



UNIVERSITAS  
INDONESIA  
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# Certificate

This certificate is awarded to

**Maejo University**

**as The 143<sup>rd</sup> World's Most Sustainable University  
in 2023 UI GreenMetric World University Rankings**

Jakarta, 5 December 2023



**Prof. Dr. Ir. Riri Fitri Sari, M.M., M.Sc.**  
Chairperson of UI GreenMetric



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# **FACT FILE 2023**

# **UI GREENMETRIC**

# **WORLD UNIVERSITY**

# **RANKINGS**

**MAEJO UNIVERSITY**

**Thailand**

**63 Mhu 4, Nongharn, Sansai Chiangmai 50290 Thailand**

# UNIVERSITY PROFILE

**Name** : Maejo University

**Established** : 1934

**Country** : Thailand

**Tree Rating** : N/A

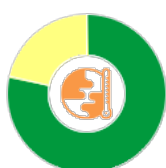


## 1. VERIFIED DATA



**Setting & Infrastructure (SI)**

Point: 1175 of max. 1500  
(78.33 %)



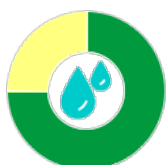
**Energy & Climate Change (EC)**

Point: 1650 of max. 2100  
(78.57 %)



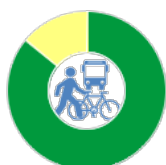
**Waste (WS)**

Point: 1350 of max. 1800  
(75.00 %)



**Water (WR)**

Point: 750 of max. 1000  
(75.00 %)



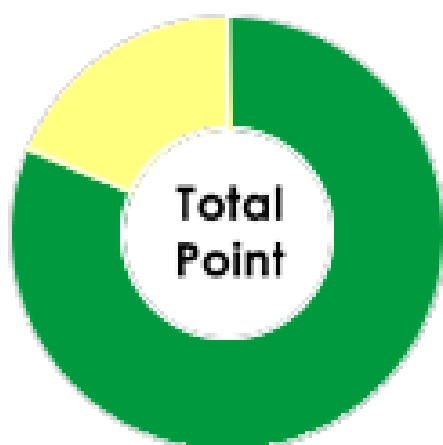
**Transportation (TR)**

Point: 1550 of max. 1800  
(86.11 %)



**Education & Research (ED)**

Point: 1675 of max. 1800  
(93.06 %)



Point: 8150 of max. 10000 (81.50 %)

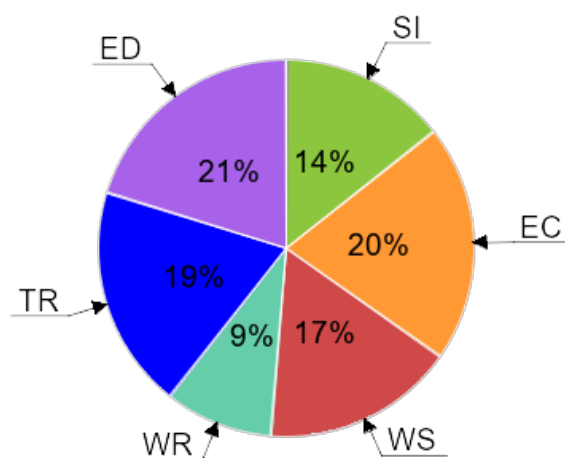


Figure 1.1 Overall Score Diagram

## 2. RESULTS SUMMARY

|               |            |            |            |
|---------------|------------|------------|------------|
| World Ranking | SI Ranking | EC Ranking | WS Ranking |
| 143           | 185        | 132        | 292        |
| WR Ranking    | TR Ranking | ED Ranking |            |
| 300           | 113        | 124        |            |

## 3. WORLD RANKINGS HISTORY

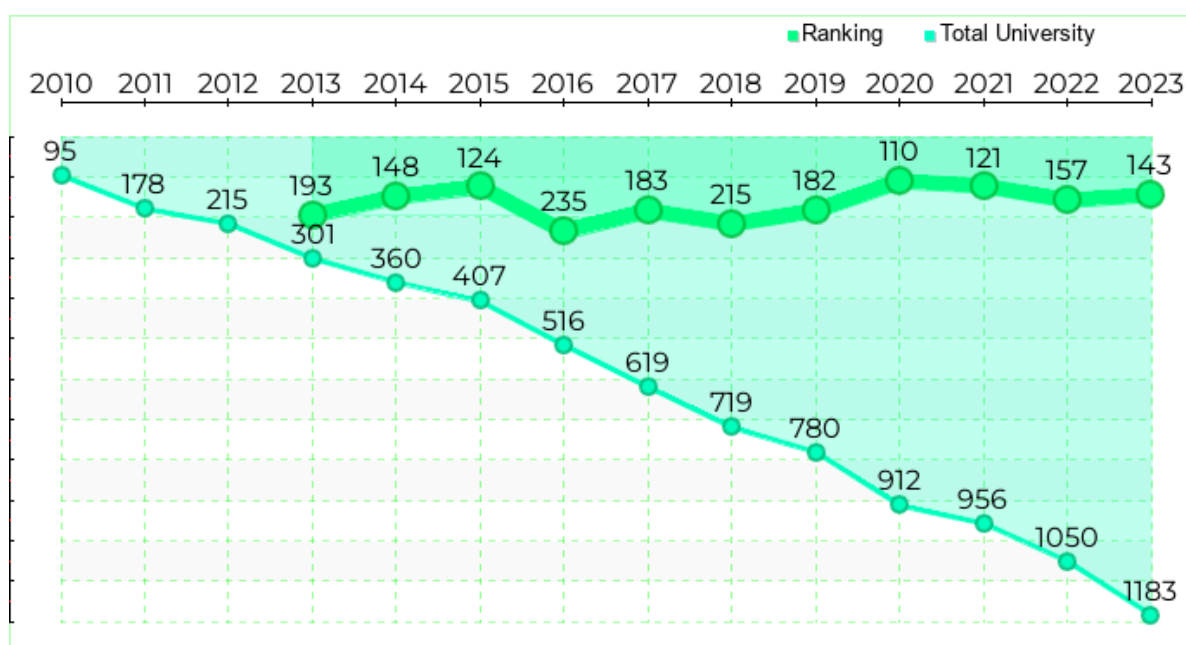


Figure 3.1 World Rankings History Diagram

## 4. RANKING IN THAILAND

|                 |            |            |            |
|-----------------|------------|------------|------------|
| Country Ranking | SI Ranking | EC Ranking | WS Ranking |
| 11              | 14         | 3          | 17         |
| WR Ranking      | TR Ranking | ED Ranking |            |
| 25              | 10         | 6          |            |



## 5. RESULTS DETAIL

### Setting and Infrastructure

The campus setting and infrastructure information provides the basic information about the university's policy on green environment. The indicators also show whether the campus deserves to be called a Green University. The aim is to encourage the participating universities to provide more spaces for greenery and safeguard the environment



| Indicator |                                                                                                                                                    | Point |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| SI.1      | The ratio of open space area towards total area                                                                                                    | 100   |
| SI.2      | Area on campus covered in forest                                                                                                                   | 50    |
| SI.3      | Area on campus covered in planted vegetation                                                                                                       | 200   |
| SI.4      | Area on campus for water absorbance                                                                                                                | 50    |
| SI.5      | The ratio of open space area divided campus population                                                                                             | 200   |
| SI.6      | University budget for sustainability effort                                                                                                        | 200   |
| SI.7      | Percentage of operation and maintenance activities of building in one year period                                                                  | 100   |
| SI.8      | Campus facilities for disabled, special needs and or maternity care                                                                                | 75    |
| SI.9      | Security and safety facilities                                                                                                                     | 75    |
| SI.10     | Health infrastructure facilities for students, academics and administrative staff's wellbeing                                                      | 75    |
| SI.11     | Conservation: plant, animal and wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities | 50    |

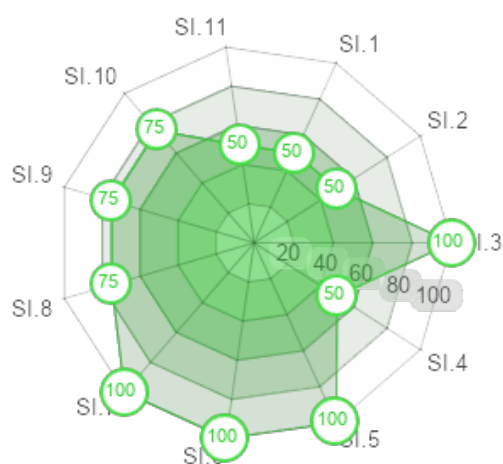


Figure 5.1 Percentage of Score to Maximum Score for Setting and Infrastructure

## Energy and Climate Change

The university's attention to the use of energy and climate change issues has the highest score in this ranking. In our questionnaire, we define several indicators for this area of concern, i.e., energy-efficient appliances usage, the implementation of smart buildings/automation buildings/intelligent buildings, renewable energy usage policy, total electricity usage, energy conservation programs, elements of green buildings, climate change adaptation and mitigation programs, greenhouse gas emission reductions policy, and carbon footprint. Within these indicators, the universities are expected to increase their efforts in energy efficiency in their buildings and to care more about nature and alternative energy resources.



| Indicator |                                                                              | Point |
|-----------|------------------------------------------------------------------------------|-------|
| EC.1      | Energy efficient appliances usage                                            | 100   |
| EC.2      | Smart building program implementation                                        | 225   |
| EC.3      | Number of renewable energy source in campus                                  | 300   |
| EC.4      | The total electricity usage divided by total campus population               | 225   |
| EC.5      | The ratio of renewable energy production towards total energy usage per year | 150   |
| EC.6      | Element of green building implementation                                     | 200   |
| EC.7      | Greenhouse gas emission reduction program                                    | 150   |
| EC.8      | The ratio of total carbon footprint divided campus population                | 100   |
| EC.9      | Number of innovative program(s) in Energy and Climate Change                 | 100   |
| EC.10     | Impactful university program(s) on climate change                            | 100   |

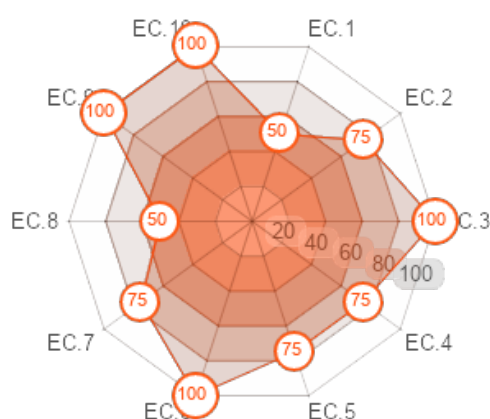
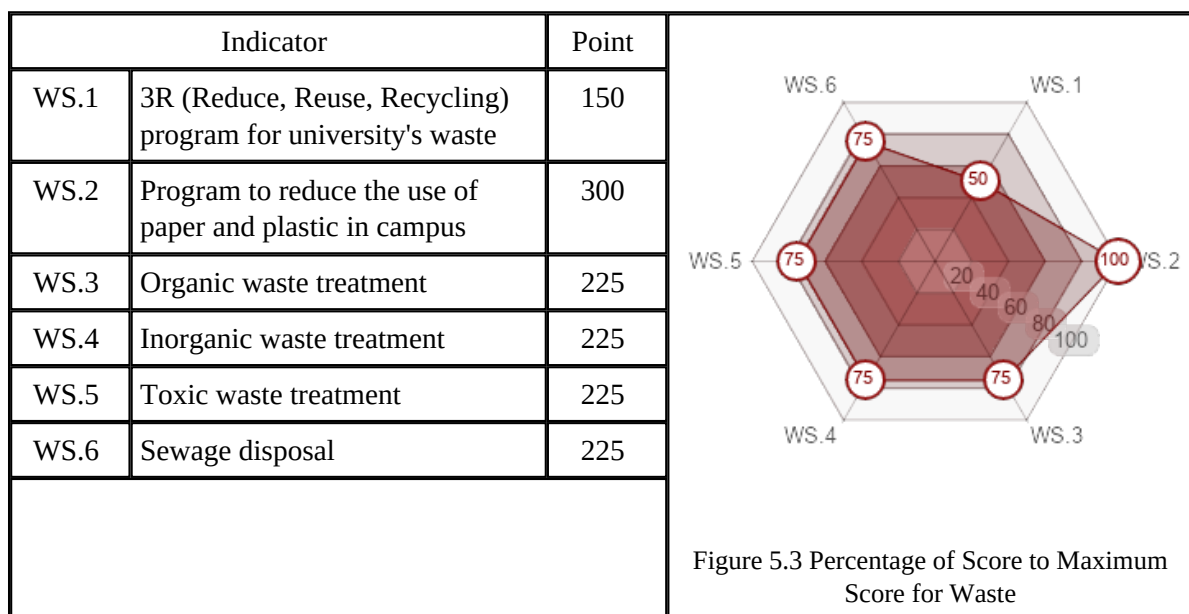


Figure 5.2 Percentage of Score to Maximum Score for Energy and Climate Change

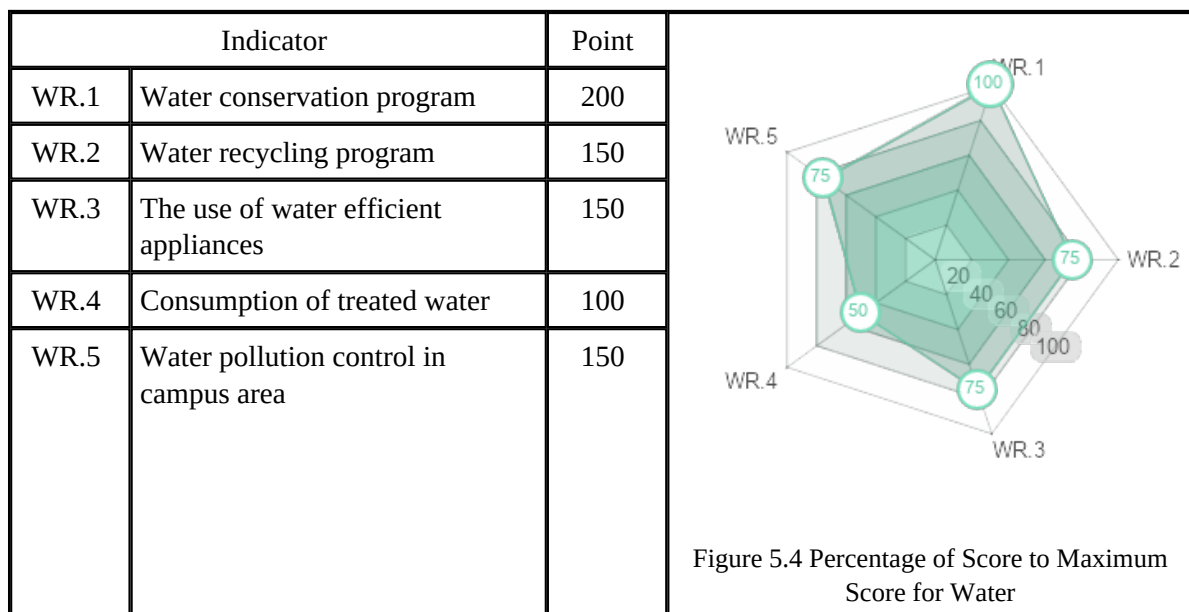
## Waste

Waste treatment and recycling activities are major factors in creating a sustainable environment. The activities of university staff, students, and communities around university produce a lot of waste; therefore, some recycling and waste treatments programs should be among the concern of the university, i.e., 3R (Reduce, Reuse, Recycle) program, organic waste treatment, inorganic waste treatment, toxic waste recycling, sewage disposal, policies to reduce the use of paper and plastic on campus.



## Water

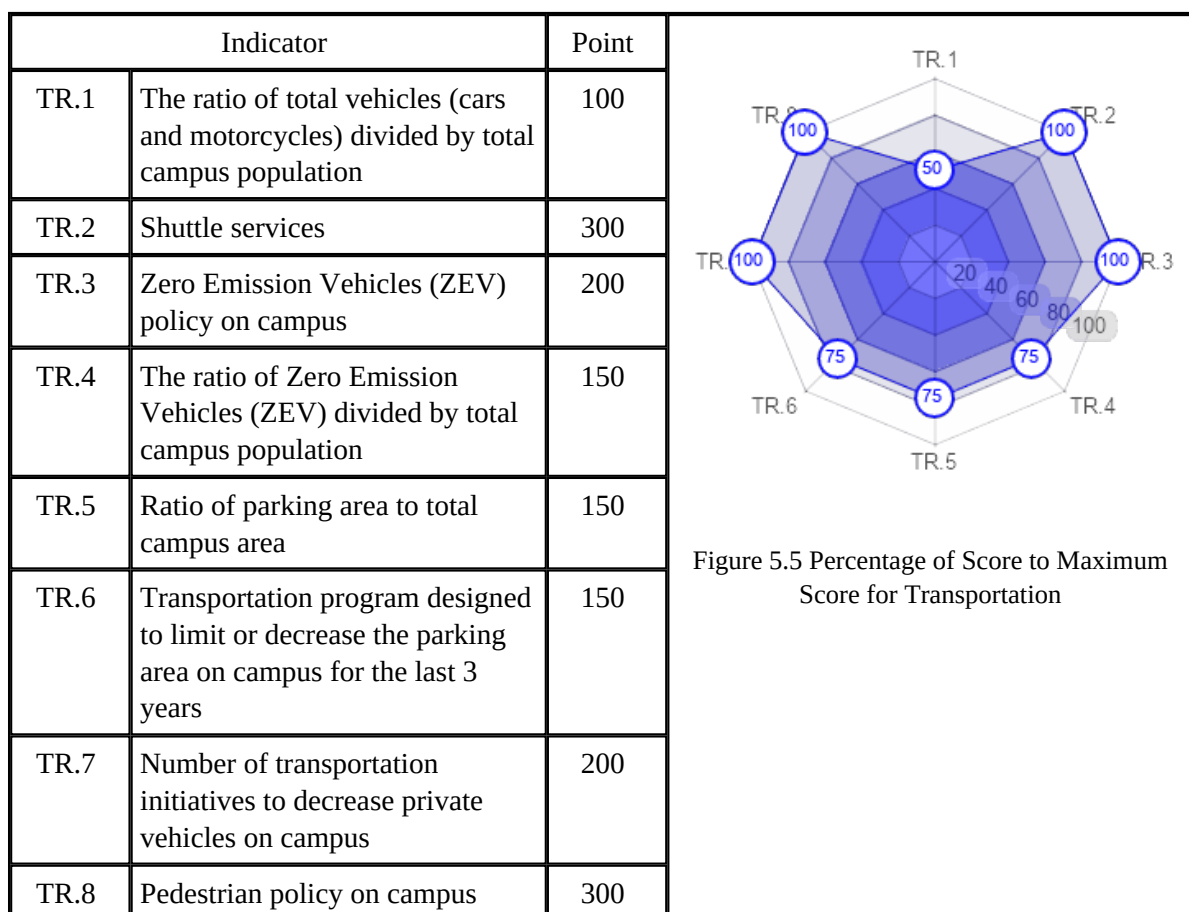
Water usage at university is another important criterion in the UI GreenMetric. The aims are to encourage universities to decrease groundwater usage, increase water conservation programs, and protect habitats. Water conservation programs, water recycling programs, water-efficient appliances usage, and treated water usage are among the criteria





## Transportation

Transportation systems play an important role in carbon emission and pollutant levels at universities. Transportation policies that limit the number of motor vehicles on campus and encourage the use of campus buses, shared vehicles, and zero emission vehicles (i.e. bicycles, electric cars, electric motorcycles, canoes, snowboards, etc.) will encourage a healthier environment. The pedestrian policy encourages students and staff to walk around campus and minimize the use of private vehicles. The use of environmentally friendly public transportation will decrease the carbon footprint around campus.



## Education & Research

The university's education and research information provide basic information about the university's policies and actions in creating and supporting their students, academic and non-academic staff with sustainability awareness. This criterion also encourages universities to report their sustainability activities, strategies, and targets to their stakeholders.



| Indicator |                                                                                  | Point |
|-----------|----------------------------------------------------------------------------------|-------|
| ED.1      | The ratio of sustainability courses towards total courses/modules                | 300   |
| ED.2      | The ratio of sustainability research funding towards total research funding      | 200   |
| ED.3      | Sustainability publications                                                      | 150   |
| ED.4      | Sustainability events                                                            | 200   |
| ED.5      | Activities organized by student organizations related to sustainability per year | 200   |
| ED.6      | Sustainability websites                                                          | 200   |
| ED.7      | Sustainability report                                                            | 100   |
| ED.8      | Cultural activities on campus                                                    | 100   |
| ED.9      | University sustainability program(s) with international collaborations           | 100   |
| ED.10     | Sustainability community services project organized and/or involving students    | 100   |
| ED.11     | Sustainability-related startups                                                  | 25    |

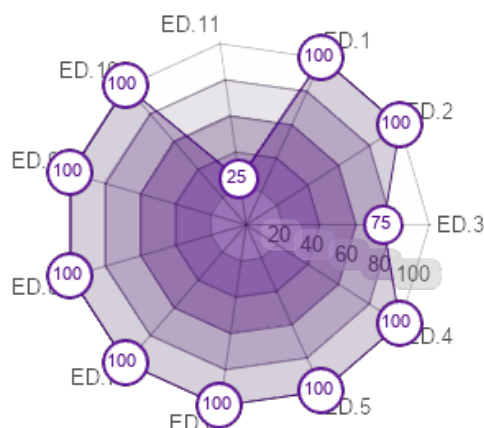


Figure 5.6 Percentage of Score to Maximum Score for Education

# UI GREENMETRIC WORLD UNIVERSITY RANKINGS

## About UI GreenMetric

UI GreenMetric World University Rankings is an annual publication of university rankings on sustainability. It is an initiative from the University of Indonesia that ranks universities around the world based on their commitment and actions towards sustainability. UI GreenMetric World University Rankings aims to increase university awareness towards sustainability.

## History

UI GreenMetric World University Rankings is a non-profit initiative of University of Indonesia developed since 2010.

In 2009 the University of Indonesia hosted an International Conference on World University Rankings. The conference was attended by World University rankers such as Webometrics, HEEACT, and others. In 2010, Prof. Dr. der Soz. Gumilar Rusliwa Somantri as Rector of the University of Indonesia at that time-initiated UI GreenMetric World University Rankings and appointed Prof. Dr. Ir. Riri Fitri Sari, MM., M.Sc. as the chairperson. Soon a team consisting of Dr. Junaidi, S.S., M.A., Dr. Budi Hartono, S.Si., MKM, Dr. Allan Frank Lauder, M.A., and Prof. Ir. Gunawan Tjahjono, M.Arch., Ph.D formulated UI GreenMetric Questionnaire and introduced UI Ranking to the world. In 2011, 11 new indicators in 5 categories have been added. Subsequently Education has been added as a new category in 2012. By the year 2015, a massive improvement was introduced including carbon footprint and a more systematic data collection. In 2016 an online based review and validation system has been set for the assessors.

UI GreenMetric took Policy into Action in 2016; Global Partnership for Sustainable Future in 2017; Universities, Impacts, and Sustainable Development Goals (SDGs) in 2018; Sustainable University in a Changing World: Lessons, Challenges and Opportunities in 2019; Universities' Responsibility for Sustainable Development Goals and World's Complex Challenges in 2020; Universities, UI GreenMetric, and SDGs in the Time of Pandemic in 2021; Collective Actions for Transforming Sustainable Universities in the Post-Pandemic Time in 2022; and Innovation, Impacts and Future Direction of Sustainable Universities in 2023 as its annual themes. In 2023, 1183 universities from 84 countries participate in the rankings.

To reach and coordinate more participating universities, UI GWURN was established in 2017 with a national coordinator in each country. To make it work, Junaidi formulated strategic framework for the network. Currently, there are 39 national coordinators in Asia, America, Africa and Europe. Each voluntarily organizes national workshop inviting other universities in their country. Since its establishment in 2010, it has been increasingly recognized as the first and only universities ranking on sustainability and has been used by participating universities to benchmark and do continuous improvement in the area of sustainability.

As a member of IREG, more activities and collaboration among participating universities are expected to achieve our common goal: sustainable university for sustainable future. UI GreenMetric itself developed its own ranking system by studying other ranking systems such as: The Times Higher Education World University Rankings (THE) sponsored by Thompson Reuters, the QS World University Rankings, the Academic Ranking of World Universities (ARWU) published by

Table 1. UI GreenMetric Timeline

| UI GreenMetric Timeline |                                                                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2010                    | UI GreenMetric published for 95 Universities                                                                                                            |
| 2011                    | UI GreenMetric added 11 new indicators within 5 categories                                                                                              |
| 2012                    | Education became one of the categories                                                                                                                  |
| 2015                    | Introducing Carbon Footprint and fact file document                                                                                                     |
| 2016                    | Focusing on university action toward sustainability                                                                                                     |
| 2017                    | UIGWURN established                                                                                                                                     |
| 2018                    | Focusing on SDGs and enlargement of memberships                                                                                                         |
| 2019                    | Improving questionnaire and data collection method                                                                                                      |
| 2020                    | Three new questions on social and economic impacts, such as (1) Startup for the green economy; (2) Public access to open spaces; (3) Community services |
| 2021                    | Introducing social, cultural, economic, and pandemic aspects in the questionnaire                                                                       |
| 2022                    | Adding an indicator related to water pollution and adjusting related to the current pandemic condition                                                  |
| 2023                    | Adding an indicator related to 3R waste program, student organization activities and international collaboration                                        |

Shanghai Jiao Tong University (SJTU), and the Webometrics Ranking of World Universities (Webometrics), published by Cybermetrics Lab, CINDOC-CSIC in Spain.

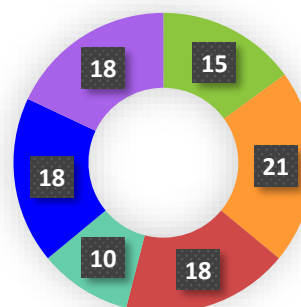
### Methodology

UI GreenMetric collects data through an online questionnaire. All participants answered some questions for some period. After that, UI GreenMetric expert members and reviewers validate the answers based on the evidence that participants provide. This year's categories and weighting of points are shown as follows. The specific indicators and their points awarded are shown in Table 3. Each indicator has been uniquely identified by a category code and a number (e.g., SI 5).

In our list, universities with the same total score will be ranked according to the highest weighted indicators, i.e firstly based on its Energy and Climate Change (EC) score, then based on the total score for Waste (WS), Transportation (TR), Education (ED). Subsequently it will be based on its Setting and Infrastructure (SI) score, and last will depend on its Water (WR) score.

Table 2. Categories used in the ranking and their weighting

| No | Category                        | Percentage of Total Points (%) |
|----|---------------------------------|--------------------------------|
| 1  | Setting and Infrastructure (SI) | 15                             |
| 2  | Energy and Climate Change (EC)  | 21                             |
| 3  | Waste (WS)                      | 18                             |
| 4  | Water (WR)                      | 10                             |
| 5  | Transportation (TR)             | 18                             |
| 6  | Education (ED)                  | 18                             |
|    | <b>TOTAL</b>                    | <b>100</b>                     |



The specific indicators and their points awarded are shown in Table 3. Each indicator has been uniquely identified by a category code and a number (e.g., SI 5).

Table 3 Indicators and categories

| No       | CRITERIA                                                                                                                                                           | Point       | Weighting  |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| <b>1</b> | <b>Setting and Infrastructure (SI)</b>                                                                                                                             |             | <b>15%</b> |
| SI1      | The ratio of open space area to the total area                                                                                                                     | 200         |            |
| SI2      | Total area on campus covered in forest vegetation                                                                                                                  | 100         |            |
| SI3      | Total area on campus covered in planted vegetation                                                                                                                 | 200         |            |
| SI4      | Total area on campus for water absorption besides the forest and planted vegetation                                                                                | 100         |            |
| SI5      | The total open space area divided by the total campus population                                                                                                   | 200         |            |
| SI6      | Percentage of university budget for sustainability efforts                                                                                                         | 200         |            |
| SI7      | Percentage of operation and maintenance activities of building in one year period                                                                                  | 100         |            |
| SI8      | Campus facilities for disabled, special needs, and/or maternity care                                                                                               | 100         |            |
| SI9      | Security and safety facilities                                                                                                                                     | 100         |            |
| SI10     | Health infrastructure facilities for students, academics, and administrative staff's wellbeing                                                                     | 100         |            |
| SI11     | Conservation: plant (flora), animal (fauna), or wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities | 100         |            |
|          | <b>Total</b>                                                                                                                                                       | <b>1500</b> |            |
| <b>2</b> | <b>Energy and Climate Change (EC)</b>                                                                                                                              |             | <b>21%</b> |
| EC1      | Energy-efficient appliances usage                                                                                                                                  | 200         |            |
| EC2      | Smart building implementation                                                                                                                                      | 300         |            |
| EC3      | Number of renewable energy sources on campus                                                                                                                       | 300         |            |
| EC4      | Total electricity usage divided by total campus' population (kWh per person)                                                                                       | 300         |            |
| EC5      | The ratio of renewable energy production divided by total energy usage per year                                                                                    | 200         |            |
| EC6      | Elements of green building implementation as reflected in all construction and renovation policies                                                                 | 200         |            |
| EC7      | Greenhouse gas emission reduction program                                                                                                                          | 200         |            |
| EC8      | Total carbon footprint divided by total campus' population (metric tons per person)                                                                                | 200         |            |
| EC9      | Number of the innovative program(s) in energy and climate change                                                                                                   | 100         |            |
| EC10     | Impactful university program(s) on climate change                                                                                                                  | 100         |            |
|          | <b>Total</b>                                                                                                                                                       | <b>2100</b> |            |



|             |                                                                                                  |             |            |
|-------------|--------------------------------------------------------------------------------------------------|-------------|------------|
| <b>3</b>    | <b>Waste (WS)</b>                                                                                |             | <b>18%</b> |
| <b>WS1</b>  | 3R (Reduce, Reuse, Recycling) program for university's waste                                     | 300         |            |
| <b>WS2</b>  | Program to reduce the use of paper and plastic on campus                                         | 300         |            |
| <b>WS3</b>  | Organic waste treatment                                                                          | 300         |            |
| <b>WS4</b>  | Inorganic waste treatment                                                                        | 300         |            |
| <b>WS5</b>  | Toxic waste treatment                                                                            | 300         |            |
| <b>WS6</b>  | Sewage disposal                                                                                  | 300         |            |
|             | <b>Total</b>                                                                                     | <b>1800</b> |            |
| <b>4</b>    | <b>Water (WR)</b>                                                                                |             | <b>10%</b> |
| <b>WR1</b>  | Water conservation program & implementation                                                      | 200         |            |
| <b>WR2</b>  | Water recycling program implementation                                                           | 200         |            |
| <b>WR3</b>  | Water-efficient appliances usage                                                                 | 200         |            |
| <b>WR4</b>  | Consumption of treated water                                                                     | 200         |            |
| <b>WR5</b>  | Water pollution control in the campus area                                                       | 200         |            |
|             | <b>Total</b>                                                                                     | <b>1000</b> |            |
| <b>5</b>    | <b>Transportation (TR)</b>                                                                       |             | <b>18%</b> |
| <b>TR1</b>  | The total number of vehicles (cars and motorcycles) divided by the total campus' population      | 200         |            |
| <b>TR2</b>  | Shuttle services                                                                                 | 300         |            |
| <b>TR3</b>  | Zero-Emission Vehicles (ZEV) policy on campus                                                    | 200         |            |
| <b>TR4</b>  | The total number of Zero-Emission Vehicles (ZEV) divided by the total campus population          | 200         |            |
| <b>TR5</b>  | The ratio of the ground parking area to the total campus' area                                   | 200         |            |
| <b>TR6</b>  | Program to limit or decrease the parking area on campus for the last 3 years (from 2020 to 2022) | 200         |            |
| <b>TR7</b>  | Number of initiatives to decrease private vehicles on campus                                     | 200         |            |
| <b>TR8</b>  | The pedestrian path on campus                                                                    | 300         |            |
|             | <b>Total</b>                                                                                     | <b>1800</b> |            |
| <b>6</b>    | <b>Education and Research (ED)</b>                                                               |             | <b>18%</b> |
| <b>ED1</b>  | The ratio of sustainability courses to total courses/subjects                                    | 300         |            |
| <b>ED2</b>  | The ratio of sustainability research funding to total research funding                           | 200         |            |
| <b>ED3</b>  | Number of scholarly publications on sustainability                                               | 200         |            |
| <b>ED4</b>  | Number of events related to sustainability                                                       | 200         |            |
| <b>ED5</b>  | Number of activities organized by student organizations related to sustainability per year       | 200         |            |
| <b>ED6</b>  | University-run sustainability website                                                            | 200         |            |
| <b>ED7</b>  | Sustainability report                                                                            | 100         |            |
| <b>ED8</b>  | Number of cultural activities on campus                                                          | 100         |            |
| <b>ED9</b>  | Number of university sustainability program(s) with international collaborations                 | 100         |            |
| <b>ED10</b> | Number of sustainability community services projects organized and/or involving students         | 100         |            |
| <b>ED11</b> | Number of sustainability-related startups                                                        | 100         |            |
|             | <b>Total</b>                                                                                     | <b>1800</b> |            |

## **UI GreenMetric Office**

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### **Contact**



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