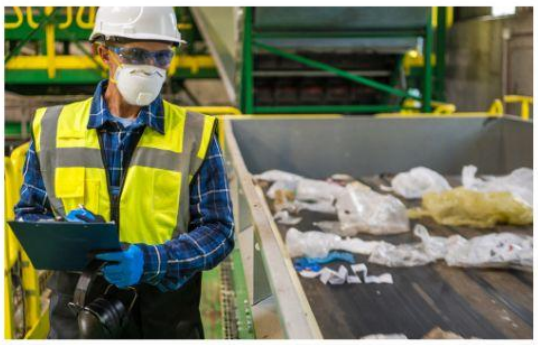

2025

UI GREENMETRIC GUIDELINE

UI GreenMetric
World University Rankings

DOING SUSTAINABLE DEVELOPMENT GOALS IN HIGHER EDUCATION : THE STORY OF OUR INSTITUTION AND SOCIETY

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1. What is UI GreenMetric World University Rankings?

Universitas Indonesia (UI) initiated world university rankings in 2010, later known as UI GreenMetric World University Rankings, to measure campus sustainability efforts. It was intended to create an online survey to portray sustainability policies and programs for universities around the world.

We based the rankings broadly on the conceptual framework of Environment, Economy, and Equity. The ranking indicators and categories are intended to be relevant to all. We have designed the indicators and weightings to be as free of bias as possible. The work of collecting and submitting data is relatively straightforward and requires reasonable staff time. Ninety-five universities from 35 countries participated in the 2010 version of UI GreenMetric: 18 from America, 35 from Europe, 40 from Asia, and 2 from Australia. In 2024, 1477 universities from 95 countries around the world participated. This shows that UI GreenMetric has been recognized as the first world university ranking on sustainability.

Our theme this year is "Doing Sustainable Development Goals in Higher Education: The Story of Our Institution and Society". We would like to focus on showcasing how universities implement and sustain their sustainability initiatives in alignment with the Sustainable Development Goals (SDGs) and the UI GreenMetric framework, highlighting the impact on both campus and the wider society.

2. What are the objectives?

Our ranking aims to:

- Contribute to academic discourses on sustainability in education and the greening of campus;
- Promote university-led social change about sustainability goals;
- Be a tool for self-assessment on campus sustainability for higher education institutions (HEIs) around the globe;
- Inform governments, international and local environmental agencies, and society about sustainability programs on campus.

3. Who can participate?

All universities in the world with a strong commitment to sustainability issues can participate in the annual UI GreenMetric World University Rankings.

4. What are the benefits?

Universities that participate in UI GreenMetric rankings by submitting their data can expect to enjoy several benefits such as internationalization and recognition, increasing awareness of sustainability issues, social change and action, and networking. Registration is free of charge.

a. Internationalization and recognition

Participation in UI GreenMetric can help the university's efforts in internationalization and recognition by getting its sustainability efforts on the global map. Participation in UI GreenMetric can result in an increase of hits to your university website, more mentions of the institution relative to the issues of sustainability on web pages, more correspondence with institutions interested to collaborate with your university, and recognition from your alumni and public as a university with strong concern with sustainability.

b. Increasing awareness of sustainability issues

Participation can help to increase awareness in the university and beyond about the importance of sustainability issues. The world faces unprecedented global challenges such as population trends, global warming, overexploitation of natural resources, oil-dependent energy, water, and food shortages, and other sustainability issues. We realize that higher education has a crucial role to play in addressing these challenges. UI GreenMetric leverages the crucial role that HEIs can play in raising awareness by doing an assessment and comparing efforts in

education for sustainable development, sustainability research, campus greening, and social outreach.

c. Social change and action

UI GreenMetric is more than raising awareness; it is about encouraging concrete change. It is crucial that understanding move forward to action to address emerging global challenges. Only by working together can we tackle global challenges on sustainability.

d. Networking

All participants of UI GreenMetric are automatically members of UI GreenMetric World University Rankings Network (UIGWURN) which was established in 2017. In this network, participants can share their best practices in sustainability programs as well as networking with other participants worldwide by attending the annual UI GreenMetric International Workshop and regional/national workshops hosted by approved host universities. Participants can also arrange technical workshops on UI GreenMetric at their respective universities.

As a platform to turn sustainability issues into action, the network is managed by UI GreenMetric as the secretariat. Programs and directions are proposed and decided by the steering committee comprising the UI GreenMetric secretariat, regional, and national coordinators as in the table below:

Table 1 National coordinators of UI GreenMetric World University Rankings Network

No.	National Coordinator
1	El Bosque University – Colombia
2	University of Sao Paulo (USP) – Brazil
3	Escuela Superior Politecnica De Chimborazo (ESPOCH) – Ecuador
4	University of Sousse – Tunisia
5	Zonguldak Bülent Ecevit University – Turkey
6	Ege University – Turkey
7	Kazakh National Agrarian University – Kazakhstan
8	Mahidol University – Thailand
9	National Pingtung University of Science and Technology (NPUST) – Chinese Taipei
10	Pakistan Higher Education Commission – Pakistan
11	Universitas Diponegoro – Indonesia
12	University of Zanjan – Iran
13	Tarbiat Modares University – Iran
14	Holy Spirit University of Kaslik (USEK) – Lebanon
15	University of Sharjah – United Arab Emirates
16	RUDN University – Russia
17	Riga Technical University – Latvia
18	University College Cork – Ireland
19	University of L'Aquila – Italy
20	University of Minho – Portugal
21	University of Navarra – Spain
22	University of Oviedo – Spain
23	Adam Mickiewicz University – Poland
24	University of Szeged – Hungary
25	University of Pecs – Hungary
26	Bukhara State University – Uzbekistan
27	October 6 University – Egypt
28	Batangas State University - Philippines

29	Al-Muthanna University - Iraq
30	Koya University - Iraq
31	Lagos State University - Nigeria
32	Toronto Metropolitan University - Canada
33	Universidad Católica de Córdoba - Argentina
34	Universidad Privada Dr. Rafael Belloso Chacín - Venezuela
35	Daffodil International University - Bangladesh

Currently, the network is comprised of 1477 participating universities located in the dynamic and diverse Asia, Europe, Africa, Australia, America, and Oceania, with more than 2 million faculty members, 17 million students, and 68 Billion USD in total research funds for environment and sustainability. The number will continue to increase as national coordinators actively encourage other universities in their countries to join UI GreenMetric.

5. How can universities participate?

To participate in the ranking is simple. The sustainability director or other persons in charge can visit www.greenmetric.ui.ac.id to learn about the ranking and if interested they can e-mail the UI GreenMetric secretariat (greenmetric@ui.ac.id) to get an invitation letter and access to the system. If you have already participated in the rankings, you will be sent an invitation to participate. If you decide not to participate due to particular reasons, it would be appreciated if you inform the secretariat. Of course, you can join the survey again in the future. It is always useful if your university appoints a person in charge of a contact person. You are welcome to contact the secretariat for any inquiries regarding the survey.

6. How was UI GreenMetric World University Ranking developed?

The decision to establish UI GreenMetric was influenced by several factors:

a. Idealism

Future challenges to civilization include population pressure, climate change, energy security, environmental degradation, water, and food security, and sustainable development. Despite many scientific studies and public discussions, governments around the world have yet to commit to a sustainable agenda. Concerned people at Universitas Indonesia have come to the idea that universities have the privilege to help develop a consensus on key areas for action. They include such concepts as the Triple Bottom Line, the 3 Es (Equity, Economy, Environment), Green Building, and Education for Sustainable Development (ESD).

UI GreenMetric World University Rankings serves as a tool for universities to deal with sustainability challenges our world is facing. Many universities use UI GreenMetric questionnaire as a tool to measure, monitor and evaluate their sustainability strategic plan. Universities can work together to reduce negative environmental impacts. UI GreenMetric is a nonprofit institution; therefore, many universities can participate in the rankings for free.

b. UI GreenMetric World University Rankings model

Although UI GreenMetric was not based on any existing ranking system, it was developed with the awareness of several existing sustainability assessment systems and academic university rankings. Sustainability systems that were referred to during the design phase of UI GreenMetric included the Holcim Sustainability Awards, GREENSHIP (the rating system recently developed by the Green Building Council of Indonesia which was based on the Leadership in the Energy and Environmental Design (LEED) system used in the U.S. and elsewhere), the Sustainability, Tracking, Assessment and Rating System (STARS) and the College Sustainability Report Card (also known as the Green Report Card).

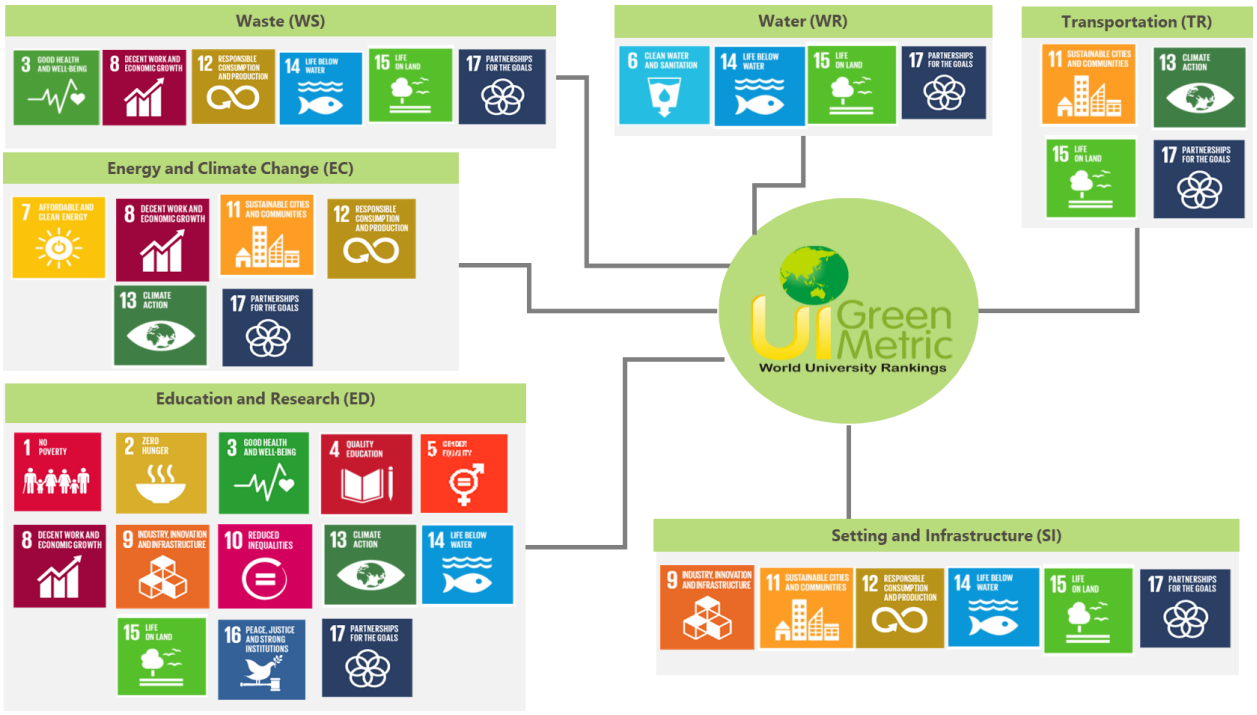

Figure 1. UI GreenMetric and SDGs

UN Environment's challenge in the 2030 Agenda is to develop and enhance integrated approaches to sustainable development – approaches that will demonstrate how improving the health of the environment will bring social and economic benefits. Aiming at reducing environmental risks and increasing the resilience of societies and the environment, UN Environment action fosters the environmental dimension of sustainable development and leads to socio-economic development (UNEP, n.d.). These 17 aspects of SDGs are captured in the UI GreenMetric criteria and indicators.

During the early stages of the design of UI GreenMetric, assistance was sought on the issues from experts in both ranking and sustainability. These included the holding of a conference on university rankings and video conferences as well as expert meetings on sustainability and green building. The latest expert workshop on UI GreenMetric, The 5th International Workshop on UI GreenMetric World University Rankings, was held on 14 - 16 April 2019 at University College Cork. Due to the pandemic, the 6th International Workshop on UI GreenMetric World University Rankings (IWGM 2020) was held virtually at the University of Zanjan, Iran in October 2020, University Putra Malaysia in 2021, and National Pingtung University of Science and Technology, Taiwan in 2022.

In 2010, 23 indicators were used within the five categories to calculate the ranking scores. In 2011, 34 indicators were used. Then in 2012, the indicator of "smoke-free and drug-free campus environment" was removed and 33 indicators were used to evaluate the green campus. In 2012, the indicators were also categorized into 6 categories including the education criteria. One change being considered was the formation of a new category for sustainability education and research. In 2015, the theme was the carbon footprint. We added two questions related to this issue in the energy and climate change section. We also improved our methodology by adding a few sub-indicators that were related to water and transportation in the 2015 ranking. A major change in methodology was done in 2017 by considering new trends in sustainability issues. In 2018, the theme was Universities, Impacts, and Sustainable Development Goals (SDGs). We added detailed answer options to the following indicators: total area on campus covered in forest, planted vegetation, water absorption besides the forest and planted vegetation, energy-efficient appliances usage, smart building implementation, the ratio of renewable energy produce/production towards total energy usage per year, elements of green building implementation, the greenhouse gas emission reduction program, all of waste and water criteria, the ratio of the parking area to the total campus area, transportation initiatives to decrease private vehicles on campus, the transportation program designed to limit or decrease the parking area on campus, shuttle services, Zero-Emission

Vehicles (ZEV) and pedestrian policy on campus, and the existence of a university-run sustainability website. We also added a new question on Education Criteria, i.e., existence of a published sustainability report. We changed the question of the bicycle into Zero-Emission Vehicles by considering the green transportation related to universities worldwide. In 2019, the theme was Sustainable University in a Changing World: Lessons, Challenges, and Opportunities. We improved the questionnaire in the options for answers and more explanations about smart building indicators. In 2020, the theme of the questionnaire is Universities' Responsibility for Sustainable Development Goals and World's Complex Challenges. This year UI GreenMetric questionnaire tried to approach the impacts that universities can provide in an effort in planning a green campus for the community. To measure the social, cultural, and economic impacts and to respond to the pandemic, new questions are added to UI GreenMetric World University Rankings Questionnaire in 2021. In 2022, there were indicator adjustments and assessments related to the current pandemic condition. There was also a new indicator related to water pollution. In 2023, several new indicators added related to the 3R waste program, student organization activities and international collaboration. In 2024, UI GreenMetric introduced adjustments and new indicators focusing on the use of Information and Communication Technology (ICT), encouraging universities to develop digital innovations that play an increasingly vital role in global society. In 2025, further adjustments have been made, emphasizing the impact of programs to ensure their relevance and effectiveness in today's sustainability context.

In addition, evidence is vital to the evaluation process by our reviewers, so please ensure the evidence that you provide is as complete as possible.

c. Realities and challenges

The goal of creating a world university sustainability ranking was done with an understanding that the diversity of types of universities, their missions, and their contexts would pose problems for the methodology. We are fully aware of the fact that universities differ in their levels of awareness and commitment to sustainability, their budgets, the amount of green cover on their campus, and many other dimensions. These issues are complex, but UI GreenMetric is committed to continually improving the ranking so that it will be both useful and fair to all. We are open to suggestions from our members.

7. Who are the team?

From 2010 to 2020, UI GreenMetric World University Rankings was managed by a team under the Rector of Universitas Indonesia. Since 2021, UI GreenMetric has to manage itself as we were encouraged to be financially self-funded. Our team members consist of management team, expert members, and reviewers who come from various academic backgrounds and experiences, such as Environmental Sciences, Engineering, Architecture, Urban Design, Dentistry, Public Health, Statistics, Chemistry, Physics, Linguistics, and Cultural Studies.

8. What is the methodology?

a. The criteria

The UI GreenMetric evaluates university's policy and perfomance on the basis of six categories; Setting and Infrastructure (SI), Energy and Climate Change (EC), Waste (WS), Water (WR), Transportation (TR), and Education and Research (ED). Each category has a weighting of points as shown in the following table.

Table 2 Categories used in the rankings 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**
	TOTAL	**100**

Table 3 Indicators and categories suggested for use in the 2025 rankings

No	CRITERIA	Point	Weighting
1	**Setting and Infrastructure (SI)**		**15%**
SI1	The ratio of open space area to total area	200	
SI2	Total area on campus covered in forest vegetation used for research, teaching, and/or community engagement	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	Campus facilities for disabled, special needs and/or maternity care	100	
SI8	Security and safety facilities	100	
SI9	Health infrastructure facilities for students, academics and administrative staffs' well-being	100	
SI10	Conservation: plant (flora), animal (fauna), or wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities	100	
SI11	Planning, implementation, monitoring and/or evaluation of all programs related to Setting and Infrastructure through the utilization of Information and Communication Technology (ICT)	100	
	Total	**1500**	
2	**Energy and Climate Change (EC)**		**21%**
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)	200	
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 buildings	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	
EC11	Planning, implementation, monitoring and/or evaluation of all programs related to Energy and Climate Change through the utilization of Information and Communication Technology (ICT)	100	
	Total	**2100**	
3	**Waste (WS)**		**18%**
WS1	3R (Reduce, Reuse, Recycle) program for university's waste	200	
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	

WS7	Planning, implementation, monitoring and/or evaluation of all programs related to Waste Management through the utilization of Information and Communication Technology (ICT)	100	
	Total	**1800**	
4	**Water (WR)**		**10%**
WR1	Water conservation program and implementation	150	
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	
WR6	Planning, implementation, monitoring and/or evaluation of all programs related to Water Management through the utilization of Information and Communication Technology (ICT)	50	
	Total	**1000**	
5	**Transportation (TR)**		**18%**
TR1	The total number of vehicles (cars and motorcycles with combustion engines) divided by the total campus' population	200	
TR2	Shuttle services	250	
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	200	
TR7	Number of initiatives to decrease private vehicles on campus	200	
TR8	Pedestrian path on campus	250	
TR9	Planning, implementation, monitoring and/or evaluation of all programs related to Transportation through the utilization of Information and Communication Technology (ICT)	100	
	Total	**1800**	
6	**Education and Research (ED)**		**18%**
ED1	The ratio of sustainability courses to total courses/subjects	200	
ED2	The ratio of sustainability research funding to total research funding	200	
ED3	Ratio of scholarly publications on sustainability to lecturers/researchers on campus in one year period	200	
ED4	Number of events related to sustainability (environment)	150	
ED5	Number of activities organized by student organizations related to sustainability per year	150	
ED6	University-run sustainability website	200	
ED7	Sustainability report	100	
ED8	Number of cultural activities on campus	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	
ED12	Percentage of number of graduates with green jobs (for the last 3 years)	50	
ED13	Availability of unit or office that coordinate sustainability on campus	50	

ED14	Planning, implementation, monitoring and/or evaluation of university governance through the utilization of Information and Communication Technology (ICT)	100	
	Total	**1800**	

*light green indicates new indicators in 2025

b. Revised indicators

To respond to the current condition, and to add metrics for social, cultural, and economic aspects of sustainability, some indicators have been revised in this year's questionnaire.

c. Scoring

Scoring for each item will be numeric so that our data can be processed statistically. Scores will be simple counts of things or responses on a scale of some sort. Details of the scoring can be found in **Appendix 1**.

d. The weighting of criteria

Each of the criteria will be categorized in a general class of information and when the results are processed, the raw scores will be weighted to give a final calculation.

e. Refining and improving the research instrument

While we have put every effort into the design and implementation of the questionnaire, we realize that there are bound to be shortcomings. Therefore, we will be reviewing the criteria and the weightings continuously to accommodate input from participants and state-of-the-art developments in the field. We welcome your comments and input.

f. Data submission

Data from the universities should be submitted through an online system between **June – 31 October 2025.**

We welcome any e-mail or hardcopy of your university sustainability evaluation and report as well as evidence on sustainability activities in your university.

g. Results

The preliminary results of the metrics are expected to be submitted on 31 October 2025, and the final complete result will be released in early December 2025.

The basic ranking results (overall rankings 2024) and the detailed scores can be accessed via

https://greenmetric.ui.ac.id/rankings/overall-rankings-2024

9. Who are our networks?

The idealism surrounding awareness of sustainability issues is now generating a network of like-minded organizations. The network is organized and run by UI GreenMetric World University Rankings secretariat, a steering committee consisting of national and/or regional coordinator representatives, in cooperation with universities that host UI GreenMetric World University Rankings events. The national workshops were held since 2017 in many universities and countries, i.e. Kazakh National Agrarian University, Kazakhstan; El Bosque University, Colombia; University of Sao Paulo, Brazil; Diponegoro University, Indonesia; University of Bologna, Italy; Aalborg University, Denmark; King Abdul Aziz University, Saudi Arabia; and Peoples' Friendship University of Russia, Russia.

In 2018 UI GreenMetric's progress was also presented in different forums such as the 4th International Workshop on UI GreenMetric (IWGM), Indonesia; IREG Forum Belgium, ISCN Conference, Sweden; CRUI Working Group on International Academic Rankings, Italy; International Association for Impact Assessment (IAIA) Conference, Malaysia; and Global Symposium on Green Campus Development, China. In the same year, UI GreenMetric also presented at the National Workshop in several universities as the hosts i.e. University of Zanjan and Ferdowsi University of Mashhad, Iran; Atyrau State University, Kazakhstan; King Abdulaziz University, Saudi Arabia; Nottingham University, United Kingdom; the National University of Colombia and University del Rosario, Colombia; University of Sao Paulo, Brazil; Pakistan Higher Education Commission, Pakistan; Universiti Utara Malaysia, Malaysia; Institut Teknologi Sepuluh Nopember, Indonesia; Riga Technical University, Latvia; Peoples' Friendship University of Russia, Russia; Universidad Tecnica Federico Santa Maria, Chile; and OMNES Education, France.

In 2019, UI GreenMetric was invited by various organizations and communities: The 4th General Assembly Meeting of Green University Union of Taiwan 2019, CRUE Meeting, World Environmental Education Congress, and Building Universities' Reputations (BUR) 2019 Conference. This year National and Regional Workshops were also held in several universities as the hosts, i.e. Universidad Autónoma de Occidente and Universidad Icesi, Colombia; University of Szeged dan University of Pecs, Hungary; Universitas Hasanuddin, Indonesia; Nazarbayev University, Kazakhstan; Universidade Federal de Lavraz, Brazil; Holy Spirit University of Kaslik (USEK), Lebanon; RUDN University, Rusia; Escuela Superior Politecnica De Chimborazo (ESPOCH), Ecuador; University of Sousse, and Tunisia; Cyprus International University, North Cyprus.

Early in 2020 two workshops have been conducted in France and Saudi Arabia. UI GreenMetric activities in 2020 continued amid the Covid-19 pandemic with more than 60 workshops and webinars successfully conducted online.

In 2020 UI GreenMetric held virtual workshops with university representatives from each country: Nottingham University (United Kingdom), Mahidol University (Thailand), Universitas Riau (Indonesia), Fundación Universidad del Norte Barranquilla (Colombia), University of Sharjah (United Arab Emirates), RUDN University (Russia), University of Campinas (Brazil), Universidad de Sonora (Mexico) and University of Zanjan (Iran).

In 2021 the virtual workshops continued with new representatives and more countries hosting them, including Universiti Putra Malaysia (Malaysia), University of Szeged (Hungary), Mahidol University (Thailand), University of Zanjan (Iran), Tarbiat Modares University (Iran), Universitas Sebelas Maret (Indonesia), Universidad Hemisferios (Ecuador), RUDN University (Russia), Universidad Tecnologica de Pereira (Colombia), Universidad Autonoma de Nuevo Leon (Mexico), Inseec U (France).

As part of its thematic priorities, UI GreenMetric with University of Sao Paolo, Universitas Indonesia, El Bosque University, University of Szeged, University of Sharjah, Escuela Superior Politécnica de Chimborazo, and the University of Sousse, ran UI GreenMetric Online Course on Sustainability 2021 for Team A. This course is the first unique global online course offered by top universities in four continents and seven countries to their students. It gives the students an understanding of the key challenges and pathways to sustainable development in Brazil, Colombia, Ecuador, Hungary, Indonesia, Tunisia, and The United Arab Emirates. The course is designed as an undergraduate-level introduction to the most challenging question facing our generation: how can countries evolve in ways that are socially inclusive and environmentally sustainable?. The course discusses the complex

interplay between the economy, social life, and our planet's physical environment, as well as the consequences of human activities on the planet's environment and the solutions.

In 2022 UI GreenMetric organized workshops with university representatives from each country like Universidad EAFIT (Colombia), Mahidol University (Thailand), Universidad Tecnologica ECOTEC (Ecuador), RUDN University (Russia), University of Sharjah (United Arab Emirates), and Universitas Multimedia Nusantara (Indonesia). In 2023 the national workshops of UI GreenMetric were hosted by among others the Universidad Nacional Autónoma de México (Mexico), University of Aquila (Italy), Bukhara State University (Uzbekistan), Institut Teknologi Sumatera (Indonesia), Tarbiat Modares University (Iran), Universidade Federal de Mato Grosso do Sul (Brazil), University San Fransisco of Quito (Ecuador), Universidad Militar Nueva Granada (Colombia), Hasan Kalyoncu University (Turkiye), Cyprus International University (Cyprus), Khwaja Fareed University of Engineering and Information Technology (Pakistan), Batangas State University (Philippines), RUDN University (Russia) and UI GreenMetric Results and Awards hosted by Abu Dhabi University (UAE). In 2024, the national workshops of UI GreenMetric were hosted by Lagos State University, Lagos, Nigeria; BUAP, Pue., Mexico; Ege University, Izmir, Turkey; Universidad de Vigo, Vigo, Spain; UPEC. Tulcán, Ecuador; KFUEIT, Punjab, Pakistan; Batangas State University, Batangas, Philippines; Universitas Tanjungpura, Pontianak, Indonesia; University of Pecs, Pecs, Hungary; RUDN University, Moscow, Russia dan Bukhara State University, Uzbekistan.

UI GreenMetric Online Course on Sustainability also continues its implementation. There are three online courses on the topic of Global Practices of SDGs offered this year. In Indonesia 17 universities collaborate to organize online courses for their students. The 17 universities are Institut Teknologi Nasional Bandung, Institut Teknologi Sepuluh Nopember, Telkom University, Universitas Diponegoro, Universitas Gadjah Mada, Universitas Islam Negeri Jakarta, Universitas Lampung, Universitas Muhammadiyah Malang, Universitas Negeri Surabaya, Universitas Padjadjaran, Universitas Palangka Raya, Universitas Pancasila, Universitas Pattimura, Universitas Sam Ratulangi, Universitas Sebelas Maret, Universitas Sriwijaya, and Universitas Syiah Kuala. Online course for Team B is also organized by National Pingtung University of Science and Technology (Taiwan), University of Pecs (Hungary), Universitas Diponegoro (Indonesia), Universitas Negeri Yogyakarta (Indonesia), Mahidol University (Thailand), Zonguldak Bulent Ecevit University (Turkey). In 2024, there are 1 new university from Team A Oguz Han Engineering and Technology University, Turkmenistan and Arab American University Palestine (Palestine) for team B

10. What are our plans?

UI GreenMetric always takes into consideration how to better achieve its own goals, how to learn from constructive criticism about rankings and the advancement of ESD, and how to learn from the diverse experience of participants with different goals and in different settings. We plan to continue developing the questionnaire and give more consultation services to the members of its network. We will also strengthen our networks through innovative programs.

11. How to contact us?

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Website: http://www.greenmetric.ui.ac.id/

Questionnaire (Criteria and Indicators)

There are six main categories in the questionnaire which consist of setting and infrastructure (SI), energy and climate change (EC), waste (WS), water (WR), transportation (TR), and education and research (ED). These categories are divided into several sections, with detailed explanations of the questions. In general, you can use the data to reflect your university in the best possible way. It is recommended to attach the campus maps of your campus as it serves as important evidence to support the explanation of various criteria.

1. Setting and Infrastructure (SI)

The campus setting and infrastructure information will provide the basic information about the university's consideration of a green environment. This indicator also shows whether the campus deserves to be called a Green/Sustainability Campus. The aim is to encourage the participating universities to provide more spaces for greenery and safeguard the environment, as well as the development of sustainable energy.

1.1. Types of the higher education institution

Please select one of the following options:
[1] Comprehensive
[2] Specialized higher education institution

1.2. Climate

Please select one of the following options that clearly describes the climate in your region:
[1] Tropical wet
[2] Tropical wet and dry
[3] Semiarid
[4] Arid
[5] Mediterranean
[6] Humid subtropical
[7] Marine west coast/oceanic climate
[8] Humid continental
[9] Subarctic

1.3. Number of campus sites

Please state the number of separate locations in which your university runs academic purposes. For example, if your university has one campus or more than one campus in different districts, towns, or cities that are separated from one another, please state the total number of university locations. If more than one campus site is stated, all data from those campuses should consistently be applied for the related indicators. The evidence provided may also include campus maps or master plan campus showing showing the location, area size, or distribution of facilities relevant to the indicators

Evidence is required

1.4. Campus setting

Please select one of the following options:
[1] Rural
[2] Suburban
[3] Urban
[4] City center
[5] High-rise building area

Evidence is required

1.5. `Total campus area (m^2)

Please state the total areas of your campus (in square meters). It is expected that the total area counted is only those in which academic activities are conducted (including the administration buildings, student and staff

activities buildings, classes, dormitories, and canteens). Forest and fields and other areas can only be counted if they are used for academic purposes (i.e., field lecture, practicum, educational training, etc.). The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators

Evidence is required

1.6. Total campus ground floor area of buildings (m^2)

Please provide information on the area occupied by buildings, by providing the total area of the ground floor parts of your university buildings on your campus.

1.7. Total campus buildings area (m^2)

Please provide information on the area occupied by buildings, by providing the total floor area (all floors) including ground floors and other floors of your university buildings on your campus. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators

Evidence is required

1.8. The ratio of open space area to total area (SI.1)

The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please provide the percentage of ratio open space area to total area on campus.

Formula: (((1.5-1.6)/1.5) x 100%)

Please select one of the following options:
[1] ≤ 1%
[2] > 1 - 80%
[3] > 80 - 90%
[4] > 90 - 95%
[5] > 95%

Evidence is required

1.9. Total area on campus covered in forest vegetation used for research, teaching, and/or community engagement (SI.2)

Please provide the percentage of the area on campus covered in vegetation in the form of forest (an area covered mainly with big trees and its biodiversity, natural and/or planted; a large amount of dense mass of vertical growth and undergrowth for conservation purposes), owned by the university, to the total campus area. The forested area must be within the university's ownership and used for academic or community purposes such as research, teaching, or community engagement. In case your university is in arid zone, you can claim the area that you develop for forest according to the requirements of the zone as area on campus covered in forest vegetation. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators.

Please select one of the following options:
[1] ≤ 2% (provide the total area in square meters)
[2] > 2 - 10% (provide the total area in square meters)
[3] > 10 - 25% (provide the total area in square meters)
[4] > 25 - 35% (provide the total area in square meters)
[5] > 35% (provide the total area in square meters)

Evidence is required

1.10. Total area on campus covered in planted vegetation (SI.3)

Please provide the percentage of the area on campus covered in planted vegetation **excluding** forests to the total campus area. Lawns, gardens, green roofs, internal planting, and vertical garden can be counted, for vegetation purposes. All claimed areas must be supported by clear visual evidence, including site maps, building names, and sectional images showing the exact locations of the vegetation areas. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select one of the following options:

[1] ≤ 10% (provide the total area in square meters)
[2] > 10 - 20% (provide the total area in square meters)
[3] > 20 - 30% (provide the total area in square meters)
[4] > 30 - 50% (provide the total area in square meters)
[5] > 50% (provide the total area in square meters)

Evidence is required

1.11. Total area on campus for water absorption besides the forest and planted vegetation (SI.4)

Please provide the percentage of the total area of ground surfaces (i.e., soil, grass, concrete block, synthetic field, etc.) dedicated for water absorption to the total campus area. A larger water absorption area is desirable. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select one of the following options:

[1] ≤ 2% (provide the total area in square meters)
[2] > 2 - 10% (provide the total area in square meters)
[3] > 10 - 20% (provide the total area in square meters)
[4] > 20 - 40% (provide the total area in square meters)
[5] > 40% (provide the total area in square meters)

Evidence is required

1.12. Total number of regular students

Please provide the total number of regular students (full-time and part-time) at your university. A regular student is defined as a registered and active student in one semester (Effective Full-Time Students (EFTS)), excluding short-term students (i.e., foreign exchange, continuing education, and short course students).

1.13. Total number of online students

The total number of students registered as online-only students (excluding regular students), at your university.

1.14. Total number of academic and administrative staff

Please state the total number of effective full-time academic staff (lecturers, professors, and researchers) and administrative staff working in your university.

1.15. The total open space area divided by the total campus population (SI.5)

Please provide the open space area per person on your campus. The areas included in the calculation of open space here are those within the campus. If there is a campus forest used for research, it can be considered under forest vegetation, but for this indicator, it cannot be included.

Formula: ((1.5-1.6)/(1.12+1.14))
Please select one of the following options:

[1] ≤ 10 m^2/person
[2] > 10 – 20 m^2/person
[3] > 20 – 40 m^2/person
[4] > 40 – 70 m^2/person
[5] > 70 m^2/person

1.16. Total university budget (in US Dollars)

Please provide the average university budget per annum over the last 3 years in US Dollars.

1.17. University budget for sustainability efforts (in US Dollars)

Please provide the average university budget for infrastructure, facilities, personnel costs, research, programs, and others related to the sustainability efforts per annum over the last 3 years in US Dollars. Evidence may also be listed according to each UI GreenMetric category. For each category, please state the amount allocated in USD and its percentage of the total sustainability budget.

Evidence is required

1.18. Percentage of university budget for sustainability efforts (SI.6)

Please provide the percentage calculation of the sustainability budget (infrastructure, facilities, personnel cost, research, programs and others related to the sustainability efforts) to the total university budget. Please select one of the following options:

[1] ≤ 1%
[2] > 1 - 5%
[3] > 5 - 10%
[4] > 10 - 15%
[5] > 15%

1.19. Campus facilities for disabled, special needs, and/or maternity care (SI.7)

Please provide information on-campus facilities for disabled, special needs, and or maternity care (i.e., library, classroom, toilet, lactation room, transportation, daycare). For each facility, provide a campus maps showing the locations of these facilities and clearly identify the buildings with these services. You can also list each building, specifying the type of facility available in each, such as in a table format (e.g., Building 1 - lactation room, accessible toilet). The evidence provided should be clear, showing exact locations on the map. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select one of the following options:

[1] None
[2] Policy is in place
[3] Facilities are in the planning stage
[4] Facilities are partially available and operated
[5] Facilities exist in all buildings and are fully operated

Evidence is required

1.20. Security and safety facilities (SI.8)

Please provide information on on-campus facilities' support for security and safety for campus residents. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select one of the following options:

[1] Passive security and safety system
[2] Security and safety infrastructure (CCTV, emergency hotline/button) available and fully function
[3] Security and safety infrastructure (CCTV, emergency hotline/button, certified personnel, fire extinguisher, hydrant) available and fully function
[4] Security and safety infrastructure available and fully functioning and security responding time for accidents, crime, fire, and natural disasters is more than 5 minutes
[5] Security and safety infrastructure available and fully functioning and security responding time for accidents, crime, fire, and natural disasters is less than 5 minutes

Evidence is required

1.21. Health infrastructure facilities for students, academics, and administrative staff's well-being (SI.9)

Please provide information on Infrastructure that supports student, academics, and staff's well-being on campus, particularly for health services (physical and mental). The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select one of the following options:
[1] Health infrastructure (first aid) is not available.
[2] Health infrastructure (first aid, emergency room, clinic, and personnel) are available
[3] Health infrastructure (first aid, emergency room, clinic, and certified personnel) are available
[4] Health infrastructure (first aid, emergency room, clinic, hospital, and certified personnel) are available
[5] Health infrastructure available (first aid, emergency room, clinic, hospital and certified personnel), system and accessible for public

Evidence is required

1.22. Conservation: plant (flora), animal (fauna), or wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities (SI.10)

Please provide information on the campus program for the conservation of plant (flora), animal (fauna), or wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities. Your university can provide information such as: program, type of species, number of species, duration of conservation, targeted population and or conservated area, etc. can be used as a baseline. Conservation progress can be shown as a percentage of the total planned program, whether already implemented or ongoing, and should reflect annual achievements. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. We encourage institutions to provide a list detailing the number of species identified as a baseline, as well as the species planned for conservation and the timeline for their conservation, to ensure that the campus has a clear and structured plan. Please select one of the following options:
[1] Conservation program in preparation
[2] Conservation program 1-25% implemented
[3] Conservation program 25-50% implemented
[4] Conservation program 50-75% implemented
[5] Conservation program >75% implemented

Evidence is required

* If conservation is conducted in another location, your university can include them in the evidence document and put that conservation area into the total campus area (question 1.5)

1.23. Planning, implementation, monitoring and/or evaluation of all programs related to Setting and Infrastructure through the utilization of Information and Communication Technology (ICT) (SI.11)

Please provide information regarding planning, implementation, monitoring, and/or evaluation of all programs related to setting and infrastructure through the utilization of ICT on campus. We recommend dashboard to input SI data. Please select one of the following options
[1] None
[2] The program is currently in the planning stage
[3] Program has been implemented
[4] Program has been implemented and evaluated
[5] Program has been implemented, evaluated, and is currently revised

Evidence is required

1.24. Impact of Setting and Infrastructure programs in supporting the Sustainable Development Goals (SDGs)

Please indicate the extent to which your university's Setting and Infrastructure (SI) programs contribute to

the achievement of the UN Sustainable Development Goals (SDGs). Select the option that best reflects the number of SDGs directly supported by these programs. Please select one of the following options
[1] Low impact (supporting 1–2 SDGs)
[2] Moderate impact (supporting 3–5 SDGs)
[3] Significant impact (supporting 6–9 SDGs)
[4] High impact (supporting 10–13 SDGs)
[5] Very high impact (supporting 14–17 SDGs)

Evidence is required

2. Energy and Climate Change (EC)

The university's attention to the use of energy and climate change issues is the indicator with the highest weighting 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 energy resources.

2.1. Energy efficient appliances usage (EC.1)

Please compare the number of energy-efficient appliances and the number of conventional ones used on your campus and provide them in percentages. Examples of energy-efficient appliances are A/C with environmentally friendly technology, LED light bulbs, Energy Star-certified computers, etc. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select one of the following options:
[1] < 1%
[2] 1 - 25%
[3] > 25 - 50%
[4] > 50 - 75%
[5] > 75%

Evidence is required

2.2. Total campus' smart building area (m^2)

Please provide the information on the total area (including ground floors and other floors) of your university smart buildings on your campus. A building that is classified as a smart building must have the general requirements of smart building features: automation, safety (physical security, presence sensors, video surveillance/CCTV), energy, water (sanitation), indoor environment (thermal comfort and air quality), and lighting (Illumination, low power lighting). An example of detailed general requirements can be found in **Appendix 3** and the **template of evidence**. We expect that your smart buildings are supported with **Building Management System (BMS)/Building Information Modelling (BIM)/Building Automation System (BAS)/Facility Management System (FMS)** and are equipped with at least 5 (five) of the remaining identified requirements, where possible, interfaced with the BMS/BIM/BAS/FMS. BMS/BIM/BAS/FMS, which is a hardware and software system for data collection, management, control, and monitoring of the mechanical and/or electrical systems of the building, for example, ventilation, hydraulic, lighting systems, electro-motor force, security systems, fire prevention. All features should be established to generate a beneficial environmental impact over the building lifecycle. The efficiency introduced by the usage of smart appliances in the building(s) should be elaborated on an annual sustainability report.

2.3. Smart building implementation (EC.2)

Please provide the stage of smart building implementation in your university (percentage of the total floor areas of the smart building to the total all floor building areas (smart and non-smart building area)). The

evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators.

Formula: ((2.2/1.7) x 100%)

Please select one of the following options:
[1] < 1%
[2] 1 - 25%
[3] > 25 - 50%
[4] > 50 - 75%
[5] > 75%

Evidence is required

2.4. Number of renewable energy sources on campus (EC.3)

The availability of more sources of renewable energy is considered to indicate that a university has put more effort into providing alternative energy. Please select the number of renewable energy sources used on your campus:
[1] None
[2] 1 source
[3] 2 sources
[4] 3 sources
[5] > 3 sources

2.5. Renewable energy sources and their amount of the energy produced (in kilowatt-hour)

Please select one or more of the following alternative energy sources used on your campus and please provide the amount of the energy produced in kilowatt-hours. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. If you have other sources of renewable energy, you may include and explain them in the evidence.

[1]	None	
[2]	Bio diesel	(provide amount in kilowatt-hour)
[3]	Clean biomass	(provide amount in kilowatt-hour)
[4]	Solar power	(provide amount in kilowatt-hour)
[5]	Geothermal	(provide amount in kilowatt-hour)
[6]	Wind power	(provide amount in kilowatt-hour)
[7]	Hydropower	(provide amount in kilowatt-hour)
[8]	Combine Heat and Power	(provide amount in kilowatt-hour)

Evidence is required

Note:

- **Bio diesel**: Bio diesel is a renewable energy source made from natural oils and fats, typically used as an alternative to traditional diesel fuel in transportation and machinery.
- **Clean biomass**: Clean biomass refers to organic materials, such as wood, agricultural residues, or algae, used to produce energy through combustion or biochemical processes, with minimal environmental impact.
- **Solar power**: Solar power harnesses energy from the sun using photovoltaic cells or solar thermal systems to generate electricity or heat.
- **Wind power**: Wind power generates electricity by using wind turbines to convert the kinetic energy from wind into electrical energy.
- **Hydropower**: Hydropower, or hydroelectric power, generates electricity by using the energy of moving water, typically from rivers or dams, to drive turbines.
- **Combine Heat and Power**: Combined Heat and Power (CHP) systems simultaneously produce electricity and useful heat from the same energy source, improving overall energy efficiency.

2.6. Electricity usage per year (in kilowatt hours)

Please provide the total energy used in the last 12 months in your entire university area (in kilowatt hours or kWh) for all purposes such as lighting, heating, cooling, running university laboratories, etc.

Evidence is required

2.7. Total electricity usage divided by total campus' population (kWh per person) (EC.4)

Please provide the total electricity usage divided by the total campus' population.

Formula: (2.6) / (1.12+1.14)

Please select one of the following options:

[1] ≥ 2400 kWh
[2] > 1500 – 2400 kWh
[3] > 600 - 1500 kWh
[4] ≥ 250 – 600 kWh
[5] < 250 kWh

2.8. The ratio of renewable energy production divided by total energy usage per year (EC.5)

Please provide the ratio of renewable energy production divided by the total energy usage per year. Please select one of the following options:

[1] ≤ 0.5%
[2] > 0.5 - 1%
[3] > 1 – 2%
[4] > 2 – 25%
[5] > 25%

Evidence is required

2.9. Elements of green building implementation as reflected in all buildings (EC.6)

Please provide information on the elements of green building implementation as reflected in all buildings. (i.e., natural ventilation, full natural daylighting, the existence of a building energy manager, the existence of a Green Building, etc.). Green Building elements classification can be found in Appendix 2 and the template of evidence. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select one that applies from the following list:

[1] None. Please select this option if there is no green building implementation at your university.
[2] 1 element
[3] 2 elements
[4] 3 elements
[5] > 3 elements

Evidence is required

2.10. Greenhouse gas emission reduction program (EC.7)

Please select a condition that reflects the current condition of your university in providing formal programs (from any scope) to reduce greenhouse gas emissions. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select from the following options:

[1] None. Please select this option if the reduction program is needed, but nothing has been done.
[2] Program in preparation
[3] Program(s) aims to reduce one out of three scopes emissions (Scope 1 or 2 or 3)
[4] Program(s) aims to reduce two out of three scopes emissions (Scope 1 and 2 or Scope 1 and 3 or Scope 2 and 3)
[5] Program(s) aims to reduce all three scopes emissions (Scope 1, 2, and 3)

Evidence is required

Please use Table 4 to answer question 2.10 on GHG emissions in your university.

Table 4 List of greenhouse gas emission sources (Woo & Choi, 2013)

	Emission data	Definition
Scope 1	Stationary combustion	Stationary combustion refers to the burning of fuels to produce electricity, steam, and heat in a fixed location, such as boilers, burners, heaters, kilns, and engines.
	Mobile combustion	Burning of fuels by institution-owned transportation devices
	Process emissions	Direct greenhouse gas (GHG) emissions from physical or chemical processes rather than from fuel combustion
	Fugitive emissions	Hydrofluorocarbon releases during the use of refrigeration and air conditioning equipment and methane leakage from natural gas transport
Scope 2	Purchased electricity	Indirect GHG emissions result from the generation of the electricity purchased and used by the institution
Scope 3	Waste	Indirect GHG emissions resulting from the incineration or landfill of your institution's solid waste
	Purchased waste	Indirect GHG emissions resulting from the generation of water supply purchased and used by the institution
	Commuting	Indirect GHG emissions resulting from regular commuting from and to institutions by students and employees (i.e., reducing regular commuting by using shared vehicles, carpooling)
	Air travel	Indirect GHG emissions resulting from air travels paid by institutions (i.e., reducing the number of staff air travel opportunities)

2.11. Total carbon footprint (CO_2 emission in the last 12 months, in metric tons)

Please provide the total carbon footprint of your university. Please exclude carbon footprints from flights and secondary carbon sources, such as dishes and clothes. To calculate your university carbon footprint, please refer to **Appendix 4**.

Evidence is required

2.12. Total carbon footprint divided by total campus' population (metric tons per person) (EC.8)

Please provide the total carbon footprint divided by the total campus population.

Formula: (2.11)/(1.12+1.14)

Please select one of the following options:
[1] ≥ 2.05 metric tons
[2] > 1.11 - 2.05 metric tons
[3] > 0.42 - 1.11 metric tons
[4] > 0.10 - 0.42 metric tons
[5] < 0.10 metric tons

2.13. Number of innovative program(s) in energy and climate change (EC.9)

Please provide the total number of innovative program(s) in energy and climate change, i.e. (Smart Indoor Health and Comfort System, new energy approach, new climate change mitigation problem solutions, etc). Innovative programs are defined as those created and developed by the university, leading to new approaches or solutions in energy use, climate change mitigation, or sustainability efforts. This includes novel technologies, patented inventions, campus-specific products, or recognized discoveries that directly

contribute to energy efficiency or climate change solutions. Note that technologies or products purchased from external manufacturers (e.g., factory-made devices or systems) do not qualify. Only those developed by the university itself, with recognition, intellectual property rights (such as patents, copyrights, or inventions) are considered as innovative. Please select one of the following options:
[1] None
[2] 1 program
[3] 2 programs
[4] 3 programs
[5] More than 3 programs

Evidence is required

2.14. Impactful university program(s) on climate change (EC.10)

Please select program(s) on climate change risks, impacts, mitigation, adaptation, impact reduction, and early warning. Supporting evidence must include the training materials and a list of participants. Please select one of the following options:
[1] None
[2] Program in preparation
[3] Provide training, educational materials, seminars/conferences, and activities which are implemented by surrounding communities.
[4] Provide training, educational materials, seminars/conferences, and activities which are implemented by communities at the national level.
[5] Provide training, educational materials, seminars/conferences, and activities which are implemented by communities at the international level.

Evidence is required

2.15. Planning, implementation, monitoring and/or evaluation of all programs related to Energy and Climate Change through the utilization of Information and Communication Technology (ICT) (EC.11)

Please provide information regarding planning, implementation, monitoring, and/or evaluation of all programs related to energy and climate change through the utilization of ICT on campus. We recommend dashboard to input EC data. Please select one of the following options
[1] None
[2] The program is currently in the planning stage
[3] Program has been implemented
[4] Program has been implemented and evaluated
[5] Program has been implemented, evaluated, and is currently revised

Evidence is required

2.16. Impact of Energy and Climate Change programs in supporting the Sustainable Development Goals (SDGs).

Please indicate the extent to which your university's Energy and Climate Change (EC) programs contribute to the achievement of the UN Sustainable Development Goals (SDGs). Select the option that best reflects the number of SDGs directly supported by these programs. Please select one of the following options
[1] Low impact (supporting 1–2 SDGs)
[2] Moderate impact (supporting 3–5 SDGs)
[3] Significant impact (supporting 6–9 SDGs)
[4] High impact (supporting 10–13 SDGs)
[5] Very high impact (supporting 14–17 SDGs)

Evidence is required

3. Waste (WS)

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

3.1. 3R (Reduce, Reuse, Recycle) program for university's waste (WS.1)

Please select a condition that reflects the current condition of your university's efforts to encourage staff and students to do 3R (Reduce, Reuse, Recycle) waste, from the following options:

[1] None
[2] 3R program in preparation
[3] 3R program 1 - 50% implemented
[4] 3R program > 50 - 75% implemented
[5] 3R program > 75% implemented

Evidence is required

3.2. Total volume of paper and plastic produced this year (tons)

Please provide the total volume of paper and plastic produced in the last 12 months in your entire university area

Evidence is required

3.3. Total volume of paper and plastic produced last year (tons)

Please provide the total volume of paper and plastic produced in the last year in your entire university area

Evidence is required

3.4. Program to reduce the use of paper and plastic on campus (WS.2)

Please select one from the following options which best reflects the current condition of your university in establishing a formal policy to reduce the use of paper and plastic (i.e., double-sided printing policy program, the use of tumblers, the use of reusable bags, necessary print, reusable goodie bags, digital notes and books, paperless meetings, eco-friendly packaging etc.):

[1] None
[2] 1 - 3 programs
[3] 4 - 6 programs
[4] 7 - 10 programs
[5] More than 10 programs

Evidence is required

3.5. Total volume organic waste produced this year (tons)

Please provide the total volume of organic waste produced in the last 12 months in your entire university area

Evidence is required

3.6. Total volume organic waste produced last year (tons)

Please provide the total volume of organic waste produced in the last year in your entire university area

Evidence is required

3.7. Total volume organic waste treated this year (tons)

Please provide the total volume of organic waste treated in the last 12 months in your entire university area

Evidence is required

3.8. Organic waste treatment (WS.3)

The method of organic waste (i.e., garbage, discarded vegetable, food, and plant matter) treatment in your university. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select an option that best describes your university's overall treatment of the bulk of organic waste:

[1] Open dumping
[2] Partial (1 - 35% treated)
[3] Partial (> 35 - 65% treated)
[4] Partial (> 65 - 85% treated)
[5] Extensive (> 85% treated)

Evidence is required

3.9. Total volume inorganic waste produced this year (tons)

Please provide the total volume of inorganic waste produced in the last 12 months in your entire university area

Evidence is required

3.10. Total volume inorganic waste produced last year (tons)

Please provide the total volume of inorganic waste produced in the last year in your entire university area

Evidence is required

3.11. Total volume inorganic waste treated this year (tons)

Please provide the total volume of inorganic waste treated in the last 12 months in your entire university area

Evidence is required

3.12. Inorganic waste treatment (WS.4)

Please describe the method of non-toxic inorganic waste (i.e., rubbish/garbage, trash, discarded paper, plastic, metal, electronic, etc.) treatment in your university. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select an option that best describes your university's overall treatment of the bulk of the inorganic waste:

[1] Burned in the open area
[2] Partial (1 - 35% treated)
[3] Partial (> 35 - 65% treated)
[4] Partial (> 65 - 85% treated)
[5] Extensive (> 85% treated)

Evidence is required

3.13. Total volume toxic waste produced this year (tons)

Please provide the total volume of toxic waste produced in the last 12 months in your entire university area

Evidence is required

3.14. Total volume toxic waste produced last year (tons)

Please provide the total volume of toxic waste produced in the last year in your entire university area

Evidence is required

3.15. Total volume toxic waste treated this year (tons)

Please provide the total volume of toxic waste treated in the last 12 months in your entire university area

Evidence is required

3.16. Toxic waste treatment (WS.5)

Please select a condition that reflects the current condition of how your university handles toxic wastes. For example, battery, fluorescent lamps, chemical waste, etc). The handling process includes whether toxic wastes are dealt with separately, for example, by classifying and handling them over to a third party or certified handling companies. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators.

Please select one of the following options:
[1] Not managed
[2] Partial (1 - 35% treated)
[3] Partial (> 35 - 65% treated)
[4] Partial (> 65 - 85% treated)
[5] Extensive (> 85% treated) or campus produces a minimum amount of toxic waste

Evidence is required

3.17. Sewage disposal (WS.6)

Please describe the primary method of sewage treatment at your university. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select an option that best describes how the bulk of the sewage is disposed of:
[1] Untreated into waterways
[2] Treated with preliminary treatment
[3] Treated with primary treatment
[4] Treated with secondary treatment
[5] Treated with tertiary treatment

Evidence is required

Note:

- **Preliminary Treatment**: consists of screening to remove large solids, grit removal to eliminate sand and other heavy materials, and oil and grease removal. Evidence can be documentation of grit chambers and screening facilities that remove large solids and debris before the sewage is discharged.
- **Primary Treatment**: includes sedimentation and coagulation-flocculation. Evidence can be diagrams or operational records of sedimentation tanks where physical processes remove settleable solids from the sewage
- **Secondary Treatment**: attached growth systems or suspended growth systems. Evidence can be reports or photos of biological treatment processes such as activated sludge systems or biofilters that further reduce organic matter in the sewage
- **Tertiary Treatment**: offers reusability options such as disinfection, filtration, and advanced oxidation to further purify the water for reuse in industrial processes or irrigation. Evidence can be water quality test results or system descriptions showing advanced filtration and disinfection processes that remove remaining impurities and pathogens before discharge.

3.18. Planning, implementation, monitoring and/or evaluation of all programs related to Waste Management through the utilization of Information and Communication Technology (ICT) (WS.7)

Please provide information regarding planning, implementation, monitoring, and/or evaluation of all programs related to waste management through the utilization of ICT on campus. We recommend dashboard to input your Waste data. Please select one of the following options
[1] None
[2] The program is currently in the planning stage
[3] Program has been implemented
[4] Program has been implemented and evaluated
[5] Program has been implemented, evaluated, and is currently revised

Evidence is required

3.19. Impact of Waste Management programs in supporting the Sustainable Development Goals (SDGs).

Please indicate the extent to which your university's Waste Management (WS) programs contribute to the achievement of the UN Sustainable Development Goals (SDGs). Select the option that best reflects the number of SDGs directly supported by these programs. Please select one of the following options
[1] Low impact (supporting 1–2 SDGs)
[2] Moderate impact (supporting 3–5 SDGs)
[3] Significant impact (supporting 6–9 SDGs)
[4] High impact (supporting 10–13 SDGs)
[5] Very high impact (supporting 14–17 SDGs)

Evidence is required

4. Water (WR)

Water usage on campus is another important indicator 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.

4.1. Water conservation program and implementation (WR.1)

Please select a condition describing your current stage in a program that is systematic and formalized, and supports water conservation (i.e., for lakes and lake management systems, rain harvesting systems, water tanks, bio pore, recharge well, etc.) in your university, from the following options. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators.
[1] None. Please select this option if the conservation program is needed, but nothing has been done.
[2] Program in preparation
[3] 1 - 25% water conserved
[4] > 25 - 50% water conserved
[5] > 50% water conserved

Evidence is required

4.2. Water recycling program implementation (WR.2)

Please select a condition that reflects the current condition of your university in establishing formal policies for water recycling programs (i.e., the use of recycled water for toilet flushing, car washing, watering plants, etc.). The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select an option that describes the current stage of your program:

[1] None. Please select this option if the water recycling program is needed, but nothing has been done.
[2] Program in preparation
[3] 1 - 25% water recycled
[4] > 25 - 50% water recycled
[5] > 50% water recycled

Evidence is required

4.3. Water efficient appliances usage (WR.3)

Water-efficient appliance usage are replacing conventional appliances. This also includes the use of water-efficient appliances (i.e., using censored/automated handwashing taps, highly efficient toilet flush, etc.). The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select one of the following options:

[1] < 20% of water efficient appliances installed
[2] 20 - 40% of water efficient appliances installed
[3] > 40 - 60% of water efficient appliances installed
[4] > 60 - 80% of water efficient appliances installed
[5] > 80% of water efficient appliances installed

Evidence is required

4.4. Consumption of treated water (WR.4)

Please indicate the percentage of treated water consumed from water treatment systems compared to all water sources (i.e., rainwater tank source, groundwater, surface water, etc.) in your university. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. The water source can be from the treated water installation inside and/or outside your university. Please select one of the following options:

[1] None
[2] 1 - 25% treated water consumed
[3] > 25 - 50% treated water consumed
[4] > 50 - 75% treated water consumed
[5] > 75% treated water consumed

Evidence is required

4.5. Water pollution control in campus area (WR.5)

Please indicate the stage of your campus water pollution control to prevent polluted water from entering the water system. Polluted water on campus could include stormwater runoff contaminated with litter and chemicals, wastewater from laboratories containing hazardous substances, and drainage systems clogged with pollutants like oil and grease from parking lots. For example, the mechanism to regularly check water quality (Physical, Chemical, and biological parameters) on your campus, programs to overcome water pollution. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select one of the following options:

[1] Policy and programs for water pollution control are in the designing stage
[2] Policy and programs for water pollution control are in the construction stage
[3] Policy and programs for water pollution control are in the early implementation stage
[4] Policy and programs for water pollution control are fully implemented and monitored occasionally
[5] Policy and programs for water pollution control are fully implemented and monitored regularly

Evidence is required

4.6. Planning, implementation, monitoring and/or evaluation of all programs related to Water Management through the utilization of Information and Communication Technology (ICT) (WR6)

Please provide information regarding planning, implementation, monitoring, and/or evaluation of all programs related to water management through the utilization of ICT on campus. We recommend dashboard to input your Water data. Please select one of the following options
[1] None
[2] The program is currently in the planning stage
[3] Program has been implemented
[4] Program has been implemented and evaluated
[5] Program has been implemented, evaluated, and is currently revised

Evidence is required

4.7. Impact of Water Management programs in supporting the Sustainable Development Goals (SDGs).

Please indicate the extent to which your university's Water Management (WR) programs contribute to the achievement of the UN Sustainable Development Goals (SDGs). Select the option that best reflects the number of SDGs directly supported by these programs. Please select one of the following options
[1] Low impact (supporting 1–2 SDGs)
[2] Moderate impact (supporting 3–5 SDGs)
[3] Significant impact (supporting 6–9 SDGs)
[4] High impact (supporting 10–13 SDGs)
[5] Very high impact (supporting 14–17 SDGs)

Evidence is required

5. Transportation (TR)

Transportation systems play an important role in carbon emission and pollutant levels in 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, canoes, snowboards, electric vehicles (cars, motorcycles, bicycles, scooters) etc.) will encourage a healthier environment. The pedestrian policy will encourage 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.

5.1. Number of cars actively used and managed by the university

Please indicate the number of cars operated on campus owned and managed by the university (including those outsourced to third parties). Please consider only cars with emissions (i.e. cars with combustion engines).

5.2. Number of cars entering the university daily

Please indicate the average number of cars that enter your university daily based on a balanced sample, taking into consideration terms and holiday periods. Please consider only cars with emissions (i.e., cars with combustion engines).

5.3. Number of motorcycles entering the university daily

Please indicate the average number of motorcycles that enter your university daily based on a balanced sample, taking into consideration terms and holiday periods. Please consider only motorcycles/motorbikes with emissions (i.e., motorcycles/motorbikes with combustion engines).

5.4 The total number of vehicles (cars and motorcycles with combustion engines) divided by the total campus' population (TR.1)

Please provide the total number of vehicles divided by the total campus' population.

Formula: (5.1+5.2+5.3)/(1.12+1.14)

Please select one of the following options:
[1] ≥ 1
[2] > 0.5 - 1
[3] > 0.125 - 0.5
[4] > 0.045 - 0.125
[5] < 0.045

Evidence is required

5.5. Shuttle services (TR.2)

Please describe the condition of the availability of shuttles for journeys within the campus and whether the ride is free or charged, operated by a university or by other parties. The evidence provided may also include campus maps showing the location, area size, route, or distribution of facilities relevant to the indicators. Please select an option from the following options. If shuttle service is not provided due to positive reason(s) such as the campus area is small, another zero-emission transportation service is available, please select "not applicable".
[1] Possible but not provided by university
[2] Provided (by university or other parties) and regular but not free
[3] Provided (by university or other parties) and the university contributes a part of the cost
[4] Provided by university, regular, and free
[5] Provided by university, regular, and zero emission vehicle. Or shuttle use is not applicable

Evidence is required

5.6. Number of shuttles operating in the university

Please indicate the number of campus shuttles operating in your university. The campus shuttle can be in the form of buses, multi-purpose vehicle (MPV) cars, or minivans which are operated inside the campus.

5.7. Average number of passengers of each shuttle

Please indicate the average number of passengers of each shuttle on one trip. You can estimate from the seat availability of the shuttle.

5.8. Total trips of each shuttle service each day

Please indicate the total number of trips for each shuttle service per day.

5.9. Zero Emission Vehicles (ZEV) availability on campus (TR.3)

Please describe the extent to which the use of Zero Emission Vehicles (i.e., bicycles, canoes, snowboards, electric vehicles (cars, motorcycles, bicycles, scooters), etc.) is supported for transportation on your campus. Please select an option from the following list that applies to your campus:
[1] ZEV are not available
[2] ZEV use is not possible or practical
[3] ZEV are available, but not provided by university
[4] ZEV are available, provided by the university and charged
[5] ZEV are available, and provided by the university for free*

Evidence is required

*Regularly used by campus academic society

5.10. Average number of Zero Emission Vehicles (ZEV) on campus per day

Please indicate the average number of Zero Emission Vehicles bicycles, canoes, snowboards, electric vehicles (cars, motorcycles, bicycles, scooters), etc.) on your campuses daily which include vehicles both owned by the university and privately owned.

5.11. The total number of Zero Emission Vehicles (ZEV) divided by the total campus population (TR.4)

Please provide the total number of Zero-Emission Vehicles (ZEV) divided by the total campus population.
Formula: (5.10)/(1.12+1.14)
Please select one of the following options:
[1] ≤ 0.002
[2] > 0.002 - 0.004
[3] > 0.004 - 0.008
[4] > 0.008 - 0.02
[5] > 0.02

5.12. Total ground parking area (m^2)
Please provide the information on the total parking area in your university. You can estimate or validate this area by using the Google maps feature.

5.13. The ratio of the ground parking area to total campus area (TR.5)
Please select a ratio of the parking area to the total campus area of your university. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators.
Formula: ((5.12/1.5) x 100%)
Please select one of the following options:
[1] > 11 %
[2] > 7 – 11 %
[3] > 4 – 7 %
[4] > 1 – 4 %
[5] < 1 %

Evidence is required

5.14. Program to limit or decrease the parking area on campus for the last 3 years (TR.6)
Please select a condition that reflects the current university program on transportation designed to limit or decrease the parking area on your campuses. Evidence can include campus maps showing which areas were reduced, and before-and-after proof. Please select an option that best describes your university from the following options:
[1] None
[2] In preparation
[3] Less than 10% decrease in parking area
[4] 10 - 30% decrease in parking area
[5] More than 30% decrease in parking area or parking area reduction reaching its limit

Evidence is required

5.15. Number of initiatives to decrease private vehicles on campus (TR.7)
Please select a condition that reflects your university's current initiatives on the availability of transportation to limit or decrease the number of private vehicles on your campuses (i.e., car-free days, car sharing, charging high parking fees, metro/tram/bus services, bike-sharing, low fare subscriptions, limiting student's car, etc.). Please select an option that best describes your university from the following:
[1] No initiative
[2] 1 initiative
[3] 2 initiatives
[4] 3 initiatives
[5] > 3 initiatives or initiative is no longer required

Evidence is required

5.16. Pedestrian path on campus (TR.8)
Please describe the extent to which the use of the pedestrian path is supported. Your university can provide

information such as pedestrian way network map as evidence. The evidence provided may also include maps showing the location, area size, or distribution of facilities relevant to the indicators. Please select an option from the following list that applies to your campus:

[1] None
[2] Available
[3] Available, and designed for safety
[4] Available, designed for safety and convenience
[5] Available, designed for safety, convenience, and in some parts provided with disabled-friendly features

Evidence is required

Note:

- ***Safety*:** equipped with enough lighting, separator between road for vehicle and pedestrian path, and some handrail.
- ***Convenience:*** Level difference with a mild slant for walking alongside the pavement, some area covered, using soft (rubber, woods, etc.) material, availability of location information and directions
- ***Disabled-friendly****:* ramps and guiding blocks that have a suitable design for pedestrians having physical disabilities.

5.17. The approximate daily travel distance of a vehicle inside your campus only (in Kilometers)

Please provide the approximate daily travel distance of a vehicle (i.e., bus, car, motorcycle) inside your campus only in kilometers.

5.18. Planning, implementation, monitoring and/or evaluation of all programs related to Transportation through the utilization of Information and Communication Technology (ICT) (TR.9)

Please provide information regarding planning, implementation, monitoring, and/or evaluation of all programs related to transportation through the utilization of ICT on campus. We recommend dashboard to input your Transportation data.Please select one of the following options

[1] None
[2] The program is currently in the planning stage
[3] Program has been implemented
[4] Program has been implemented and evaluated
[5] Program has been implemented, evaluated, and is currently revised

Evidence is required

5.19. Impact of Transportation programs in supporting the Sustainable Development Goals (SDGs).

Please indicate the extent to which your university's Transportation (TR) programs contribute to the achievement of the UN Sustainable Development Goals (SDGs). Select the option that best reflects the number of SDGs directly supported by these programs. Please select one of the following options

[1] Low impact (supporting 1–2 SDGs)
[2] Moderate impact (supporting 3–5 SDGs)
[3] Significant impact (supporting 6–9 SDGs)
[4] High impact (supporting 10–13 SDGs)
[5] Very high impact (supporting 14–17 SDGs)

Evidence is required

6. Education and Research (ED)

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.

6.1. Number of courses/subjects related to sustainability offered

The number of courses/subjects of which the contents are related to sustainability offered at your university. Some universities have already tracked how many courses/subjects are available for this. The definition of the extent to which a course can be seen as related to sustainability (environmental, social, cultural, economics) or both, can be defined according to your university's situation. If a course/subject contributes in more than a minor or passes the way to increase awareness, knowledge, or action related to sustainability, then it counts. The number of courses/subjects can be counted by specifying related sustainability keywords used in the subjects. For example, Environmental Chemistry is the subject of the Chemistry study program.

Evidence is required

6.2. Total number of courses/subjects offered

It is the total number of courses/subjects offered at your university yearly. This information will be used to calculate to what extent environment and sustainability education have been defined in your university teaching and learning.

Evidence is required

6.3. Total number of study program related to sustainability offered

It is the total number of study program related to sustainability offered at your university. This information will be used to calculate to what extent environment and sustainability education have been defined in your university teaching and learning.

Evidence is required

6.4. The ratio of sustainability courses to total courses/subjects (ED.1)

Please select the ratio of sustainability courses to the total number of courses (subjects) in your university.

Formula: ((6.1/6.2) x 100%)

Please select one of the following options:
[1] ≤ 1%
[2] > 1 - 5%
[3] > 5 - 10%
[4] > 10 - 20%
[5] > 20%

6.5. Total research funds dedicated to sustainability research (in US Dollars)

Please provide the average funding for research on sustainability per annum over the last 3 years.

Evidence is required

6.6. Total research funds (in US Dollars)

The average total research funds per annum over the last 3 years. This information will be used to calculate the percentage of environment and sustainability research funding to the overall research funding.

Evidence is required

6.7. The ratio of sustainability research funding to total research funding (ED.2)

Please select a ratio of sustainability research funding to the total research funding in your university.

Formula: ((6.4/6.5) x 100%)

Please select one of the following options:
[1] ≤ 1%

[2] > 1 - 10%
[3] > 10 - 20%
[4] > 20 - 40%
[5] > 40%

6.8. Number of lecturers and researchers on campus in one year period

Please provide the total number of lecturers and researchers who were actively working on campus during the most recent one-year period. This number is used to assess the university's academic capacity related to sustainability education and research.

Evidence is required

6.9. Number of scholarly publications on sustainability in one year period

Please provide the ratio of number of indexed publications (Google scholar/Scopus/Indexed reputable journal) on environment and sustainability, published in one year period, using keywords: green, environment, sustainability, renewable energy, climate change

Evidence is required

6.10. Ratio of scholarly publications on sustainability to lecturers and researchers on campus in one year period (ED.3)

Please calculate the ratio by dividing the number of sustainability publications (as defined in 6.9) by the total number of lecturers and researchers (as defined in 6.8) during the same one-year period. Please select one of the following options:

Formula: (6.9/6.8)
[1] < 0.5
[2] 0.5 - 1
[3] > 1 - 2
[4] > 2 - 3
[5] > 3

Evidence is required

6.11. Number of events related to sustainability (environment) (ED.4)

Please provide the number of events (i.e., conferences, workshops, awareness raising, practical training, festival, etc.) related to the issues of environment and sustainability hosted or organized by your university (average per annum over the last 3 years). Please select one of the following options:
[1] 0
[2] 1 – 5 events
[3] 6 – 20 events
[4] 21 – 50 events
[5] > 50 events

Evidence is required

6.12. Number of activities organized by student organizations related to sustainability per year (ED.5)

Please provide the total number of activities organized by student organizations in a faculty or university level per year. For example, seminars, webinars, training, sport events, bazaar about recycle materials, community outreach, etc. Please select one of the following options:
[1] 0
[2] 1 – 5 activities
[3] 6 – 10 activities

[4] 11 – 20 activities
[5] > 20 activities

Evidence is required

6.13. University-run sustainability website (ED.6)

If your university has a sustainability website, please provide the address of the web. Some detailed information on a university website to educate students and staff as well as providing information about their \latest involvement on green campus, environment and sustainability programs, sustainability plan, target, achievement will be very useful. Please select the following options:
[1] Not available
[2] Website in progress or under construction
[3] Website is available and accessible
[4] Website is available, accessible, and updated occasionally
[5] Website is available, accessible, and updated regularly

6.14. Sustainability website address (URL) if available

Please provide your university sustainability link/website (URL).

6.15. Sustainability report (ED.7)

Please provide a sustainability report. Sustainability report content could be based on SDGs report or UI GreenMetric questionnaire indicators. The report should at least describe vision, strategy, policy, programs and implementation in your university. Annual regularity should be proven at least for the last 3 years. Specific information on target and achievement is preferable.
Please select the following options:
[1] Not available
[2] Sustainability report is in preparation
[3] Available but not publicly accessible
[4] Sustainability report is accessible and published occasionally
[5] Sustainability report is accessible and published annually

Evidence is required

6.16. Sustainability report link address (URL) if available

Please provide your university sustainability report link (URL).

6.17. Number of cultural activities on campus (ED.8)

The fact that 'green' facilities in campus are accessible for public, such as during cultural activities, indicates wider impact of green campus' existence to its surroundings. Activities can be related to those that have an impact on sustainability, and evidence can be in the form of a table or a list of activities. Please provide the total number of cultural activities on campus (i.e., Cultural Festival, theater, music performance, exhibition, etc.).
Please select the following options:
[1] None
[2] 1 - 3 events per year
[3] 4 - 6 events per year
[4] 7 - 10 events per year
[5] More than 10 events per year

Evidence is required

6.18. Number of university sustainability program(s) with international collaborations (ED.9)

Please provide the total number of university sustainability program(s) with international collaboration. For

example, join research, online course, educational trip, double degree, student-staff exchange, internship, etc. Evidence can include MOU documents, event posters showing the university logo. Please select the following options:
[1] None
[2] 1 - 3 programs per year
[3] 4 - 6 programs per year
[4] 7 - 10 programs per year
[5] More than 10 programs per year

Evidence is required

6.19. Number of community services related to sustainability organized by university and involving students (ED.10)

Please provide the total number of sustainability community services projects organized by university and involving students. Please select the following options:
[1] None
[2] 1 - 3 projects per year
[3] 4 - 6 projects per year
[4] 7 - 10 projects per year
[5] More than 10 projects per year

Evidence is required

6.20. Number of sustainability-related startups (ED.11)

Please provide the total number of sustainability-related startups initiated and managed by university. You can count any level of startup (profit/non-profit, digital/non-digital, managed by university involving student or not). The startups must have a maximum age of 3 years to be counted. Evidence can include how long the start-up has been running, its annual revenue, and the number of employees. Please select the following options:
[1] None
[2] 1 – 5 startups
[3] 6 – 10 startups
[4] 11 – 15 startups
[5] More than 15 startups

Evidence is required

6.21. Total number of graduates with green jobs (for the last 3 years)

Please state the total number of graduates with green jobs (for the last 3 years). Green jobs are decent jobs that contribute to preserve or restore the environment, be they in traditional sectors such as manufacturing and construction, or in new, emerging green sectors such as renewable energy and energy efficiency. Green jobs help improve energy and raw materials efficiency, limit greenhouse gas emissions, minimize waste and pollution, protect and restore ecosystems, support adaptation to the effects of climate change. Evidence can be in a table or list format, consisting of the year of graduation, industry, and distribution.

Evidence is required

6.22. Total number of graduates (for the last 3 years)

Please state the total number of university graduates over the past three years, regardless of employment field. Evidence can be in a table or list format, consisting of the year of graduation, industry, and distribution.

Evidence is required

6.23. Percentage of number of graduates with green jobs (for the last 3 years) (ED12)

Please calculate the percentage of graduates who have obtained green jobs over the last three years relative to the total number of graduates in the same period. This percentage reflects the university's effectiveness in preparing students for careers that support environmental sustainability. Please select the following options:

Formula: ((6.21/6.22) x 100%)

[1] ≤ 1%
[2] > 1 - 5%
[3] > 5 - 10%
[4] > 10 - 20%
[5] > 20%

Evidence is required

6.24. Availability of unit or office that coordinate sustainability on campus (ED13)

Please describe the availability of units or offices that coordinate or are related to sustainability on your campus. Evidence can include decree of establishment, structure, duties, and programs in units or office. Please select the following options:

[1] Ad-hoc / task force
[2] Unit or office in development
[3] Unit or office with university leader decree of establishment, structure and duties at early stage
[4] Unit or office with university leader decree of establishment, structure and duties has been operational
[5] Unit or office with university leader decree of establishment, structure and duties has been operational and lead the university implementation of sustainability

Evidence is required

6.25. Planning, implementation, monitoring and/or evaluation of university governance through the utilization of Information and Communication Technology (ICT) (ED14)

Please provide information regarding planning, implementation, monitoring, and/or evaluation of all programs related to education and research, community engagement, reporting, and graduate employability through the utilization of ICT on campus. We recommend dashboard to input your Education and Research data. Please select one of the following options

[1] None
[2] The program is currently in the planning stage
[3] Program has been implemented
[4] Program has been implemented and evaluated
[5] Program has been implemented, evaluated, and is currently revised

Evidence is required

6.26. Impact of Education and Research programs in supporting the Sustainable Development Goals (SDGs).

Please indicate the extent to which your university's Education and Research (ED) programs contribute to the achievement of the UN Sustainable Development Goals (SDGs). Select the option that best reflects the number of SDGs directly supported by these programs. Please select one of the following options

[1] Low impact (supporting 1–2 SDGs)
[2] Moderate impact (supporting 3–5 SDGs)
[3] Significant impact (supporting 6–9 SDGs)
[4] High impact (supporting 10–13 SDGs)
[5] Very high impact (supporting 14–17 SDGs)

Evidence is required

Data submission

1. Please submit the latest yearly (annual) data that you have according to your 12 months data gathering schedule (i.e., for Questions 1.19, 2.6, 2.8) unless otherwise requested.

Evidence Guidelines

This is the eight year we request evidence for the questionnaire. The use of the evidence is to support your data submission when being reviewed by our assessors. For this purpose, please read carefully the following guidance:

1. Evidence is mandatory, except for some questions which can be uploaded. Lack of evidence may result in a declined score.
2. All evidence should comply with the template provided in the website link: https://bit.ly/UIGreenmetricEvidences2023
3. Evidence could be provided as pictures, graphs, tables, data, etc.
4. Please provide a detailed description quantitatively to explain the shown pictures, graphs, tables, and data above.
5. The evidence provided may also include campus maps showing the location, area size, or distribution of facilities relevant to the indicators.
6. Description of the evidence should be written in English. Please provide English translation for any language other than English.
7. Please be aware and prepare that the maximum file size for the evidence is 2 MB (.doc/.docx/.pdf).

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[2] Evaluating UI GreenMetric as a tool to Support Green Universities Development: Assessment of the Year 2011 Ranking by Dr. Nyoman Suwartha and Prof. Riri Fitri Sari, Journal of Cleaner Production, Volume 61, Pages 46–53 (2013)

[3] Moving towards an ecologically sound society? Starting from green universities and environmental higher education by Yutao Wang, Han Shi, Mingxing Sun, Donald Huisingh, Lars Hanssonn and Renqing Wang, Journal of Cleaner Production, Volume 61, Pages 1-5 (2013)

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Appendix 1

Below are how we score your data. Please note that the final score will be based on our validators' review. Details of the scoring are described as follows:

No	Category and Indicator	Point	Score	Weighting
1	**Setting and Infrastructure (SI)**			**15%**
SI 1	**The ratio of open space area to the total area**	**200**		
	≤ 1%		0.05x200	
	> 1 - 80%		0.25×200	
	> 80 - 90%		0.50×200	
	> 90 - 95%		0.75×200	
	> 95%		1.00×200	
SI 2	**Total area on campus covered in forest vegetation used for research, teaching, and/or community engagement**	**100**		
	≤ 2%		0.05x100	
	> 2 - 10%		0.25×100	
	> 10 - 25%		0.50×100	
	> 25 - 35%		0.75×100	
	> 35%		1.00×100	
SI 3	**Total area on campus covered in planted vegetation**	**200**		
	≤ 10%		0.05x200	
	> 10 - 20%		0.25×200	
	> 20 - 30%		0.50×200	
	> 30 - 50%		0.75×200	
	> 50%		1.00×200	
SI 4	**Total area on campus for water absorption besides the forest and planted vegetation**	**100**		
	≤ 2%		0.05x100	
	> 2 - 10%		0.25×100	
	> 10 - 20%		0.50×100	
	> 20 - 40%		0.75×100	
	> 40%		1.00×100	
SI 5	**The total open space area divided by total campus population**	**200**		
	≤ 10 m^2/person		0.05x200	
	> 10 – 20 m^2/person		0.25×200	
	> 20 – 40 m^2/person		0.50×200	
	> 40 – 70 m^2/person		0.75×200	
	> 70 m^2/person		1.00×200	
SI 6	**Percentage of university budget for sustainability efforts**	**200**		
	≤ 1%		0.05x200	
	> 1 - 5%		0.25×200	
	> 5 - 10%		0.50×200	
	> 10 - 15%		0.75×200	
	> 15%		1.00×200	
SI7	**Campus facilities for disabled, special needs and/or maternity care**	**100**		
	None		0	
	Policy is in place		0.25×100	
	Facilities are in the planning stage		0.50×100	
	Facilities are partially available and operated		0.75×100	
	Facilities exist in all buildings and are fully operated		1.00×100	
SI8	**Security and safety facilities**	**100**		
	Passive security and safety system		0	

	Security and safety infrastructure (CCTV, emergency hotline/button) available and fully functioning		0.25×100	
	Security and safety infrastructure (CCTV, emergency hotline/button, certified personnel, fire extinguisher, hydrant) available and fully functioning		0.50×100	
	Security and safety infrastructure available and fully functioning and security responding time for accidents, crime, fire, and natural disasters is more than 5 minutes		0.75×100	
	Security and safety infrastructure available and fully functioning and security responding time for accidents, crime, fire, and natural disasters is less than 5 minutes		1.00×100	
SI9	**Health infrastructure facilities for students, academics and administrative staff's wellbeing**	**100**		
	Health infrastructure (first aid) is not available		0	
	Health infrastructure (first aid, emergency room, clinic and personnel) are available		0.25×100	
	Health infrastructure (first aid, emergency room, clinic and certified personnel) are available		0.50×100	
	Health infrastructure (first aid, emergency room, clinic, hospital and certified personnel) are available		0.75×100	
	Health infrastructure available (first aid, emergency room, clinic, hospital and certified personnel), system and accessible for public		1.00×100	
SI10	**Conservation: plant (flora), animal (fauna) or wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities**	**100**		
	Conservation program in preparation		0.05x100	
	Conservation program 1-25% implemented		0.25×100	
	Conservation program 25-50% implemented		0.50×100	
	Conservation program 50-75% implemented		0.75×100	
	Conservation program >75% implemented		1.00×100	
SI11	**Planning, implementation, monitoring and/or evaluation of all programs related to Setting and Infrastructure through the utilization of Information and Communication Technology (ICT)**	**100**		
	None		0	
	The program is currently in the planning stage		0.25×100	
	Program has been implemented		0.50×100	
	Program has been implemented and evaluated		0.75×100	
	Program has been implemented, evaluated, and is currently revised		1.00×100	
	Total	**1500**		
2	**Energy and Climate Change (EC)**			**21%**
EC 1	**Energy efficient appliances usage**	**200**		
	< 1%		0.05x200	
	1 - 25%		0.25×200	
	> 25 - 50%		0.50×200	
	> 50 - 75%		0.75×200	
	> 75%		1.00×200	
EC 2	**Smart building implementation**	**300**		
	< 1%		0.05x300	
	1 - 25%		0.25×300	
	> 25 - 50%		0.50×300	
	> 50 - 75%		0.75×300	
	> 75%		1.00×300	
EC 3	**Number of renewable energy sources on campus**	**300**		
	None		0	

	1 source		0.25×300	
	2 sources		0.50×300	
	3 sources		0.75×300	
	> 3 sources		1.00×300	
EC 4	**Total electricity usage divided by total campus population (kWh per person)**	**200**		
	≥ 2400 kWh		0.05x200	
	> 1500 - 2400 kWh		0.25×200	
	> 600 - 1500 kWh		0.50×200	
	> 250 - 633 kWh		0.75×200	
	< 250 kWh		1.00×200	
EC 5	**The ratio of renewable energy production divided by total energy usage per year**	**200**		
	≤ 0.5%		0.05x200	
	> 0.5 - 1%		0.25×200	
	> 1 - 2%		0.50×200	
	> 2 - 25%		0.75×200	
	> 25%		1.00×200	
EC 6	**Elements of green building implementation as reflected in all buildings**	**200**		
	None		0	
	1 element		0.25×200	
	2 elements		0.50×200	
	3 elements		0.75×200	
	> 3 elements		1.00×200	
EC 7	**Greenhouse gas emission reduction program**	**200**		
	None		0	
	Program in preparation		0.25×200	
	Program(s) aims to reduce one out of three scopes emissions		0.50×200	
	Program(s) aims to reduce two out of three scopes emissions		0.75×200	
	Program(s) aims to reduce all three scopes emissions		1.00×200	
EC 8	**Total carbon footprint divided by total campus population**	**200**		
	≥ 2.05 metric tons		0.05x200	
	> 1.11 - 2.05 metric tons		0.25×200	
	> 0.42 - 1.11 metric tons		0.50×200	
	> 0.10 - 0.42 metric tons		0.75×200	
	< 0.10 metric tons		1.00×200	
EC 9	**Number of innovative program(s) in energy and climate change**	**100**		
	None		0	
	1 program		0.25×100	
	2 programs		0.50×100	
	3 programs		0.75×100	
	More than 3 programs		1.00×100	
EC 10	**Impactful university program(s) on climate change**	**100**		
	None		0	
	Program in preparation		0.25×100	
	Provide training, educational materials, seminars/conferences, and activities which are implemented by surrounding communities		0.50×100	
	Provide training, educational materials, seminars/conferences, and activities which are implemented by communities at the national level		0.75×100	
	Provide training, educational materials, seminars/conferences, and activities which are implemented by communities at the international level		1.00×100	

EC 11	**Planning, implementation, monitoring and/or evaluation of all programs related to Energy and Climate Change through the utilization of Information and Communication Technology (ICT)**	**100**		
	None		0	
	The program is currently in the planning stage		0.25×100	
	Program has been implemented		0.50×100	
	Program has been implemented and evaluated		0.75×100	
	Program has been implemented, evaluated, and is currently revised		1.00×100	
	Total	**2100**		
3	**Waste (WS)**			**18%**
WS 1	**3R (Reduce, Reuse, Recycle) program for university's waste**	**200**		
	None		0	
	3R program in preparation		0.25×200	
	3R program 1 – 50% implemented		0.50×200	
	3R program > 50 – 75% implemented		0.75×200	
	3R program > 75% implemented		1.00×200	
WS 2	**Program to reduce the use of paper and plastic on campus**	**300**		
	None		0	
	1 - 3 programs		0.25×300	
	4 - 6 programs		0.50×300	
	7 - 10 programs		0.75×300	
	More than 10 programs		1.00×300	
WS 3	**Organic waste treatment**	**300**		
	Open dumping		0	
	Partial (1 - 35% treated)		0.25×300	
	Partial (> 35 - 65% treated)		0.50×300	
	Partial (> 65 - 85% treated)		0.75×300	
	Extensive (> 85% treated)		1.00×300	
WS 4	**Inorganic waste treatment**	**300**		
	Burned in open		0	
	Partial (1 - 35% treated)		0.25×300	
	Partial (> 35 - 65% treated)		0.50×300	
	Partial (> 65 - 85% treated)		0.75×300	
	Extensive (> 85% treated)		1.00×300	
WS 5	**Toxic waste treatment**	**300**		
	Not managed		0	
	Partial (1 - 35% treated)		0.25×300	
	Partial (> 35 - 65% treated)		0.50×300	
	Partial (> 65 - 85% treated)		0.75×300	
	Extensive (> 85% treated) or campus produces a minimum amount of toxic waste		1.00×300	
WS 6	**Sewage disposal**	**300**		
	Untreated into waterways		0	
	Treated with preliminary treatment		0.25×300	
	Treated with primary treatment		0.50×300	
	Treated with secondary treatment		0.75×300	
	Treated with tertiary treatment		1.00×300	
WS 7	**Planning, implementation, monitoring and/or evaluation of all programs related to Waste Management through the utilization of Information and Communication Technology (ICT)**	**100**		
	None		0	
	The program is currently in the planning stage		0.25×100	
	Program has been implemented		0.50×100	

	Program has been implemented and evaluated		0.75×100	
	Program has been implemented, evaluated, and is currently revised		1.00×100	
	Total	**1800**		
4	**Water (WR)**			**10%**
WR 1	**Water conservation program and implementation**	**150**		
	None		0	
	Program in preparation		0.25×150	
	1 - 25% water conserved		0.50×150	
	> 25 - 50% water conserved		0.75×150	
	> 50% water conserved		1.00×150	
WR 2	**Water recycling program implementation**	**200**		
	None		0	
	Program in preparation		0.25×200	
	1 - 25% water recycled		0.50×200	
	> 25 - 50% water recycled		0.75×200	
	> 50% water recycled		1.00×200	
WR 3	**Water efficient appliance usage**	**200**		
	< 20% of water efficient appliances installed		0.05x200	
	20 - 40% of water efficient appliances installed		0.25×200	
	> 40 - 60% of water efficient appliances installed		0.50×200	
	> 60 - 80% of water efficient appliances installed		0.75×200	
	> 80% of water efficient appliances installed		1.00×200	
WR 4	**Consumption of treated water**	**200**		
	None		0	
	1 - 25% treated water consumed		0.25×200	
	> 25 - 50% treated water consumed		0.50×200	
	> 50 - 75% treated water consumed		0.75×200	
	> 75% treated water consumed		1.00×200	
WR 5	**Water pollution control in campus area**	**200**		
	Policy and programs for water pollution control are in the designing stage		0.05x200	
	Policy and programs for water pollution control are in the construction stage		0.25×200	
	Policy and programs for water pollution control are in the early implementation stage		0.50×200	
	Policy and programs for water pollution control are fully implemented and monitored occasionally		0.75×200	
	Policy and programs for water pollution control are fully implemented and monitored regularly		1.00×200	
WR 6	**Planning, implementation, monitoring and/or evaluation of all programs related to Water Management through the utilization of Information and Communication Technology (ICT)**	**50**		
	None		0	
	The program is currently in the planning stage		0.25×50	
	Program has been implemented		0.50×50	
	Program has been implemented and evaluated		0.75×50	
	Program has been implemented, evaluated, and is currently revised		1.00×50	
	Total	**1000**		
5	**Transportation (TR)**			**18%**
TR 1	**The total number of vehicles (cars and motorcycles) divided by total campus population**	**200**		
	≥ 1		0	
	> 0.5 - 1		0.25×200	

	> 0.125 - 0.5		0.50×200	
	> 0.045 - 0.125		0.75×200	
	< 0.045		1.00×200	
TR 2	**Shuttle services**	**250**		
	Possible but not provided by university		0	
	Provided (by university or other parties) and regular but not free		0.25×250	
	Provided (by university or other parties) and the university contributes a part of the cost		0.50×250	
	Provided by university, regular, and free		0.75×250	
	Provided by university, regular, and zero emission vehicle. Or shuttle use is not applicable		1.00×250	
TR 3	**Zero Emission Vehicles (ZEV) availability on campus**	**200**		
	ZEV are not available		0	
	ZEV use is not possible or practical		0.25×200	
	ZEV are available, but not provided by the university		0.50×200	
	ZEV are available, provided by the university and charged		0.75×200	
	ZEV are available, and provided by the university for free		1.00×200	
TR 4	**The total number of Zero Emission Vehicles (ZEV) divided by total campus population**	**200**		
	≤ 0.002		0.05x200	
	> 0.002 - 0.004		0.25×200	
	> 0.004 - 0.008		0.50×200	
	> 0.008 - 0.02		0.75×200	
	> 0.02		1.00×200	
TR 5	**The ratio of the ground parking area to total campus area**	**200**		
	> 11%		0	
	> 7 - 11 %		0.25×200	
	> 4 - 7 %		0.50×200	
	> 1 – 4 %		0.75×200	
	< 1%		1.00×200	
TR 6	**Program to limit or decrease the parking area on campus for the last 3 years**	**200**		
	None		0	
	In preparation		0.25×200	
	Less than 10% decrease in parking area		0.50×200	
	10 - 30% decrease in parking area		0.75×200	
	More than 30% decrease in parking area or parking area reduction reaching its limit		1.00x200	
TR 7	**Number of initiatives to decrease private vehicles on campus**	**200**		
	No initiative		0	
	1 initiative		0.25×200	
	2 initiatives		0.50×200	
	3 initiatives		0.75×200	
	> 3 initiatives, or initiative is no longer required		1.00×200	
TR 8	**Pedestrian path on campus**	**250**		
	None		0	
	Available		0.25×250	
	Available, and designed for safety		0.50×250	
	Available, designed for safety and convenience		0.75×250	
	Available, designed for safety, convenience, and in some parts provided with disabled-friendly features		1.00×250	
TR 9	**Planning, implementation, monitoring and/or evaluation of all programs related to Transportation through the utilization of Information and Communication Technology (ICT)**	**100**		
	None		0	

	The program is currently in the planning stage		0.25×100	
	Program has been implemented		0.50×100	
	Program has been implemented and evaluated		0.75×100	
	Program has been implemented, evaluated, and is currently revised		1.00×100	
	Total	**1800**		
6	**Education and Research (ED)**			**18%**
ED 1	**The ratio of sustainability courses to total courses/subjects**	**200**		
	≤ 1%		0.05x200	
	> 1 - 5%		0.25×200	
	> 5 - 10%		0.50×200	
	> 10 - 20%		0.75×200	
	> 20%		1.00×200	
ED 2	**The ratio of sustainability research funding to total research funding**	**200**		
	≤ 1%		0.05x200	
	> 1 - 10%		0.25×200	
	> 10 - 20%		0.50×200	
	> 20 - 40%		0.75×200	
	> 40%		1.00×200	
ED 3	**Ratio of scholarly publications on sustainability to lecturers/researchers on campus in one year period**	**200**		
	< 0.5		0	
	0.5 - 1		0.25×200	
	> 1 - 2		0.50×200	
	> 2 - 3		0.75×200	
	> 3		1.00×200	
ED 4	**Number of events related to sustainability (environment)**	**150**		
	0		0	
	1 - 5		0.25×150	
	6 - 20		0.50×150	
	21 - 50		0.75×150	
	> 50		1.00×150	
ED 5	**Number of activities organized by student organizations related to sustainability per year**	**150**		
	0		0	
	1 - 5		0.25×150	
	6 - 10		0.50×150	
	11 - 20		0.75×150	
	> 20		1.00×150	
ED 6	**University-run sustainability website**	**200**		
	Not available		0	
	Website in progress or under construction		0.25×200	
	Website is available and accessible		0.50×200	
	Website is available, accessible, and updated occasionally		0.75×200	
	Website is available, accessible, and updated regularly		1.00x200	
ED 7	**Sustainability report**	**100**		
	Not available		0	
	Sustainability report is in preparation		0.25×100	
	Available but not publicly accessible		0.50×100	
	Sustainability report is accessible and published occasionally		0.75×100	
	Sustainability report is accessible and published annually		1.00x100	
ED 8	**Number of cultural activities on campus**	**100**		
	None		0	
	1 - 3 events per year		0.25×100	

	4 - 6 events per year		0.50×100	
	7 - 10 events per year		0.75×100	
	More than 10 events per year		1.00x100	
ED 9	**Number of university sustainability program(s) with international collaborations**	**100**		
	None		0	
	1 - 3 programs per year		0.25×100	
	4 - 6 programs per year		0.50×100	
	7 - 10 programs per year		0.75×100	
	More than 10 programs per year		1.00x100	
ED 10	**Number of community services related to sustainability organized by university and involving students**	**100**		
	None		0	
	1 - 3 projects per year		0.25×100	
	4 - 6 projects per year		0.50×100	
	7 - 10 projects per year		0.75×100	
	More than 10 projects per year		1.00x100	
ED 11	**Number of sustainability-related startups**	**100**		
	None		0	
	1 – 5 startups		0.25×100	
	6 – 10 startups		0.50×100	
	11 – 15 startups		0.75×100	
	More than 15 startups		1.00x100	
ED 12	**Percentage of number of graduates with green jobs (for the last 3 years)**	**50**		
	≤ 1%		0.05X50	
	> 1 - 5%		0.25×50	
	> 5 - 10%		0.50×50	
	> 10 - 20%		0.75×50	
	> 20%		1.00x50	
ED 13	**Availability of unit(s) or office(s) that coordinate sustainability on campus**	**50**		
	Ad-hoc / task force		0	
	Unit(s) or office(s) in development		0.25×50	
	Unit(s) or office(s) with university leader decree of establishment, structure and duties at early stage		0.50×50	
	Unit(s) or office(s) with university leader decree of establishment, structure and duties has been operational		0.75×50	
	Unit(s) or office(s) with university leader decree of establishment, structure and duties has been operational and lead the university implementation of sustainability		1.00x50	
ED 14	**Planning, implementation, monitoring and/or evaluation of university governance through the utilization of Information and Communication Technology (ICT)**	**100**		
	None		0	
	The program is currently in the planning stage		0.25×100	
	Program has been implemented		0.50×100	
	Program has been implemented and evaluated		0.75×100	
	Program has been implemented, evaluated, and is currently revised		1.00×100	
	Total	**1800**		
	TOTAL	**10000**		

Note : Light green indicates new questions introduced in 2025

Appendix 2

List of Green Building Elements

GBI Non-Residential Existing Building	GBI Non-Residential New Construction (NRNC)
Element 1. Energy Efficency	
Design & Performance	**Design**
Minimum EE Performance	Minimum EE Performance
Lighting Zoning	Lighting Zoning
Electrical Sub-metering	Electrical Sub-metering
Renewable Energy	Renewable Energy
Advanced or Improved EE Performance - BEI	Advanced EE Performance - BEI
Commissioning	**Commissioning**
Enhanced or Re-commissioning	Enhanced Commissioning
On-going Post Occupancy Commissioning	Post Occupancy Commissioning
Monitoring, Improvement & Maintenance	**Verification & Maintenance**
EE Monitoring & Improvement	EE Verification
Sustainable Maintenance	Sustainable Maintenance
Element 2. Indoor Environmental Quality	
Air Quality	**Air Quality**
Minimum IAQ Performance	Minimum IAQ Performance
Environmental Tobacco Smoke (ETS) Control	Environmental Tobacco Smoke (ETS) Control
Carbon Dioxide Monitoring and Control	Carbon Dioxide Monitoring and Control
Indoor Air Pollutants	Indoor Air Pollutants
Mould Prevention	Mould Prevention
Thermal Comfort	**Thermal Comfort**
Thermal Comfort: Controllability of Systems	Thermal Comfort: Design & Controllability of Systems
Air Change Effectiveness	Air Change Effectiveness
Lighting, Visual & Acoustic Comfort	**Lighting, Visual & Acoustic Comfort**
Daylighting	Daylighting
Daylight Glare Control	Daylight Glare Control
Electric Lighting Levels	Electric Lighting Levels
High Frequency Ballasts	High Frequency Ballasts
External Views	External Views
Internal Noise Levels	Internal Noise Levels
Verification	**Verification**
IAQ Before/During Occupancy	IAQ Before & During Occupancy
Occupancy Comfort Survey: Verification	Post Occupancy Comfort Survey: Verification
Element 3. Sustainable Site Planning & Management	
Facility Management	**Site Planning**
GBI Rated Design & Construction	Site Selection
Building Exterior Management	Brownfield Redevelopment
Integrated Pest Management, Erosion Control & Landscape Management	Development Density & Community Connectivity
	Environment Management
	Construction Management
	Earthworks - Construction Activity Pollution Control

	QLASSIC
	Workers' Site Amenities
Transportation	**Transportation**
Green Vehicle Priority - Low Emitting & Fuel Efficient Vehicles	Public Transportation Access
Parking Capacity	Green Vehicle Priority
	Parking Capacity
Reduce Heat Island Effect	**Design**
Greenery & Roof	Stormwater Design – Quantity & Quality Control
Building User Manual	Greenery & Roof
	Building User Manual
Element 4. Materials & Resources	
Reused & Recycled Materials	**Reused & Recycled Materials**
Materials Reuse and Selection	Materials Reuse and Selection
Recycled Content Materials	Recycled Content Materials
Sustainable Materials & Resources and Policy	**Sustainable Resources**
Sustainable Timber	Regional Materials
Sustainable Purchasing Policy	Sustainable Timber
Waste Management	**Waste Management**
Storage, Collection & Disposal of Recyclables	Storage & Collection of Recyclables
	Construction Waste Management
Green Products	**Green Products**
Refrigerants & Clean Agents	Refrigerants & Clean Agents
Element 5. Water Efficiency	
Water Harvesting & Recycling	**Water Harvesting & Recycling**
Rainwater Harvesting	Rainwater Harvesting
Water Recycling	Water Recycling
Increased Efficiency	**Increased Efficiency**
Water Efficient - Irrigation/Landscaping	Water Efficient - Irrigation/Landscaping
Water Efficient Fittings	Water Efficient Fittings
Metering & Leak Detection System	Metering & Leak Detection System
Element 6. Innovation	
Innovation & Environmental Initiatives	Innovation in Design & Environmental Design Initiatives
Green Building Index Facilitator	Green Building Index Accredited Facilitator

Adapted from 'The Green Building Index (GBI)"

For more information: https://www.greenbuildingindex.org/gbi-tools/

Note: Please classify the green building elements in your university.

Appendix 3

List and Description of Smart Building Requirements

Field		Requirement		Description
B	Automation	B1	BMS	Presence of Building Management System (BMS)/Building Information Modelling (BIM)/Building Automation System (BAS)/Facility Management System (FMS) **(recommended requirement)**
		B2	APP	Interactive support for users via APP or online service
S	Safety	S1	Intruder Alarm System	Intruder alarm system (recommended: interfaced with BMS)
		S2	Fire-fighting	Fire-fighting system (recommended: interfaced with BMS)
		S3	Video surveillance	Video surveillance system (recommended: interfaced with BMS)
		S4	Anti-flooding	Anti-flooding system (recommended: interfaced with BMS)
E	Energy	E1	Monitoring	Automatic acquisition and logging system of energy consumption (recommended: interfaced with BMS)
		E2	Management	Automatic management system for energy supplies and production (recommended: interfaced with BMS)
A	Water	A1	Monitoring	Automatic acquisition and logging system of water consumption (recommended: interfaced with BMS)
		A2	Recovery	Rainwater recovery system for covering the flushing and irrigation
I	Indoor environment	I1	Thermal comfort	Monitoring (recommended: interfaced with BMS) of environmental parameters related to thermo-hygrometric comfort (i.e. air temperature, relative humidity, air velocity, etc.)
		I2	Air quality	Monitoring (recommended: interfaced with BMS)of pollutants (i.e. VOC, PM, CO_2 ...)
		I3	Real-time	Programming and management in real time according to the occupancy profile of the premises (recommended: interfaced with BMS)
		I4	Passive system	Passive cooling and/or exploitation/limitation systems for free supplies
L	Lighting	L1	LEDs	High-efficiency luminaires (LEDs)
		L2	Sensors	Automatic lighting control (recommended: presence/illuminance sensors interfaced with BMS)
		L3	Shielding	Shielding adjustment and solar control
		L4	Natural light	Passive systems for natural light exploitation

Note:

Please state the Building Management System (BMS)/Building Information Modelling (BIM)/Building Automation System (BAS)/Facility Management System (FMS) used in your university

Adapted from 'UI GreenMetric 2018: Energy and Climate Change Guidelines for Compilation', by RUS Energia, 2019.

Appendix 4

Calculation of Carbon Footprint Per Year

The Carbon footprint calculation can be conducted based on the stage of calculation as stated in www.carbonfootprint.com, which is the sum of electricity usage per year and transportation per year.

a. Electricity usage per year (EC 2.7)

The CO_2 emission from electricity
= (electricity usage per year in kWh/1000) x 0.84
= (1633286 kWh/1000) x 0.84
= 1371.96 metric tons

Notes:
Electricity usage per year= 1633286 kWh
0.84 is the coefficient to convert kWh to metric tons (source: www.carbonfootprint.com)

b. Transportation per year (Shuttle) (TR 5.6)

= (Number of the shuttle bus in your university x total trips for shuttle bus service each day x approximate travel distance of a vehicle each day inside campus only (in kilometers) x 240/100) x 0.01
= ((15 x 150 x 5 x 240)/100)) x 0.01
= 270 metric tons

Notes:
240 is the number of working days per year
0.01 is the coefficient (source: www.carbonfootprint.com) to calculate the emission in metric tons per 100 km for bus

c. Transportation per year (Car) (TR 5.2)

= (Number of cars entering your university x 2 x approximate travel distance of a vehicle each day inside campus only (in kilometers) x 240/100) x 0.02
= ((2000 x 2 x 5 x 240)/100)) x 0.02
= 960 metric tons

Notes:
240 is the number of working days per year
0.02 is the coefficient (source: www.carbonfootprint.com) to calculate the emission in metric tons per 100 km car

d. Transportation per year (Motorcycle) (TR 5.3)

= (Number of motorcycle entering your university x 2 x approximate travel distance of a vehicle each day inside campus only (in kilometers) x 240/100) x 0.01
= ((4000 x 2 x 5 x 240)/100)) x 0.01
= 960 metric tons

Notes:
240 is the number of working days per year
0.01 is the coefficient (source: www.carbonfootprint.com) to calculate the emission in metric tons per 100 km for motorcycle

e. Total emission per year

= total emission from electricity usage + transportation (bus, car, motorcycle)
= 1371.96 + (270 + 960 + 960)
= 3561.96 metric tons

Notes:
2000 and **4000** is an example of the number of cars and motorcycles, respectively. **5** is an example of the approximate travel distance. Please provide based on your own data

About the UI GreenMetric

Initiated by Universitas Indonesia in 2010, UI GreenMetric World University Rankings is the first World University Ranking on Sustainable Campus. Through 39 indicators in 6 criteria, UI GreenMetric World University Rankings asseses universities around the world for their commitments, initiatives, and achievements on sustainability.

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