

APPENDIX A: GUIDE to UNIVERSITY “GREEN” RANKINGS

Contents:

- UI GreenMetrics Categories and Indicators ; Table 48 1.2: Tops in each metric for world and Asia-Pac
- STARS indicators and weightings for Operations category
- Princeton Review Green Rankings; methodology with sample questions
- Times Higher Education Impact Rankings with an example of SDG 6
- QS Standard Development Goals for Environmental Impact
- A list of SDGS at the end of this Appendix.



UI GreenMetrics Categories and Indicators

The indicators with description, mappings to SDG, and weightings Metrics highlighted in GREEN added to the 2020 rankings.

1. Setting and Infrastructure (SI) (15%) 1500 POINTS

The campus setting and infrastructure information will give the basic information of the university policy towards green environment. This indicator also shows whether the campus deserves to be called Green Campus. The aim is to trigger the participating university to provide more space for greenery and in safeguarding environment, as well as developing sustainable energy

Mapped to SDGs: 11, 12, 17

The indicators are:

SI 1	The ratio of open space area towards total area	200
SI 2	Total area on campus covered in forest vegetation	100
SI 3	Total area on campus covered in planted vegetation	200
SI 4	Total area on campus for water absorption besides the forest and planted vegetation	100
SI 5	The total open space area divided by total campus population	200
SI 6	Percentage of university budget for sustainability efforts	200
SI 7	Percentage of operation and maintenance activities of building during Covid-19 pandemic	100
SI 8	Campus facilities for disabled, special needs and or maternity care	100
SI 9	Security and safety facilities	100
SI 10	Health infrastructure facilities for students, academics and administrative staff's wellbeing	100
SI 11	Conservation: plant, animal and wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities	100

2. Energy and Climate Change (EC) (21%) 2100 points

The university's attention to the use of energy and climate change issues takes the highest weighting in this ranking. In our questionnaire we define several indicators for this particular area of concern, i.e., energy efficient appliances usage, renewable energy usage policy, total electricity use, energy conservation program, green building, climate change adaptation and mitigation program, greenhouse

gas emission reductions policy. With this indicator, universities are expected to increase the effort in energy efficiency on their buildings and to take more about nature and energy resources.

Mapped to SDGs: 7, 11, 13, 17

The indicators are:

EC 1	Energy efficient appliances usage	200
EC 2	Smart Building implementation	300
EC 3	Number of renewable energy sources in campus	300
EC 4	Total electricity usage divided by total campus population (kWh per person)	300
EC 5	The ratio of renewable energy production divided by total energy usage per year	200
	Elements of green building implementation as reflected in all construction and renovation policies	200
EC 7	Greenhouse gas emission reductions program	200
EC 8	Total carbon footprint divided by total campus' population (metric tons per person)	200
EC 9	Number of innovative program(s) during covid-19 pandemic	100
EC 10	Impactful university program(s) on climate change	100

3. Waste (WS) (18%)

Waste treatment and recycling activities are major factors in creating a sustainable environment. The activities of university staff and students in campus will produce a lot of waste, therefore some programs and waste treatments should be among the concern of the university, i.e., recycling program, toxic waste recycling, organic waste treatment, inorganic waste treatment, sewerage disposal, policy to reduce the use of paper and plastic in campus.

Mapped to SDGs: 3, 12, 14, 15, 17

The indicators are:

WS 1	Recycling program for university's waste	300
WS 2	Program to reduce the use of paper and plastic in campus	300
WS 3	Organic waste treatment	300
WS 4	Inorganic waste treatment	300
WS 5	Toxic waste handled	300
WS 6	Sewerage disposal	300

4. Water (WR) (10%)

Water use in campus is another important indicator in Greenmetric. The aim is that universities can decrease water usage, increase conservation program, and protect the habitat. Water conservation program, piped water use is among the criteria.

Mapped to SDGs: 6, 17

The indicators are:

WR 1	Water conservation program implementation	200
WR 2	Water recycling program implementation	200
WR 3	Water efficient appliances usage	200
WR 4	Consumption of treated water	200
WR 5	Percent of additional handwashing and sanitation facilities during Covid-19 pandemic	200

5. Transportation (TR) (18%)

Transportation system plays an important role on the carbon emission and pollutant level in university. Transportation policy to limit the number of motor vehicles in campus, the use of campus bus and bicycle will encourage a healthier environment. The pedestrian policy will encourage students and staff to walk around campus. and avoid using private vehicle. The use of environmentally friendly public transportation will decrease carbon footprint around campus.

Mapped to SDGs: 11, 13, 17

The indicators are:

	The total number of vehicles (cars and motorcycles) divided by total campus' population	200
TR 1		
TR 2	Shuttle service	300
TR 3	Zero Emission Vehicles (ZEV) policy on campus	200
TR 4	The total number of Zero Emission Vehicles (ZEV) divided by total campus population	200
TR 5	Ratio of ground parking area to total campus' area	200
TR 6	Program to limit or decrease the parking area on campus for the last 3 years	200
TR 7	Number of initiatives to decrease private vehicles on campus	200
TR 8	Pedestrian path on campus	300

6. Education and Research (ED) (18%)

This criterion is based on the thought that university has an important role in creating the new generation concern with sustainability issues.

Mapped to SDGs: 1, 2, 3, 4, 5, 8, 9, 10, 13-17

The indicators are:

ED 1	The ratio of sustainability courses towards total courses/subjects	300
ED2	The ratio of sustainability research funding towards total research funding	200
ED 3	Number of scholarly publications on sustainability	200
ED 4	Number of events related to sustainability	200
ED 5	Number of student organizations related to sustainability	200
ED 6	University-run sustainability website	200
ED 7	Sustainability report	100
ED 8	Number of cultural activities on campus	100
ED 9	Number of university program(s) to cope with Covid-19 pandemic	100
	Number of sustainability community services project organized and/or involving	
ED 10	students	100
ED 11	Number of sustainably related startups	100

from <https://greenmetric.ui.ac.id/publications/guidelines/2021/english> (see pg. 6 for SDG mappings)

There is also a template for evidence but some of the categories are difficult to validate.

https://questionnaire.greenmetric.ui.ac.id/files/template_evidence/UIGM_template_evidence.pdf

Table 48 1.2: Tops in each metric in the world and Asia/Pac

#	REGION/Country	Top in Region	Rank	2nd in Region	
456	Asia	Weifang IT (CN) Wageningen U& R (NL)	19	U Indonesia	27
254	Europe		1	U Oxford (UK)	2
17	Africa	Alexandria (EG)	198	Kafrelsheikh U (EG)	234
1	Oceania	Lincoln U (NZ)	51	only one	
63	North America	UC Davis	5	U Connecticut	11
113	Latin America	U São Paulo (BR)	13	U Federal de Lavras (BZR)	30
36	Thailand	Mahidol U	62	Kasetsart U	73

To find any individual country covered in the ranking substitute your country for Thailand

<https://greenmetric.ui.ac.id/rankings/ranking-by-country-2020/Thailand>

Article 48 Part 2 will include the numbers and comparisons across rankings by country

Category Rank

#	CAMPUS SETTING	Top in World		Top in Asia	
67	Rural	Trier U Umwelt Campus¹	DE	U Utara MY	4
220	Suburban	Wageningen U& R (NL)	NL	Weifang Institute of Technology	6
458	Urban	U Oxford	UK	King Abdulaziz	16
153	City Center	Leiden U	NL	U Malaya	5
5	High Rise	Ntl Taipei U Tech (WR 118)	TW	4 of 5 Asian	
	CAMPUS TYPE	World		Asia	
597	Comprehensive	Wageningen U& R (NL)	NL	Weifang Institute of Technology	16
306	Specialized	Trier U Umwelt Campus¹	DE	Ntl Pingtung U Sci & Tech	7
46	Top 50 < 50 2020	Trier U Umwelt Campus¹		Weifang Institute of Technology	5

RED - top in more than one category and top 10 world or Asia

BOLD - top in World or Asia

<https://greenmetric.ui.ac.id/>



The Sustainability Tracking, Assessment & Rating System

STARS is the ranking system for AAHE. Its focus is primarily North America. The STARS list includes all institutions that have registered to use its tools, currently ranked institutions, institutions whose ranking period has expired, and reporters. Subscribers with the correct documentation can be ranked as platinum, gold, silver, or bronze. For STARS, a Reporter is an institution that is not a subscriber but submitted a report that will not be scored. An example is [Northeastern University](#) which has a silver ranking in QS. 552 institutions, including institutions awarding two-year degrees are rated out of 1,054 listed as of November 2021. [Check the STARS Technical Manual](#) (2019) for detailed descriptions and links to SDGs. pgs. 126-254. See AAHE's 2021 [Sustainable Campus Index](#) for tops in individual categories.

Indicators and their points for Operations:

Air & Climate 11 points available	OP 1 Emissions Inventory and Disclosure 3
SDGs: 3,7,11,13	OP 2 Greenhouse Gas Emissions 8
Buildings Up to 8 points available	OP 3 Building Design and Construction * 3
SDGs 3,6,7,9,11,12	OP 4 Building Operations and Maintenance 5
Energy 10 points available	OP 5 Building Energy Efficiency 6
	OP 6 Clean and Renewable Energy 4
Food & Dining * Up to 8 points available	OP 7 Food and Beverage Purchasing * 6
	OP 8 Sustainable Dining * 2
Grounds * Up to 4 points available	OP 9 Landscape Management * 2
	OP 10 Biodiversity * 1 - 2 **
Purchasing 6 points available	OP 11 Sustainable Procurement 3
	OP 12 Electronics Purchasing 1
	OP 13 Cleaning and Janitorial Purchasing 1
	OP 14 Office Paper Purchasing 1
Transportation Up to 7 points available	OP 15 Campus Fleet * 1
	OP 16 Commute Modal Split 5
	OP 17 Support for Sustainable Transportation 1
Waste Up to 10 points available	OP 18 Waste Minimization and Diversion 8
	OP 19 Construction and Demolition Waste Diversion * 1
	OP 20 Hazardous Waste Management 1
Water Up to 8 points available	OP 21 Water Use 4 - 6 **
	OP 22 Rainwater Management 2

- - Not required for every institution



Green Rating methodology – Sample Questions

Questions include:

1. What is the percentage of food expenditures that goes toward local, organic or otherwise environmentally preferable food?
2. Does the school offer programs including mass transit programs, bike sharing, facilities for bicyclists, bicycle and pedestrian plans, car sharing, a carpool discount, carpool/vanpool matching, cash-out of parking, prohibiting idling, local housing, telecommuting, and a condensed work week?
3. Does the school have a formal committee with participation from students that is devoted to advancing sustainability on campus?
4. Are school buildings that were constructed or underwent major renovations in the past three years LEED certified?
5. What is a school's overall waste-diversion rate?
6. Does the school have an environmental studies major, minor or concentration?
7. Do the school's students graduate from programs that include sustainability as a required learning outcome or include multiple sustainability learning outcomes?
8. Does the school have a formal plan to mitigate its greenhouse gas emissions?
9. What percentage of the school's energy consumption is derived from renewable resources?
10. Does the school employ a dedicated full-time (or full-time equivalent) sustainability officer?

Additionally, The Princeton Review and the Association for the Advancement of Sustainability in Higher Education (AASHE) continue to collaborate on their effort to streamline the reporting process for institutions that choose to participate in various higher education sustainability assessments. The intent of this initiative is to reduce and streamline the amount of time campus staff spend tracking sustainability data and completing related surveys.

<https://www.princetonreview.com/college-rankings/green-guide/methodology>



THE IMPACT RANKINGS and UN SDGS

Each SDG has its own methodology. Some are related to the green campus. An example is SDG 6, [Clean Water and Sanitation](#):

Research on water (27%) (from Elsevier searches)

- Proportion of papers in the top 10 per cent of journals as defined by Citescore (10%)
- Field-weighted citation index of papers (10%)
- Number of publications (7%)

Water consumption (19%)

- Water consumption tracking (9.5%)
- Water consumption per person (9.5%)

The data and evidence: provided by universities and the data are normalised.

Water usage and care (23%)

- Process to treat wastewater (4.6%)
- Process to prevent polluted water entering water system (4.6%)
- Free drinking water for students, staff and visitors (4.6%)
- Building standards to minimise water use (4.6%)
- Plant landscapes to minimise water usage (4.6%)

The evidence: provided by universities, evaluated and scored by *THE* and not normalised.

Water reuse (12%)

- Policy to maximise water reuse across university (6%)
- Measure the reuse of water across university (6%)

Evidence provided by universities, evaluated and scored by *THE* and not normalised.

Water in the community (19%)

- Educational opportunities for local communities to learn about good water management (3.8%)
- Promote conscious water usage on campus and in wider community (3.8%)
- Support water conservation off campus (3.8%)
- Sustainable water extraction technologies on associated university grounds off campus (3.8%)
- Cooperate with local, regional, national or global governments on water security (3.8%)

Evidence provided by universities, evaluated and scored by *THE* and not normalised.

THE explains how it checks for accuracy. A full book on the [methodology](#) is available (version 1.3)

In the special report on Carbon emissions, Race to New Zero, THE noted that many universities did not include all the necessary aspects of the SDG.

https://www.timeshighereducation.com/sites/default/files/the_race-to-net-zero-report.pdf



QS Standard Development Goals, Environmental Impact, SGs 7,11-15, incorporated into universities rankings.

A new interface includes SDG Ratings as an option in addition to the Rankings Indicators.

The UN's Sustainable Development Goals (SDGs) embody decades of work and a global commitment to tackling the biggest issues facing our world
[Learn more →](#)

Year: 2022
 University Search:
 Region:
 Location:

See Ruth's Ranking Update for more details. <https://librarylearningspace.com/ruths-ranking-news-update-august-2021-covering-the-arab-region-and-sdgs/>

O, Craig (November 2021). QS World University Rankings: Standard Development Goals

<https://www.topuniversities.com/university-rankings/world-university-rankings/sustainable-development-goals>

Click [here](#) for QS methodology for its SDG ratings



From THE Impact Rankings