



UNIVERSITAS
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Certificate

This certificate is awarded to
Universidad Tecnologica de Bolivar
as The 635th World's Most Sustainable University
in 2024 UI GreenMetric World University Rankings

12 December, 2024



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

FACT FILE 2024

UI GREENMETRIC 2024

UNIVERSIDAD TECNOLÓGICA DE BOLÍVAR
COLOMBIA



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FOREWORD



Prof. Riri Fitri Sari, M.M, M.Sc

Chairperson of UI GreenMetric

It is with great pride and appreciation that we present this year's report on the global ranking of universities committed to sustainability. This year, we received submissions from 1,477 universities across 95 countries. We are encouraged to see a growing number of institutions embracing our sustainability-focused ranking system, demonstrating an increasing commitment to our shared mission. As the world's first university ranking system to emphasize sustainability, this initiative has pioneered a global movement, urging universities to lead with purpose and act as key drivers of change.

Every institution that joined us this year is a champion, signaling their commitment to transforming campuses into more sustainable and environmentally-friendly operations. Their participation not only reinforces their individual efforts but also strengthens our collective resolve toward a more sustainable future.

This year's numbers mark a significant milestone in our organization's journey. They underscore not only the enthusiasm of participating institutions but also the strength of our vision for a more sustainable future. Our ranking system goes beyond traditional benchmarking; it fosters a network of collaboration, bringing together universities from around the world. Through this platform, institutions are not merely ranked—they are united in a shared commitment to advancing sustainable development, learning from one another, and innovating together.

We hope this level of enthusiasm continues for next year's questionnaire submission, if not growing even bigger, to create a more lasting impact. We believe this collective effort is more than a movement within academia; it is a force with the power to create a multiplier effect, spreading sustainable practices and values that transcend campuses and touch the world at large. Together, we are amplifying the urgency of sustainable action and empowering universities to not only transform themselves but to make an impact beyond the academic community. By working together, we can build a brighter, more resilient future—one where universities continue to act as pivotal leaders in the journey towards sustainability.

With Regards,

A handwritten signature in black ink, appearing to be 'RFS'.

Prof. Riri Fitri Sari

Chairperson of UI GreenMetric

Unlock Global Recognition for Your Sustainability Efforts!



Elevate Your University's Global Impact



Global Network Reach

- Connect with 1,477+ universities
- Spanning 95 countries worldwide
- Part of world-leading sustainability network

Elevate Your University's Global Impact



Performance Excellence

- Expert sustainability consulting
- Detailed ranking trackers
- Trees Rating evaluation
- Regular performance insights
- Customized improvement strategies



Strategic Partnership

- Support UI GreenMetric global Initiatives
- Implement SDG #17 partnerships
- Access international events & workshops
- Join our sustainability leadership community

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UI GREENMETRIC WORLD UNIVERSITY RANKINGS

UNIVERSIDAD TECNOLÓGICA DE BOLÍVAR
#635





UNIVERSITY PROFILE

NAME : UNIVERSIDAD TECNOLÓGICA DE BOLÍVAR
EST. : 1970
COUNTRY : COLOMBIA

1. VERIFIED DATA

Campus Sustainability Scores

Overall Performance
62.35 %

Total Score
6235 / 10000

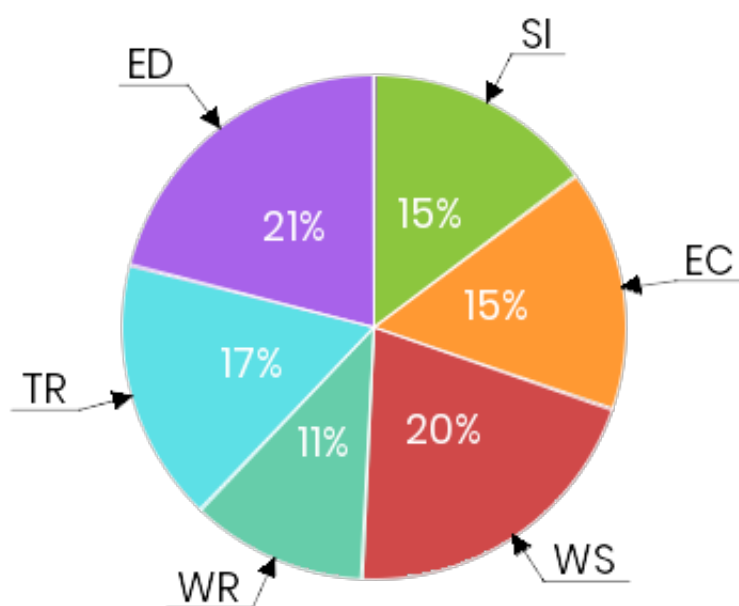
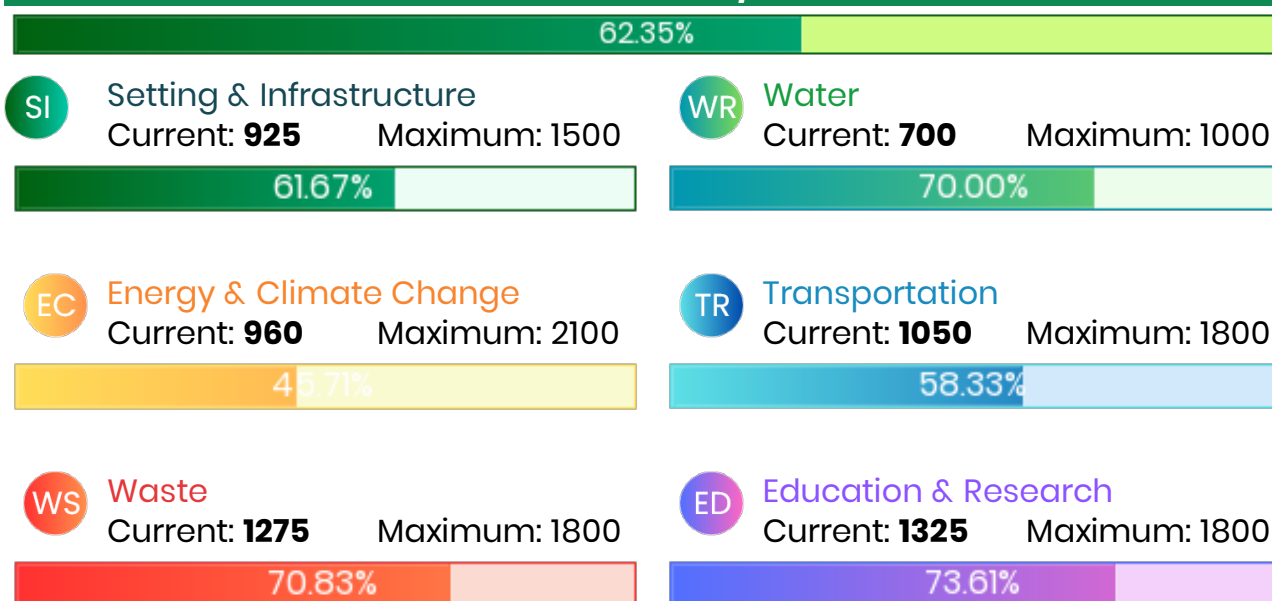
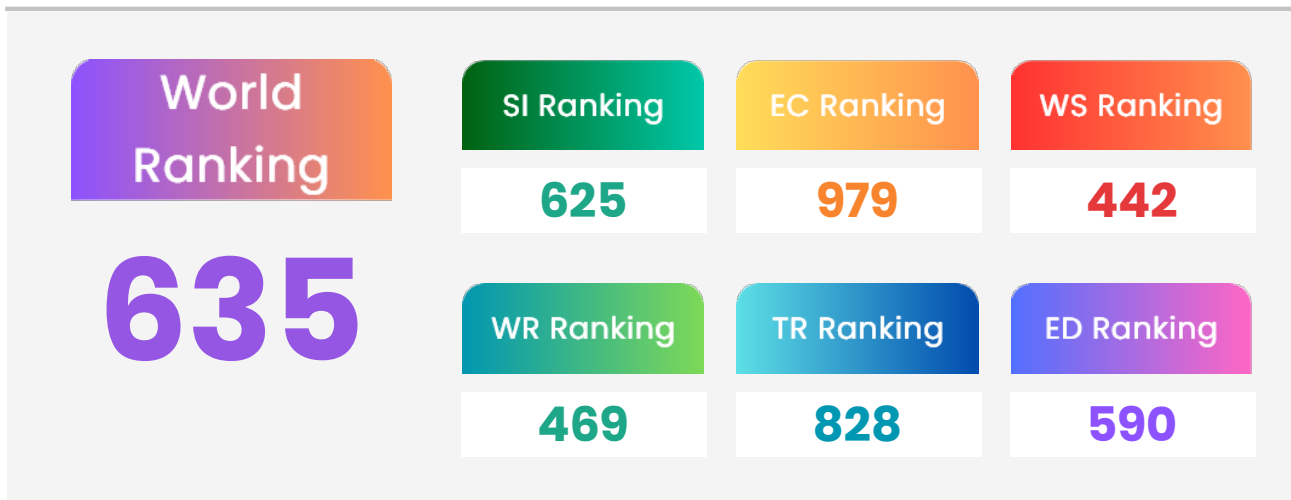


Figure 1.1 Category Score Contribution to Total Score

2. RESULTS SUMMARY



3. WORLD RANKINGS HISTORY

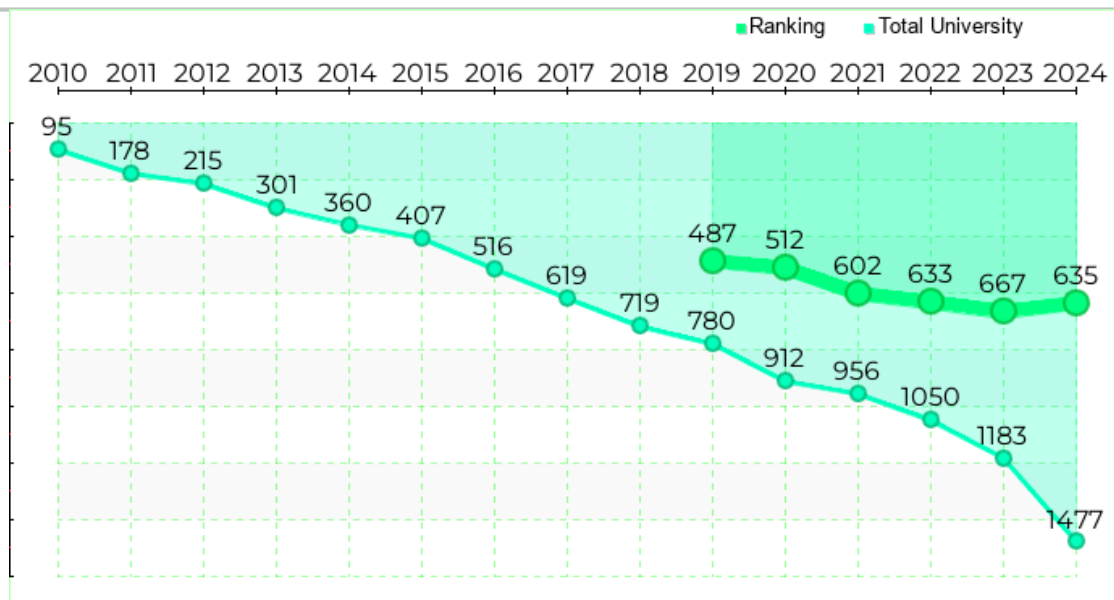
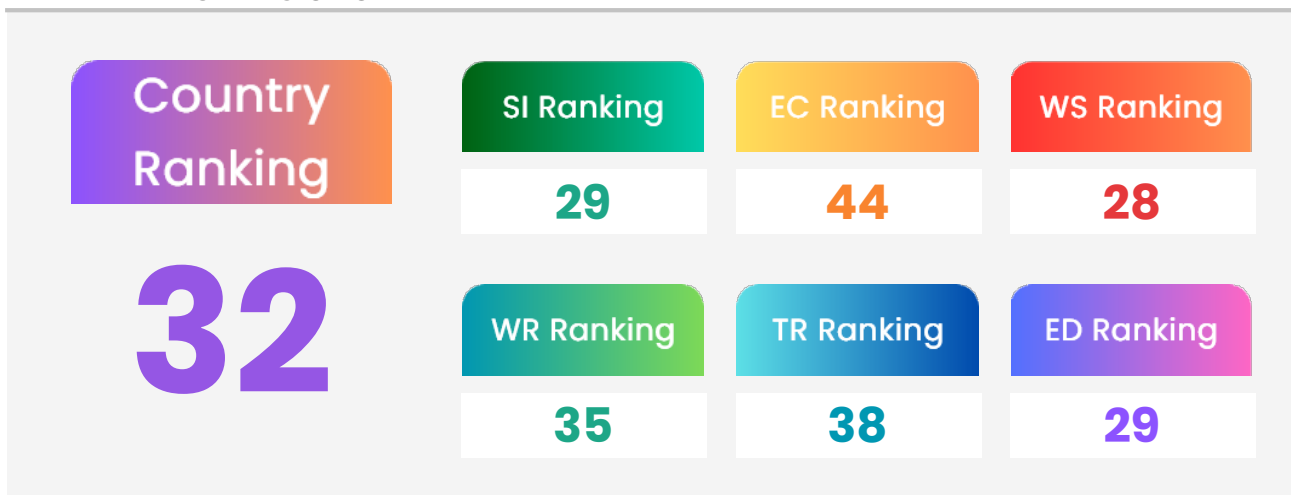


Figure 3.1 World Rankings History Diagram

4. RANKING IN COLOMBIA



5. PERFORMANCE BY INDICATOR

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 to total area	200
SI.2	Total area on campus covered in forest vegetation	75
SI.3	Total area on campus covered in planted vegetation	50
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	100
SI.6	Percentage of university budget for sustainability efforts	150
SI.7	Percentage of operation and maintenance activities of building in one year period	75
SI.8	Campus facilities for disable, special needs and/or maternity care	75
SI.9	Security and safety facilities	75
SI.10	Health infrastructure facilities for students, academics and administrative staffs' well-being	0
SI.11	Conservation: plant (flora), animal (fauna), or wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities	25

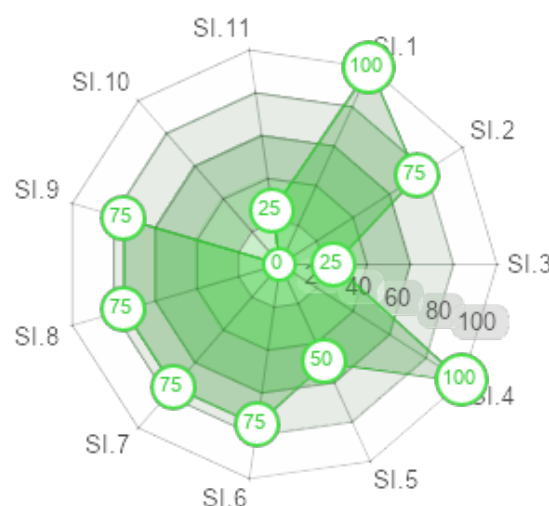


Figure 5.1 Percentage of Score to Maximum Score for Setting and Infrastructure

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	150
EC.2	Smart building implementation	75
EC.3	Number of renewable energy sources on campus	75
EC.4	Total electricity usage divided by total campus' population	225
EC.5	The ratio of renewable energy production divided by total energy usage per year	10
EC.6	Elements of green building implementation as reflected in all construction and renovation policies	200
EC.7	Greenhouse gas emission reduction program	50
EC.8	Total carbon footprint divided by total campus' population	150
EC.9	Number of innovative program(s) in energy and climate change	25
EC.10	Impactful university program(s) on climate change	0

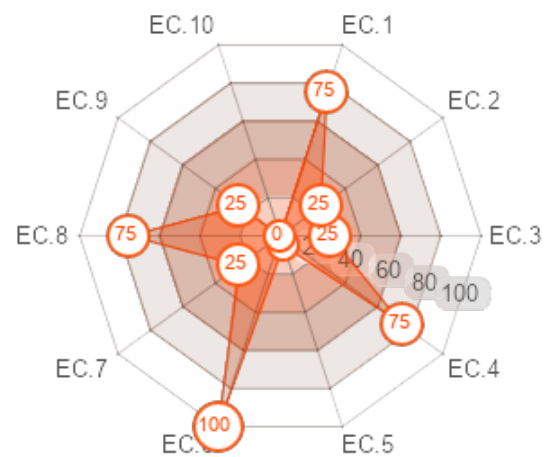


Figure 5.2 Percentage of Score to Maximum Score for Energy and Climate Change

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.



Indicator		Point
WS.1	3R (Reduce, Reuse, Recycle) program for university's waste	300
WS.2	Program to reduce the use of paper and plastic on campus	225
WS.3	Organic waste treatment	300
WS.4	Inorganic waste treatment	75
WS.5	Toxic waste treatment	300
WS.6	Sewage disposal	75

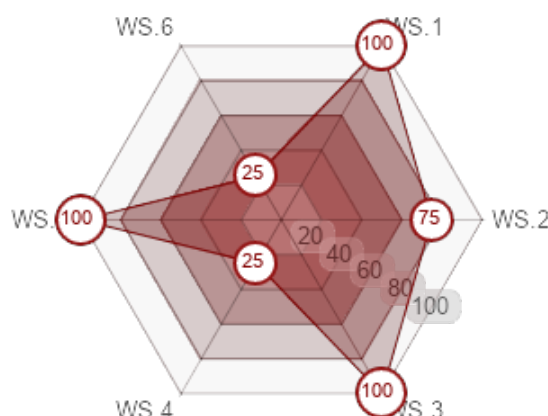


Figure 5.3 Percentage of Score to Maximum Score for Waste

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



Indicator		Point
WR.1	Water conservation program & implementations	100
WR.2	Water recycling program implementation	100
WR.3	Water efficient appliances usage	100
WR.4	Consumption of treated water	200
WR.5	Water pollution control in the campus area	200

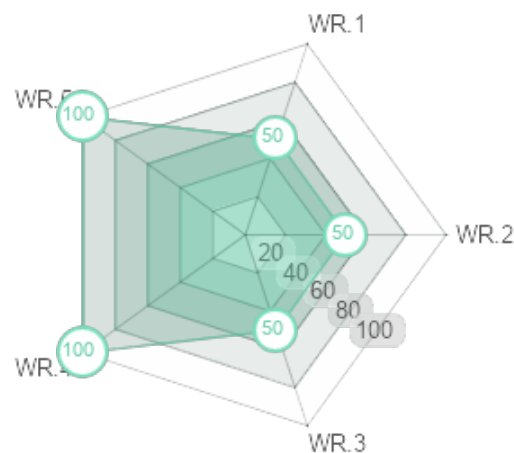
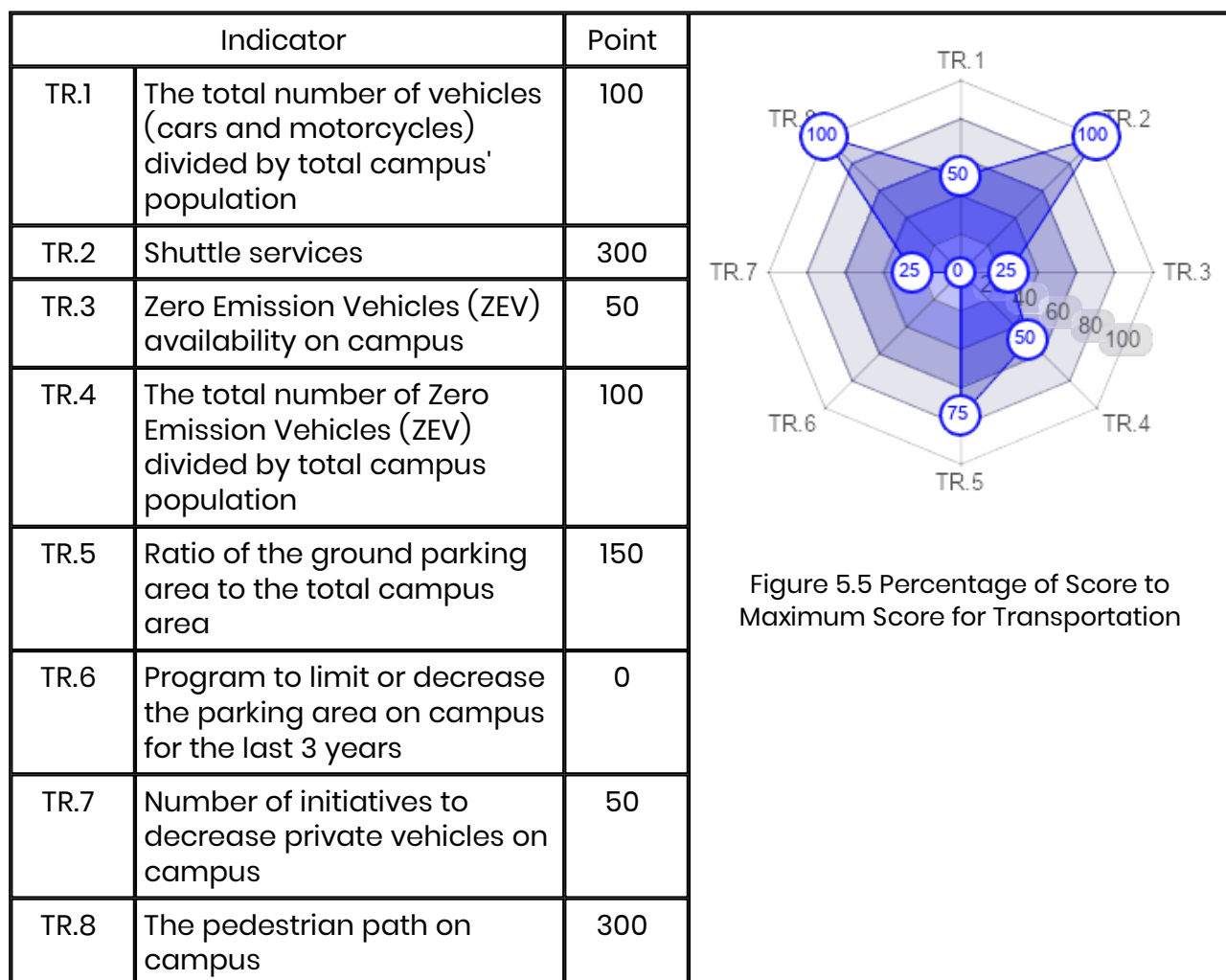


Figure 5.4 Percentage of Score to Maximum Score for Water

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 to total courses/subjects	225
ED.2	The ratio of sustainability research funding to total research funding	50
ED.3	Number of scholarly publications on sustainability	100
ED.4	Number of events related to sustainability (environment)	200
ED.5	Number of activities organized by student organizations related to sustainability per year	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 sustainability program(s) with international collaborations	50
ED.10	Number of community services related to sustainability organized by university and involving students	100
ED.11	Number of sustainability-related startups	0

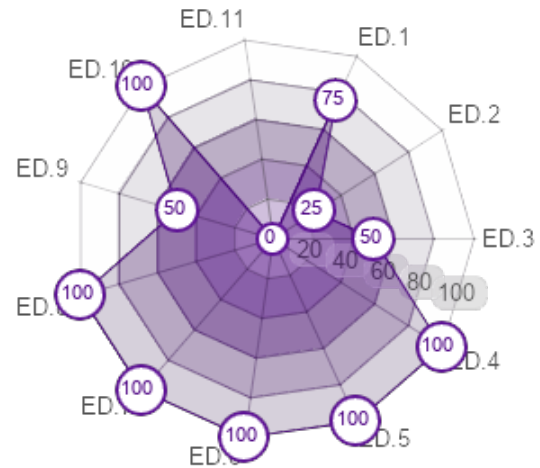


Figure 5.6 Percentage of Score to Maximum Score for Education



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

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. Gumilar Rusliwa Somantri as Rector of the University of Indonesia at that time-initiated UI GreenMetric World University Rankings and appointed Prof. Riri Fitri Sari as the chairperson. Soon a team consisting of Junaidi, Budi Hartono, Allan Lauder, and Prof. Dr. Ir. Gunawan Tjahjono 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 2024, 1477 universities from 95 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 Shanghai Jiao Tong University (SJTU), and the Webometrics Ranking of World Universities (Webometrics), published by Cybermetrics Lab, CINDOC-CSIC in Spain.

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	Education became one of the categories
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
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
2024	Indicator adjustments and new indicators related to utilizing ICT

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 and Research (ED)	18%



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
1	Setting and Infrastructure (SI)	
SI1	The ratio of open space area to 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 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 disable, special needs and/or maternity care	100
SI9	Security and safety facilities	100
SI10	Health infrastructure facilities for students, academics and administrative staffs' well-being	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
	Total	1500
2	Energy and Climate Change (EC)	
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 innovative program(s) in energy and climate change	100
EC10	Impactful university program(s) on climate change	100
	Total	2100
3	Waste (WS)	
WS1	3R (Reduce, Reuse, Recycle) program for university's waste	300
WS2	Program to reduce the use of paper and plastic on campus	300
WS3	Organic waste treatment	300
WS4	Inorganic waste treatment	300
WS5	Toxic waste treatment	300
WS6	Sewage disposal	300
	Total	1800
4	Water (WR)	
WR1	Water conservation program & implementations	200
WR2	Water recycling program implementation	200
WR3	Water efficient appliances usage	200
WR4	Consumption of treated water	200
WR5	Water pollution control in the campus area	200
	Total	1000
5	Transportation (TR)	
TR1	The total number of vehicles (cars and motorcycles) divided by total campus' population	200
TR2	Shuttle services	300
TR3	Zero Emission Vehicles (ZEV) availability on campus	200
TR4	The total number of Zero Emission Vehicles (ZEV) divided by total campus population	200
TR5	Ratio of the ground parking area to the total campus area	200
TR6	Program to limit or decrease the parking area on campus for the last 3 years (from 2021 to 2023)	200
TR7	Number of initiatives to decrease private vehicles on campus	200
TR8	The pedestrian path on campus	300
	Total	1800
6	Education and Research (ED)	
ED1	The ratio of sustainability courses to total courses/subjects	300
ED2	The ratio of sustainability research funding to total research funding	200
ED3	Number of scholarly publications on sustainability	200
ED4	Number of events related to sustainability (environment)	200
ED5	Number of activities organized by student organizations related to sustainability per year	200
ED6	University-run sustainability website	200
ED7	Sustainability report	100
ED8	Number of cultural activities on campus (e.g.Cultural Festival)	100
ED9	Number of university sustainability program(s) with international collaborations	100
ED10	Number of community services related to sustainability organized by university and involving students	100
ED11	Number of sustainability-related startups	100
	Total	1800

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