



UNIVERSITAS
INDONESIA
Veritas, Probitas, Justitia



Certificate

This certificate is awarded to

**King Mongkuts University of Technology North
Bangkok**

**as The 161st World's Most Sustainable University
in 2020 UI GreenMetric World University Rankings**

Jakarta, 7 December 2020



Prof. Ari Kuncoro, S.E., M.A., Ph.D
Rector of Universitas Indonesia



Prof. Riri Fitri Sari, M.M., M.Sc
Chairperson of UI GreenMetric
World University Rankings



FACT FILE 2020

UI GREENMETRIC WORLD UNIVERSITY RANKINGS

KING MONGKUTS UNIVERSITY OF TECHNOLOGY NORTH BANGKOK

Thailand

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UNIVERSITY PROFILE

Name : King Mongkuts University of
Technology North Bangkok

Established : 1959

Country : Thailand



1. VERIFIED DATA

Category	Point	Percentage of Point to Total Score	Maximum Point	Percentage of Point to Maximum Point
Setting and Infrastructure (SI)	1,025	14 %	1,500	68.33 %
Energy and Climate Change (EC)	1,225	17 %	2,100	58.33 %
Waste (WS)	1,200	17 %	1,800	66.67 %
Water (WR)	900	13 %	1,000	90.00 %
Transportation (TR)	1,525	22 %	1,800	84.72 %
Education (ED)	1,200	17 %	1,800	66.67 %
Total Score	7,075	100 %	10,000	70.75 %

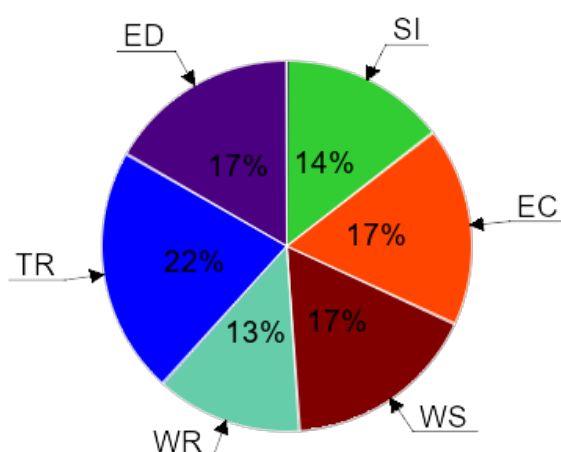


Figure 1.1 Overall Score Diagram

2. RESULTS SUMMARY

World Ranking	SI Ranking	EC Ranking	WS Ranking
161	168	285	281
	WR Ranking	TR Ranking	ED Ranking
	58	46	354

3. WORLD RANKINGS HISTORY

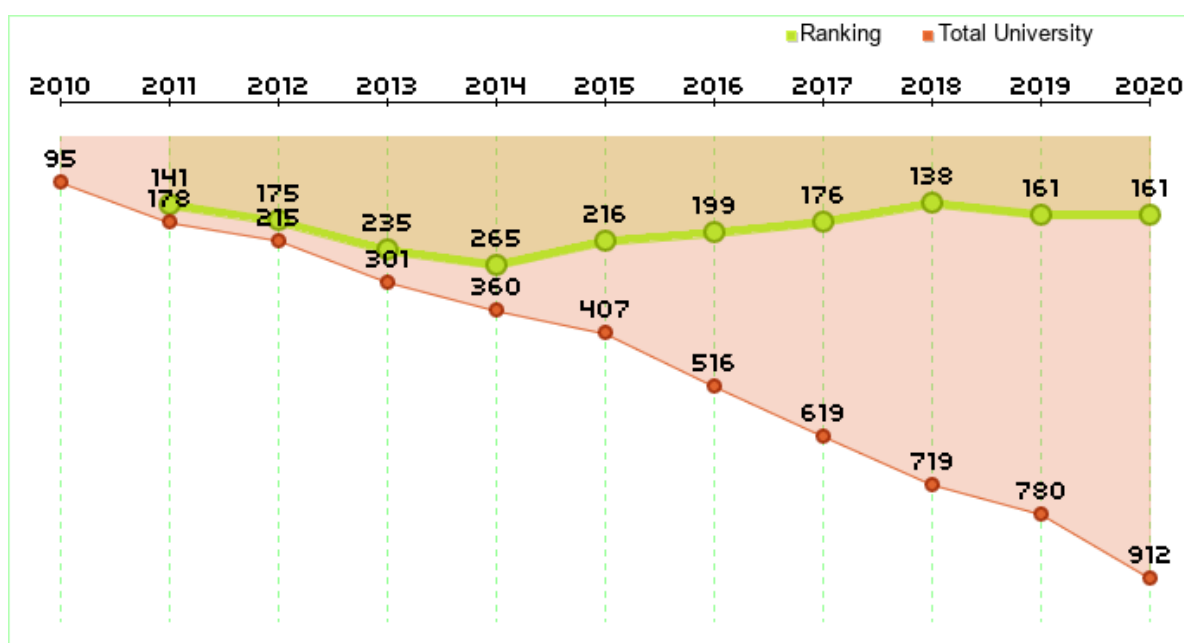


Figure 3.1 World Rankings History Diagram

4. RANKING IN THAILAND

Country Ranking	SI Ranking	EC Ranking	WS Ranking
12	14	13	10
	WR Ranking	TR Ranking	ED Ranking
	3	5	25

5. RESULTS DETAIL

Setting and Infrastructure

Indicator		Score
SI.1	The ratio of open space area to total area	225
SI.2	Total area on campus covered in forest vegetation	200
SI.3	Total area on campus covered in planted	150
SI.4	Total area on campus for water absorption besides the forest and planted	100
SI.5	The total open space area divided by total campus population	300
SI.6	Percentage of university budget for sustainability efforts within a year	50

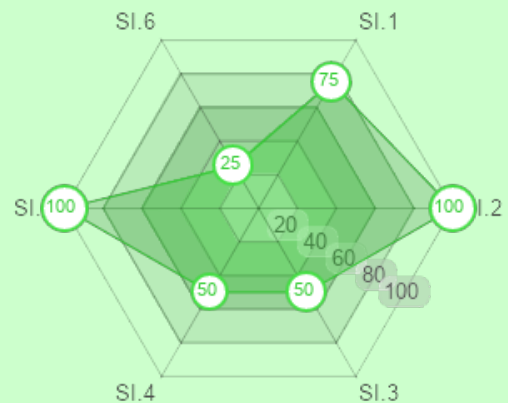


Figure 5.1 Percentage of Score to Maximum Score for Setting and Infrastructure

Energy and Climate Change

Indicator		Score
EC.1	Energy efficient appliances usage	100
EC.2	Smart building implementation	75
EC.3	Number of renewable energy source in campus	225
EC.4	Total electricity usage divided by total campus population	150
EC.5	The ratio of renewable energy production divided by total energy usage per year	150
EC.6	Elements of green building implementation as reflected in all construction and renovation policies	225
EC.7	Greenhouse gas emission reduction program	150
EC.8	Total carbon footprint divided by total campus population	150

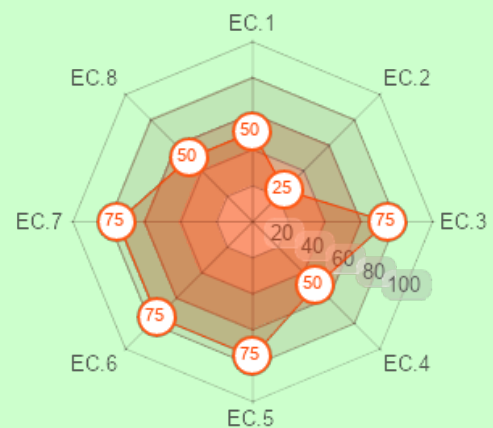


Figure 5.2 Percentage of Score to Maximum Score for Energy and Climate Change

Waste

Indicator		Score
WS.1	Recycling program for university's waste	150
WS.2	Program to reduce the use of paper and plastic on campus	225
WS.3	Organic waste treatment	225
WS.4	Inorganic waste treatment	150
WS.5	Toxic waste treatment	225
WS.6	Sewage disposal	225

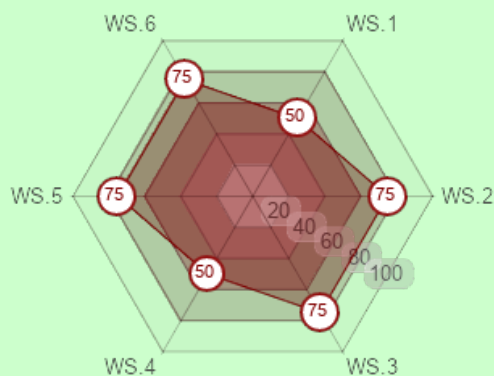


Figure 5.3 Percentage of Score to Maximum Score for Waste

Water

Indicator		Score
WR.1	Water conservation program & implementations	300
WR.2	Water recycling program implementation	300
WR.3	Water efficient appliances usage	200
WR.4	Consumption of treated water	100

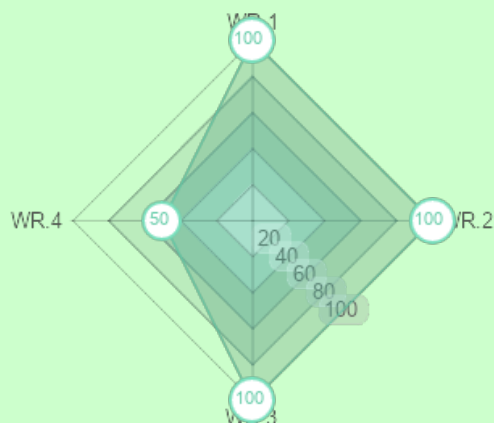


Figure 5.4 Percentage of Score to Maximum Score for Water

Transportation

Indicator		Score
TR.1	The total number of vehicles (cars and motorcycles) divided by total campus' population	150
TR.2	Shuttle services	300
TR.3	Zero Emission Vehicles (ZEV) policy on campus	200
TR.4	The total number of Zero Emission Vehicles (ZEV) divided by total campus population	100
TR.5	The ratio of the ground parking area to total campus area	200
TR.6	Transportation program designed to limit or decrease the parking area on campus for the last 3 years	200
TR.7	Number of transportation initiatives to decrease private vehicles on campus	150
TR.8	Pedestrian path on campus	225

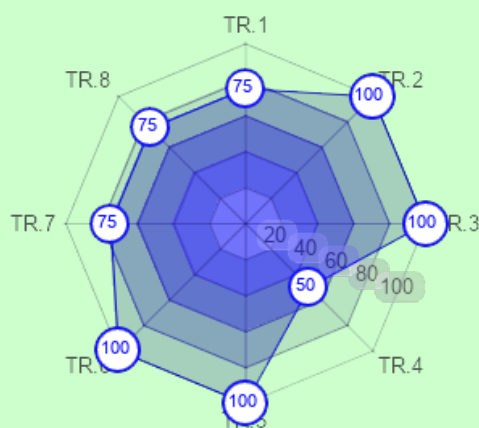


Figure 5.5 Percentage of Score to Maximum Score for Transportation

Education

Indicator		Score
ED.1	The ratio of sustainability courses to total courses/modules	225
ED.2	The ratio of sustainability research funding to total research funding	225
ED.3	Scholarly publications on sustainability	150
ED.4	Events related to sustainability	225
ED.5	Student organizations related to sustainability	150
ED.6	University-run sustainability website	150
ED.7	Sustainability report	75

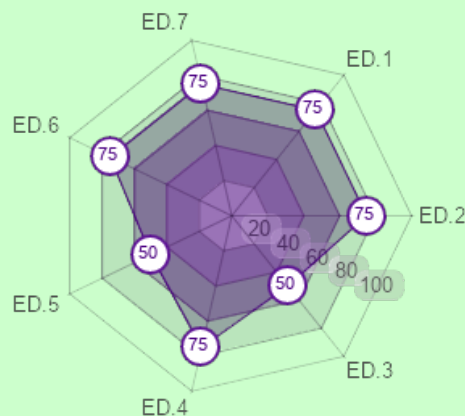


Figure 5.6 Percentage of Score to Maximum Score for Education

UI GREENMETRIC WORLD UNIVERSITY RANKINGS

About UI GreenMetric

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

History

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

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

UIGM works on different themes every year. They are Policy into Action in 2016, Global Partnership for Sustainable Future in 2017, Universities, Impacts, and Sustainable Development Goals (SDGs) in 2018, Sustainable University in a Changing World: Lessons, Challenges and Opportunities in 2019, and Universities Responsibility for Sustainable Development Goals and World's Complex challenges in 2020. In 2020 912 universities from 84 countries participate in the rankings.

To reach and coordinate more participating universities, UI GreenMetric World University Rankings Network (UI GWURN) was established in 2017 with 1-2 national coordinators in each country. To make it work, Junaidi formulated a strategic framework for the network. Currently, there are 35 national coordinators in 30 countries in Asia, America, Africa and Europe. Each voluntarily organizes national workshop inviting other universities in their country. With the network UI GreenMetric World University Rankings has been increasingly recognized as the first and only universities ranking on sustainability with a global network. Since 2017 participating universities benchmark, do continuous improvement, and develop partnerships in the area of sustainability with other members.

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

Table 1. UI GreenMetric Timeline

UI GreenMetric Timeline	
2010	UI GreenMetric published for 95 Universities
2011	UI GreenMetric added 11 new indicators within 5 categories
2012	Education became one of the categories
2015	Introducing Carbon Footprint and Fact file document
2016	Focusing on university action towards sustainability
2017	UIGWURN established
2018	Focusing on SDGs and enlargement of memberships
2019	Improving questionnaire and data collection method
2020	Introducing three new questions on social and economic aspects, such as (1) Startup for the green economy; (2) Public access to open spaces; (3) Community services

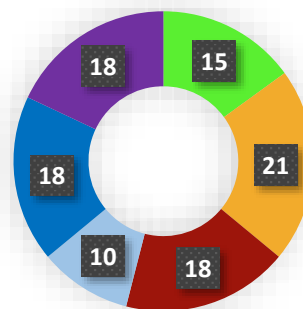
Methodology

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

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

Table 2. Categories in the ranking and their weighting

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



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

Table 3 Indicators and categories

No	CRITERIA	Point	Weighting
1	Setting and Infrastructure (SI)		15%
SI1	The ratio of open space area to total area	300	
SI2	Total area on campus covered in forest vegetation	200	
SI3	Total area on campus covered in planted	300	
SI4	Total area on campus for water absorption besides the forest and planted	200	
SI5	The total open space area divided by total campus population	300	
SI6	Percentage of university budget for sustainability efforts within a year	200	
	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)	300	
EC5	The ratio of renewable energy production divided by total energy usage per year	200	
EC6	Elements of green building implementation as reflected in all construction and renovation policies	300	
EC7	Greenhouse gas emission reduction program	200	
EC8	Total carbon footprint divided by total campus' population (metric tons per person)	300	
	Total	2100	
3	Waste (WS)		18%
WS1	Recycling program for university's waste	300	

WS2	Program to reduce the use of paper and plastic on campus	300	
WS3	Organic waste treatment	300	
WS4	Inorganic waste treatment	300	
WS5	Toxic waste treatment	300	
WS6	Sewage disposal	300	
	Total	1800	
4	Water (WR)		10%
WR1	Water conservation program & implementations	300	
WR2	Water recycling program implementation	300	
WR3	Water efficient appliances usage	200	
WR4	Consumption of treated water	200	
	Total	1000	
5	Transportation (TR)		18%
TR1	The total number of vehicles (cars and motorcycles) divided by total campus' population	200	
TR2	Shuttle services	300	
TR3	Zero Emission Vehicles (ZEV) policy on campus	200	
TR4	The total number of Zero Emission Vehicles (ZEV) divided by total campus population	200	
TR5	Ratio of ground parking area to total campus' area	200	
TR6	Program to limit or decrease the parking area on campus for the last 3 years (from 2017 to 2019)	200	
TR7	Number of initiatives to decrease private vehicles on campus	200	
TR8	Pedestrian path on campus	300	
	Total	1800	
6	Education and Research (ED)		18%
ED1	The ratio of sustainability courses to total courses/subjects	300	
ED2	The ratio of sustainability research funding to total research funding	300	
ED3	Number of scholarly publications on sustainability	300	
ED4	Number of events related to sustainability	300	
ED5	Number of student organizations related to sustainability	300	
ED6	University-run sustainability website	200	
ED7	Sustainability report	100	
	Total	1800	

UI GreenMetric Team World University Rankings

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