agencies' in 2020	
Quarter 1	100%
Quarter 2	100%
Quarter 3	100%
Quarter 4	100%
NCUE's 'performance in the procurement of green-designated items by government agencies' in 2021	
Quarter 1	100%
Quarter 2	100%

NCUE's 'performance in the procurement of green-designated items by government agencies' in 2020 is 100%. For details, see the screenshot below.



類別	品名	品類	綠色採購件	第一階段		第二階段		非電氣產品	非電氣產品
				金額(元)	百分比	金額(元)	百分比		
採購件	採購件	綠色採購件	第一階段	2,911,111	100.0%	2,911,111	100.0%	2,911,111	100.0%
			第二階段	0	0.0%	0	0.0%	0	0.0%
			合計	2,911,111	100.0%	2,911,111	100.0%	2,911,111	100.0%
			第一階段	2,911,111	100.0%	2,911,111	100.0%	2,911,111	100.0%
			第二階段	0	0.0%	0	0.0%	0	0.0%
			合計	2,911,111	100.0%	2,911,111	100.0%	2,911,111	100.0%
			第一階段	2,911,111	100.0%	2,911,111	100.0%	2,911,111	100.0%
			第二階段	0	0.0%	0	0.0%	0	0.0%
			合計	2,911,111	100.0%	2,911,111	100.0%	2,911,111	100.0%
			合計	2,911,111	100.0%	2,911,111	100.0%	2,911,111	100.0%

NCUE's 'performance in the procurement of green-designated items by government agencies' in the first half of 2021 is 100%. For details, see the screenshot below.



類別	品名	品類	綠色採購件	第一階段		第二階段		非電氣產品	非電氣產品
				金額(元)	百分比	金額(元)	百分比		
採購件	採購件	綠色採購件	第一階段	1,051,910.0	100.0%	1,051,910.0	100.0%	1,051,910.0	100.0%
			第二階段	0	0.0%	0	0.0%	0	0.0%
			合計	1,051,910.0	100.0%	1,051,910.0	100.0%	1,051,910.0	100.0%
			第一階段	1,051,910.0	100.0%	1,051,910.0	100.0%	1,051,910.0	100.0%
			第二階段	0	0.0%	0	0.0%	0	0.0%
			合計	1,051,910.0	100.0%	1,051,910.0	100.0%	1,051,910.0	100.0%
			第一階段	1,051,910.0	100.0%	1,051,910.0	100.0%	1,051,910.0	100.0%
			第二階段	0	0.0%	0	0.0%	0	0.0%
			合計	1,051,910.0	100.0%	1,051,910.0	100.0%	1,051,910.0	100.0%
			合計	1,051,910.0	100.0%	1,051,910.0	100.0%	1,051,910.0	100.0%

1. 總計	11,988,831.4	100.0%	100.0%	11,988,831.4
2. 第一類採購金額	11,988,831.4	100.0%	100.0%	11,988,831.4
3. 第二類採購金額	0.0	0.0%	0.0%	0.0
4. 第三類採購金額	0.0	0.0%	0.0%	0.0

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4. 第三類採購金額	0.0	0.0%	0.0%	0.0

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2. 第一類採購金額	11,988,831.4	100.0%	100.0%	11,988,831.4
3. 第二類採購金額	0.0	0.0%	0.0%	0.0
4. 第三類採購金額	0.0	0.0%	0.0%	0.0

2. Food procurement requirements for two canteens in the Jin-De Campus and Bao-Shan Campus:

(1) NCUE adheres to two basic principles for food procurement:

Preference is given to seasonal foods and local foods to reduce the carbon footprint, shorten food miles, and reduce energy consumption.

(2) According to the three-tiered management system for campus food safety and hygiene practices, (1) NCUE cooperates with the Ministry of Education during the Ministry’s on-site guidance once every academic year; (2) NCUE’s catering management committee is responsible for coordination across different departments; and (3) a dedicated nurse inspects hygiene practices in catering spaces once every week. To ensure food safety, NCUE encourages the canteens to do the following:

a. give preference to labelled or traceable foods, such as ‘Traceable Agricultural Products’, products meeting ‘Certified Agricultural Standards’, and produce, livestock, and aquaculture products with tracing QR codes;



Picture caption: Labelled and traceable foods are preferred.

b. to ensure food safety within NCUE’s canteens by examining fresh vegetables and fruits according to the ‘Criteria for Monitoring Pesticide Residue in Agricultural Products’ issued by the Taiwan Food and Drug Administration, Ministry of Health and Welfare (as below): <https://www.fda.gov.tw/TC/site.aspx?sid=2428&r=1485767145>

c. to make sure vendors login to the Ministry of Education’s ‘Filing Platform for School Foods’ every day to fully disclose relevant food information. <https://fatraceschool.k12ea.gov.tw/frontend/>

3. Preference is given to products and services from disability welfare institutions, organisations, or sheltered workshops.

In compliance with the ‘Persons with Disabilities Rights Protection Act’ and the ‘Regulation for Obligated Purchasing Units / Institutions to Purchase the Products and Services Provided by Disabled Welfare Institutions, Organizations, or Sheltered Workshops’, particularly promoting the employment of people with disabilities and the protection of vulnerable groups, NCUE has developed an ‘Implementation Plan for Preferential Procurement of Products and Services from Disability Welfare Institutions, Organisations, or Sheltered Workshops’. The target is that for designated product and service items, those contracted or subcontracted by such institutions, organisations or sheltered workshops should account for more than 5% of total annual procurements made by NCUE for the product and service items.

Considering regional characteristics, the products and services (excluding plan development) currently covered are bento, meal boxes (single purchase of 20 or more boxes), and printing services (business cards, posters, books, and magazines) with fees of NT\$10,000 or more in a single transaction. They should be listed on the preferential procurement platform. Only when no disability welfare institutions, organisations or sheltered workshops are willing to contract, or their products or services are disqualified could NCUE contact general vendors.

Please refer to appendix 12.2.1C-Regulations on the Preferential Procurement of Environmental Protection Products by Government Agencies

Year of implementation	Ratio of preferential procurement (%)
2019	7.98
2020	8.76

Appendices (including supporting documents):

No.: 12.2.1A-2020 Scoring Method for Performance Evaluation of Annual Green Procurement;

12.2.1B-2020 Annual Statistical Form for Amounts of Green Procurement

12.2.1C-Regulations on the Preferential Procurement of Environmental
Protection Products by Government Agencies

题目编号：12.2.3

英文题目：Policy waste disposal - hazardous materials

Have a policy, process or practice on waste disposal - Covering hazardous materials

NCUE has developed 'Guidelines for Disposal of Laboratory Waste in the NCUE'. Waste effluent, chemicals, and empty containers from NCUE laboratories are removed twice a year. Biomedical wastes produced by infirmaries and laboratories are removed once a week.

Please refer to appendices 12.2.3A-Guidelines for Disposal of Laboratory Wastes in NCUE and 12.2.3B-Wastes Removed in 2020.

Please refer to the waste management website of the Centre of Protection and Occupational Safety and Health:

http://webadmin.ncue.edu.tw/el/web_edit/edit_show.asp?ClassID=627



Picture caption: Removal of laboratory waste.



Picture caption: Removal of biomedical waste produced by infirmaries and laboratories.

Below is the weight of biomedical waste produced by university laboratories and infirmaries in 2020:

Month	Metric tons
1	0.031
2	0.402
3	0.055
4	0.041

Jan.	8,640	kg	2,210	kg	6,290	kg	17,140	kg
Feb.	5,853	kg	2,090	kg	5,350	kg	13,293	kg
Mar.	9,450	kg	3,230	kg	9,790	kg	22,470	kg
Apr.	8,580	kg	2,650	kg	8,215	kg	19,445	kg
May	9,710	kg	3,370	kg	9,375	kg	22,455	kg
Jun.	12,630	kg	3,910	kg	7,260	kg	23,800	kg
Jul.	9,300	kg	2,520	kg	9,710	kg	21,530	kg
Aug.	6,800	kg	2,050	kg	8,175	kg	17,025	kg
Sept.	10,570	kg	2,930	kg	11,860	kg	25,360	kg
Oct.	10,110	kg	3,180	kg	10,930	kg	24,220	kg
Nov.	11,570	kg	3,540	kg	9,820	kg	24,930	kg
Dec.	12,780	kg	3,450	kg	12,975	kg	29,205	kg
Total	115,993	kg	35,130	kg	109,750	kg	260,873	kg

Recycled materials account for 42.07% of total waste

Statistics of resource recovery rewards distributed to schools within the jurisdiction of Changhua City for their cooperation

School name	Recycled in 2020 (kg)	Annual rewards (NT\$)
National Changhua University of Education	109,750	131,700

Please refer to appendix 12.2.4A-Official Document of Changhua Municipal Office.



Picture caption: Garbage sorting and recycling buckets in NCUE.

12.2.4A-Official Document of Changhua Municipal Office

题目编号：12.2.5

英文题目：Policy waste disposal - landfill policy

Have a policy on waste disposal - to measure the amount of waste sent to landfill and recycled

According to the ‘Restrictive Use of Shopping Plastic Bags: Scope, Implementation, and Date’ of the Environmental Protection Agency (the Executive Yuan), NCUE will not provide plastic bags for consumers to carry the purchased products when faculty, staff, and students of NCUE go to the canteens to purchase any products.

Please refer to appendix 12.2.5A-Restrictive Use of Shopping Plastic Bags: Scope, Implementation, and Date



Picture caption: Posters informing the public about 14 types of spaces where free shopping plastic bags are not allowed to be provided.

For more details, please refer to the website for the regulation:

<https://aoout.epa.gov.tw/law/LawContent.aspx?id=GL006482>

No.: 12.2.5A-Restrictive Use of Shopping Plastic Bags: Scope, Implementation, and Date

题目编号：12.2.6

英文题目：Policy for minimisation of disposable items

Have policies around use minimisation of disposable items

NCUE will take relevant measures according to the ‘Restrictive Use of Disposable Tableware: Scope and Implementation/Restrictive Use of Disposable

Plastic Straws: Scope and Implementation’ of the Environmental Protection Administration, Executive Yuan, including no water cups or bottled water in meeting rooms and no disposable tableware in canteens.

Please refer to appendices 12.2.6A Restrictive Use of Disposable Tableware: Scope and Implementation and 12.2.6B Restrictive Use of Disposable Plastic Straws: Scope and Implementation



Picture caption: Posters to inform the public that no disposable tableware or disposable plastic straws will be provided.



Picture caption: No water cups or bottled water in meeting rooms.



Picture caption: No disposable tableware in canteens

For more details, please refer to the website for the regulation:

<https://oaout.epa.gov.tw/law/LawContent.aspx?id=GL007530&KeyWord=%e4%b8%80%e6%ac%a1%e7%94%a8%e5%a1%91%e8%86%a0%e5%90%b8%e7%ae%a1%e9%99%90%e5%88%b6%e4%bd%bf%e7%94%a8%e5%b0%8d%e8%b1%a1%e5%8f%8a%e5%af%a6%e6%96%bd%e6%96%b9%e5%bc%8f>

<https://oaout.epa.gov.tw/law/LawContent.aspx?id=GL006481&KeyWord=%e5%85%8d%e6%b4%97%e9%a4%90%e5%85%b7%e9%99%90%e5%88%b6%e4%bd%bf%e7%94%a8%e5%b0%8d%e8%b1%a1%e5%8f%8a%e5%af%a6%e6%96%bd%e6%96%b9%e5%bc%8f>

Annex No.: 12.2.6A-Restrictive Use of Disposable Tableware: Scope and Implementation

12.2.6B-Restrictive Use of Disposable Plastic Straws: Scope and Implementation

题目编号： 12.2.7

英文题目： Disposable policy: extensions to services

Ensuring these policies extend to outsourced services and the supply chain

Currently, NCUE outsources cleaning, canteen, and security services to relevant suppliers. Contract specifications for all suppliers are in compliance with the regulations of the Environmental Protection Administration, Executive Yuan. For example, no disposable tableware or plastic shopping bags are provided in canteens, and the cleaning staff should be responsible for implementing garbage sorting and resource recycling policies.



Picture caption: No disposable tableware in canteens.



Picture caption: The canteen staff in NCUE all wear masks, net caps, and aprons when working.



Picture caption: NCUE's cleaning staff fully implementing garbage sorting and resource recycling policies.

题目编号：12.2.8

英文题目：Minimisation policies extended to suppliers

Ensuring these policies extend to outsourced suppliers and the supply chain - (suppliers of equipment, stationary, building contracts)?

In contracts awarded by NCUE to vendors and contractors for outsourced works, the relevant specifications are included to comply with the regulations of the Environmental Protection Administration, Executive Yuan, and NCUE's relevant minimisation policies. Vendors and contractors are required to comply with the

‘Waste Disposal Act and Enforcement Rules’ of the Environmental Protection Administration. They must adopt measures of minimisation, reuse, and recycling to reduce waste products and packages.

Please refer to appendix 12.2.8A- Waste Removal Act and 12.2.8B- Waste Removal Act Enforcement Rules.

For more details, please refer to the website for the regulation:

<https://law.moj.gov.tw/LawClass/LawAll.aspx?pcode=O0050001>

<https://law.moj.gov.tw/LawClass/LawAll.aspx?pcode=O0050036>

No.: 12.2.8A-Waste Removal Act

12.2.8B-Waste Removal Act Enforcement Rules

题目编号：12.3.1

英文题目：Waste tracking

Measure the amount of waste generated and recycled across NCUE

The NCUE requests the Cleaning Squad of Changhua Municipal Office to provide monthly information on the weight of general waste and recycled materials from NCUE. Recycled materials include the following categories: paper, plastic, glass, iron and aluminium cans, paper containers (meal boxes), PET bottles and dry batteries.

2020	Jin-De Campus		Bao-Shan Campus		Subtotal of the two campuses		Total	Unit
	General waste	Unit	General waste	Unit	Recycled materials	Unit		
Jan.	8,640	kg	2,210	kg	6,290	kg	17,140	kg
Feb.	5,853	kg	2,090	kg	5,350	kg	13,293	kg
Mar.	9,450	kg	3,230	kg	9,790	kg	22,470	kg
Apr.	8,580	kg	2,650	kg	8,215	kg	19,445	kg
May	9,710	kg	3,370	kg	9,375	kg	22,455	kg
Jun.	12,630	kg	3,910	kg	7,260	kg	23,800	kg
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Oct.	10,110	kg	3,180	kg	10,930	kg	24,220	kg
Nov.	11,570	kg	3,540	kg	9,820	kg	24,930	kg
Dec.	12,780	kg	3,450	kg	12,975	kg	29,205	kg
Total	115,993	kg	35,130	kg	109,750	kg	260,873	kg

Recycled materials account for 42.07% of total waste (or 57.93% of waste that is not recycled).

题目编号：12.3.2

英文题目：Proportion of waste recycled

Amount of waste generated

Amount of waste recycled

Amount of waste sent to landfill

Please refer to the Tables in Section 12.3.1.

Proportion of waste recycled: 42.07% in 2020

Amount of waste generated: 260.873 metric tons in 2020

Amount of waste recycled: 109.750 metric tons in 2020

Amount of waste sent to landfill: 151.123 metric tons in 2020

题目编号：12.4.1

英文题目：Publication of a sustainability report

- 1. On 29 September 2020, in the presence of members of the Occupational Safety and Health Committee, the President of NCUE signed the ‘Protection and Occupational Safety and Health Policy of National Changhua University of Education’. It specifies the following: to build a sustainable and green university, faculty, staff, and students at NCUE should fully comply with the relevant laws and regulations, participate in educational programmes, maintain campus security, prevent accidents, cherish the environmental resources, act on energy conservation and carbon reduction, and commit to pollution prevention and continuous improvement. As a member of the global village, everyone should fulfil their responsibilities to build an ecological campus free of accidents and pollution.**

Please refer to appendix 12.4.1A-Protection and Occupational Safety and Health Policy, as well as the Centre of Protection and Occupational Safety and Health’s website for posting laws, regulations, and rules applying to faculty and staff:

<http://webadmin.ncue.edu.tw/el/ploy/UploadFiles/934/File/%E7%92%B0%E5%AE%89%E8%A1%9B%E6%94%BF%E7%AD%96%28%E6%96%B0%E7%89%88%29%5B1272%5D.pdf>



Picture caption: NCUE President signing the ‘Protection and Occupational Safety and Health Policy of National Changhua University of Education’.



Picture caption: Protection and Occupational Safety and Health Policy of National Changhua University of Education.

2. **In response to relevant national policies, NCUE will complete the addition of solar photovoltaic panels on the roof of each building of NCUE by the end of July 2022, with a total capacity of 1,888.5 kW for Jin-De Campus and 731.25 kW for Bao-Shan Campus. In addition to reducing the net load of the buildings, in some scenarios (such as off-peak months) the building can be fully dependent on solar photovoltaic electricity. Given the reduced electricity current of the distribution lines, line loss can be reduced**

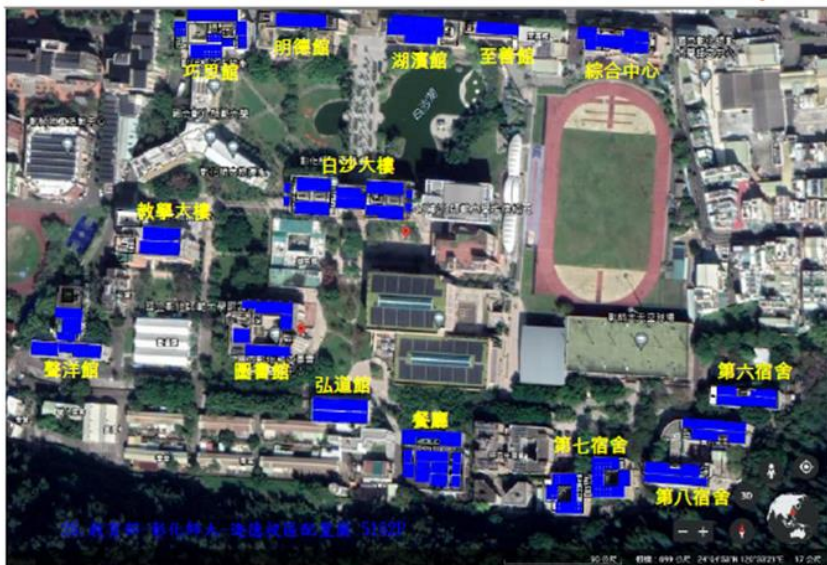
by about 3% and energy efficiency can be improved. Moreover, solar panels can block direct sunlight from the roof. According to research data, they can reduce the heat energy of direct sunlight on the roof by 38% and reduce the temperature of the roof by 2.8°C. With the building's improved overall temperature environment, air conditioning use can be reduced to improve energy efficiency. The planning and design drawings (partial) of the building's rooftop solar photovoltaic panels in Jin-De Campus and Bao-Shan Campus in 2021-2022 is shown in Appendix 12.4.1B-Rooftop Solar Photovoltaic Building Panels Planning and Drawings in Jin-De and Bao-Shan.

Campus	Building name	Estimated capacity of the installation (kWp)	Total	Estimated electricity generation (kWh/year)	Total
Jin-De Campus	Qiao Si Building	157.5	1888.5 kWp	196,875	2,360,626 kWh
	Hong Dao Building	118.125		147,656	
	Bai Sha Building	251.25		314,063	
	Zhi Shan Building	48		60,000	
	Ming De Building	64.125		80,156	
	Teaching Building	96.375		120,469	
	Eighth Dorm	199.5		249,375	
	Seventh Dorm	181.5		226,875	
	Sixth Dorm	88.5		110,625	
	Hu Bin Building	123		153,750	
	Library	133.5		166,875	
	Comprehensive Centre Canteen	115.5		144,375	
	212.25	265,313			

	Sheng Yang Building	99.375		124,219	
Bao-Shan Campus	Ninth Dorm	100.5	731.25	125,625	914,063
	Tenth Dorm	127.5	kWp	159,375	kWh
	First Teaching Building	101.25		126,563	
	Second Teaching Building				
	College of Engineering Building	139.5		174,375	
	Jing Shi Building	114.375		142,969	
	Li Xing Building	148.125		185,156	



設計規劃 進德校區校舍位置圖 **總設置容量1888.5kWp**





設計規劃 寶山校區校舍位置圖 總設置容量731.25kWp



Appendices (including supporting documents):

No.: 12.4.1A-Protection and Occupational Safety and Health Policy (latest version)

12.4.1B-Rooftop Solar Photovoltaic Building Panels Planning and Drawings in Jin-De and Bao-Shan.