

UNIVERSITI MALAYSIA PAHANG
**SUSTAINABILITY
REPORT
2017/2018**



5-Star World Class Technological University
www.ump.edu.my

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I. Introduction

As an institution of higher learning UMP is entrusted with a bigger responsibility to make our institution operate sustainably, and to foster more programmes and initiatives towards making the university campuses “green” in our operation. As a teaching university we embrace our responsibility in our lecture sessions to ensure that the engineers and technologists that we train shall become a new breed of professionals with far-reaching conscience and responsibility as future members of their companies, and as members of the community to always think and act to make the Earth a beautiful and comfortable home to live in. As a research university, UMP should be more active conducting research related to resources-use efficiency and sustainability for the benefits of the global world and for future survival and comfort of our future generations.

2. Governance

Our sustainability agenda is supported by a formal Sustainability and Environment Committee chaired by our Chief Operating Officer and supported by the Heads of Cluster of IU GreenMetric and representatives from a range of faculties, professional services, functions and campuses (see Appendix I). Last year (2017) saw an increase in the number of submissions to our Strategic Plan fund (Leap 4: Branding Prominence). This fund is administered by Leap 4: Branding Prominence Secretariat to award to student and staff-led sustainability projects each year.

To measure our own internal development we utilise a number of external benchmarks to evaluate our progress and performance based on six categories under UI GreenMetric World University Ranking which include:

- Setting and Infrastructure (15%)
- Energy and Climate Change (21%)
- Waste Management (18%)
- Water Usage (10%)
- Transportation (18%)
- Education (18%)



3. Setting & Infrastructure

The University has faced the most challenging experience in trees-planting management since the very beginning. Built on swamp areas and barren lands has made it difficult for us to plant trees on the campus. Therefore, greening of campus is the main focus of the University's top management. For 2017/2018, UMP's top management has approved RM30,227,192 worth of allocation for sustainability projects and initiatives within the campus. From 2017 to 2018, 12,012 trees had been planted around the campus through various activities, events and campaigns by staff and students.

All the planted trees are supervised by UMP's Planting & Landscape Management Unit. Besides that, UMP has one special project called 'MyTreeVolution Programme, National Forest Restoration Project'. It is an initiative project under the Fellow CEO@Faculty Programme 2.0, to address the environmental issues that need to be given attention to due to the rapid development of this country.

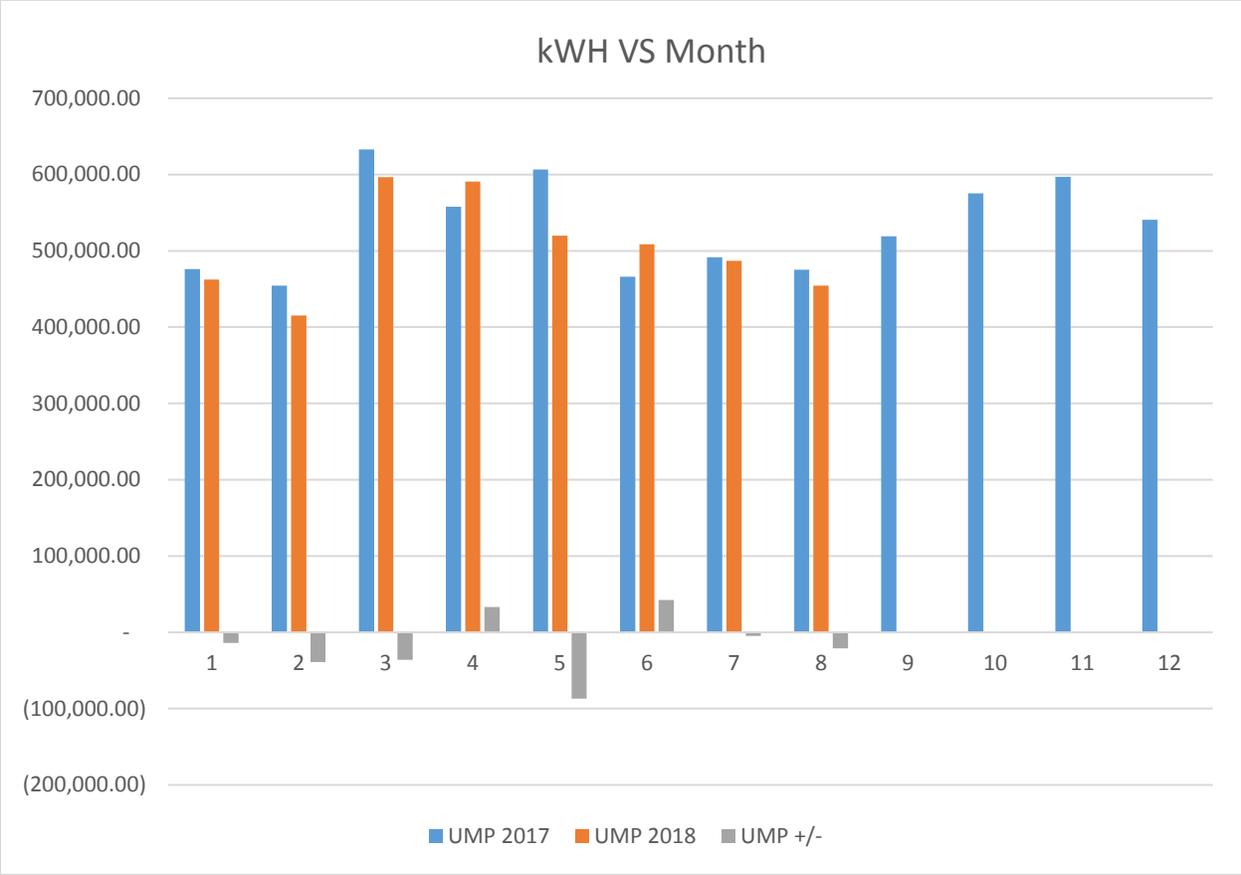
No	Initiative	Quantity (nos)
1	Casuarina equisetifolia planting project	100
2	Go Green Initiative - Earleaf acacia planting	30
3	Earleaf acacia planting by staff of UMP's Planting & Landscape Management Unit	167
4	"MyTreeVolution Programme, vol. 1	300
5	"MyTreeVolution Programme, vol. 2	1000

6	One-Tree, One-Life Programme	100
7	Landscape project at for Bio-aromatic Park Gabion Wall and Tun Razak Chancellory	590
8	Trees planting at Students Resident 5, Faculty, Nursery, Tun Abdul Razak Chancellory	1896
9	Trees planting project at UMP Multipurpose Hall	48
10	Trees planting project for pedestrian walkway: BPA to Container café	714
11	Landscape project at Halal Gelatin Manufacturing Building	1177
12	Trees planting project at New Sports Complex Facility (Surau)	7
13	Trees panting project at staff housing area	18
14	Trees planting project at Bio-aromatic Park entrance	92
15	Trees planting project for pedestrian walkway: Tun Abdul Razak Chancellory	452
16	Trees planting project: Lepisanthes alata	10
17	Trees planting project: Cocos nucifera 'Matag'	35
18	Trees planting project: UMP's Landmark	15
19	Trees planting project: UMP's Multi-Purpose Hall (Arecaceae)	13
20	Trees planting project: Afforestation UMP – FRIM (Plot I) <ul style="list-style-type: none"> ▪ Forest trees: 1500 ▪ Acacia trees: 1500 	3000
21	Trees planting project: Earleaf acacia at Tun Abdul Razak Chancellory	50
22	Trees planting project: Angsana trees at Kolej Mawardah	30
23	Trees planting project: Earleaf acacia at Faculty of Electric & Electronic	1036
24	Trees planting project: Earleaf acacia at Students Health Centre	140

25	Trees planting project: Earleaf acacia at Red Cafe	240
26	Trees planting project: Earleaf acacia at FRIM Afforestation site project (Plot 2)	133
27	UMP's Orchard	42
28	Trees planting project: Peltophorum pterocarpum (Batai Laut)	30
29	Trees planting project at Extinct Fruits Site	57
30	Trees planting project: UMP's Multi-Purpose Hall	54
31	Trees planting project: Bio-aromatic Park	120
32	Trees planting project: UMP entrance	200
33	Trees planting project: Lake B	116
Total		12012

4. Energy & Climate Change

With both campuses (Gambang and Pekan) ever growing, UMP faces a slight increase of electricity consumption, due to construction works inside the campus. There is always on-going development of new buildings and the population of UMP keeps increasing as development occurs. The increase in energy consumption has actually been offset by the various energy efficiency measures – the increase would have been more significant had there been no energy efficiency measures pursued by the University.



The Figure above shows UMP electricity consumption for both campuses in 2017 and 2018.

In 2017, UMP consumed 6,363,284 kWh of electrical energy for the whole year. On average, electrical energy consumption in 2017 was 532,774 kWh monthly. In 2018, until August, UMP consumed 4,035,062 kWh electrical energy, but the buildings area keeps increasing on the site. The average electrical energy consumption in 2018 is 504,383 kWh monthly. From the average comparison UMP has managed to optimise the usage of electrical energy to maximum needs. UMP has managed to save 85,486 kWh monthly in average.

To overcome the increase in electricity consumption UMP is active in installing and upgrading its energy-efficient appliances in all buildings by phases. For 2018, 10 projects are identified and

implemented. The savings of electricity are measured and translated into cost savings and reported to Leap 2: Income Generations & Saving Secretariat.

No	Initiatives	Numbers	kWH Saving Per Month
1	Upgrading of street and compound lightings for Pekan Library Area	40	4,464.00
2	Installation of light motion sensors at toilets in UMP Pekan	100	3,744.20
3	Upgrading from conventional lights to energy-efficient lights in CTAR, UMP Pekan	64	3,778.60
4	Replacement of T8 to T5 fluorescent tubes in UMP Gambang: Block B5 KPU and UMPH Block B1, A1-A3 Block C1-C8 Block C9-C15	12,850	48,061.63
5	Upgrading from metal halides to LED light in high-bay area in FKKSA Laboratory Area, UMP Gambang	77	6,222.33
6	Upgrading from conventional to energy-savings bulbs (1400 nos) in Blocks H and I, UMP Gambang	1500	16,210.00
7	Green Awareness Campaign	-	Awareness Programme
8	Installation of PV panels in all gazebo units	20	1,070.00
9	Acknowledgement of GreenTech Malaysia and Sustainable Energy Development Agency (SEDA) of UMP's initiatives towards integrated energy-savings and CO2 emissions reduction initiatives, with SEDA	-	Awareness Programme

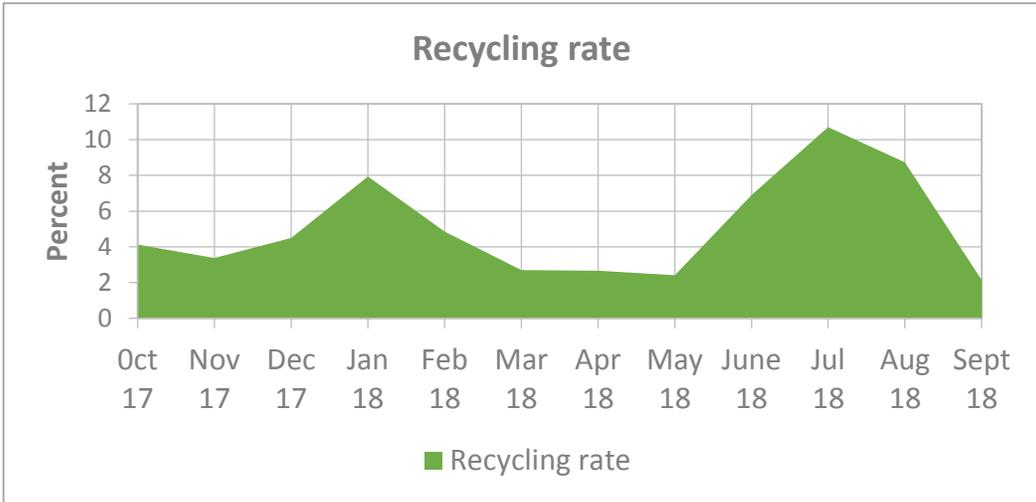
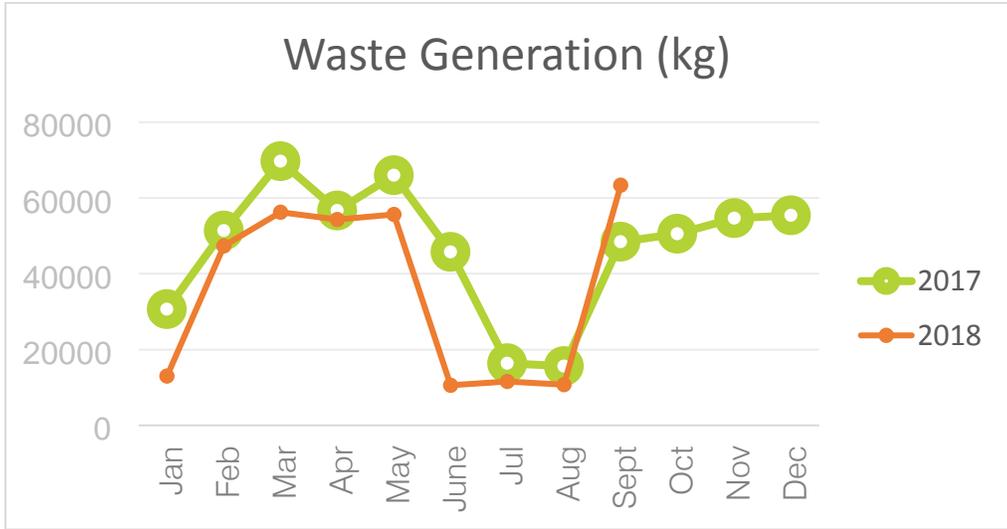
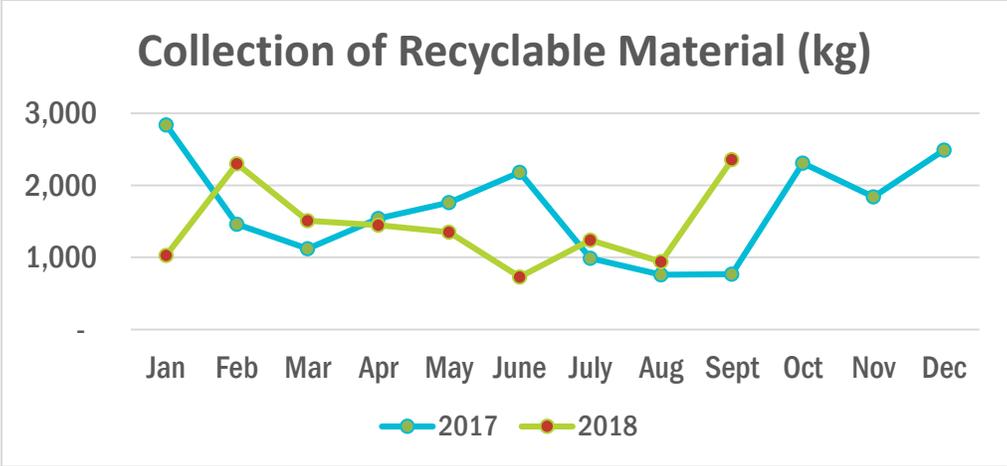
	allocating a RM55,000 grant to conduct an energy audit for UMP Pekan Library		
10	Installation of solar-powered LED lights with motion sensors	10	2,160.00

5. Waste

UMP is practicing Public Sector Conducive Ecosystem which is a guideline provided by Management Modernisation Unit and Malaysia Management Planning. Public Sector Conducive Ecosystem, commonly known as EKSA are focusing on 5 main objectives:

- i. Expanding the implementation of Government agencies to create a conducive environment;
- ii. Enhancing corporate image;
- iii. Strengthening creativity and innovation activities in line with the demands of stakeholders;
- iv. Encouraging activities towards creating green environment through cultivation of Green Practices; and
- v. Ensuring that the auditing elements meet the needs of the various Government agencies. They are provided with recycle bins and each month they need to measure the amount wastes and submit report to the UMP's Public Sector Conducive Ecosystem Committee.

Since we practice EKSA, each department must form an EKSA Committee to supervise and implement all possible initiatives to minimise waste in campus. All collected wastes are measured and collected for recycling. As a result, UMP's recycle rate until September 2018 has reached 5.22% compared to 4.36% at the end of last year (2017).



There has been some food waste composting conducted in UMP. The researchers are conducting research to increase the quality of the composted product so to be used as fertiliser in UMP. The University has targeted to tackle food waste problems generated from the various cafeteria inside the campus. Besides that, green waste has been composted either by putting it into a composting pit or by using it as organic fertiliser. There are a few small-scale projects related to food composting that are conducted by the university students. This will help them understand the benefits of composting to the environment.

UMP has continued to collect recyclable materials to ensure that they would not be disposed as domestic wastes. To be able to collect more recyclable materials, a new Recycling & Composting Centre is in the process of being built. The centre will be able to manage more organic and inorganic wastes in future.

6. Water

The University has four lakes functioning to conserve water and at the same time acting as an attraction to students, staff and the local community members to enjoy the serenity by the lake. Since UMP is located on the East Coast Region of Peninsular Malaysia, the two campuses generally received heavy rainfall during the month of September until February of the following year. Therefore all buildings in the campus are equipped with rain gutters or surface water collection channels (as components of water discharge system for a building). Water from a pitched roof flowing down into eaves gutter will flow to the drainage system connected to Lakes A, B, C and D. Besides that, in this year the University has developed 40 staff houses inside the Pekan campus equipped with rainwater harvesting systems for irrigation use.



7. Transportation

The University's Green Campus Campaign runs throughout the year. All students and staff are encouraged to use zero-emission vehicles. In some faculties they are using electric bicycles to commute from one place to another inside the campus. This year the University has improved its bicycle facilities and infrastructure.



The designation of bicycles parking areas and facilities makes it convenient for students to commute from the Students Residency to the faculty or lecture hall, and vice versa. By designating bicycle lanes we also promote safety on road to the campus community. To specially mitigate gas emissions inside the campus the University has recently initiates special parking lots for those using electric cars.

8. Education

Nations around the world are upping their efforts in the fight against climate change, so do Malaysia supported by environment-conscious and reputable institutions like Universiti Malaysia Pahang (UMP). UMP has managed to pull a crowd of 300 (in Phase 1) and 1,000 new students intake (in Phase 2) to plant saplings to combat the effect of global warming. Saplings from *Kelat Jambu Laut* and *Ketapang* species were planted at Laman Cendekia, under the MyTREEvolution Integrated CSR project.

MyTreeVolution Programme, National Forest Restoration Project is an initiative project under the Fellow CEO@Faculty Programme 2.0 to address environmental issues that need to be given attention due to the rapid development of this country. This project is one part of several activities done in conjunction with Students Induction Week, (MINDS).





About one hundred staff were involved in One-Life, One-Responsibility Programme on 18 April 2018. This programme was held by UMP's Persatuan Pegawai Tadbir & Ikhtisas as an effort towards greening of the university. Each staff involved was responsible to take care of the trees he or she planted. Each tree is tagged with the name of its planter!



9. Healthy Lifestyle

In our effort to promote healthy lifestyle in campus, UMP has launched two Virtual Run programmes for staff and students to practice healthy habits and culture in life. MyGift Advanced Virtual Run is Universiti Malaysia Pahang's efforts to raise funds for Universiti Malaysia Pahang Endowment known as MyGift UMP. MyGift UMP is a fundraising effort for any party to use for educational sponsorships and upgrading of existing lessons in UMP for the sake of future students. This MyGift UMP can provide positive input for UMP's future in providing infrastructure to UMP residents and local communities. Between Endowments and Funds Under MyGift are:

1. Student Scholars Endowment
2. Endowment Chair
3. Facilities and Labour Endowment
4. Endowment of Excellence
5. Community Fund (Including Zakat Fund / Student Welfare)
6. Endowment Fund (Waqf Mawaddah Residential College)
7. Disaster Fund
8. Mosque Tubes
9. Ramadan Fund
10. Infrastructure Fund



10. Engagement & Partnership

Sultan Ahmad Shah Environment Trust (SASET) is a Non-Government Organisation (NGO) in the State of Pahang. SASET is actively involved in awareness campaigns to the community especially the young generation on how they can contribute to nature through conservation

programmes, such as conservation activities of Ramsar Site in Bera Lake, Pahang. In this initiative UMP works hand-in-hand with SASET, the Department of Wildlife & National Parks and the Pahang State Forestry Department in planting the area with native forest species in order to mitigate land degradation of the area. This year in 2018 UMP is involved in several trees planting initiatives under SASET, namely:

- i. Go Green with SASET, 22 - 23 Sep 2018, Felda Tembangau, Reserved Forest Bera Lake
- ii. Go Green with SASET, 10 - 12 Aug 2018, Reserved Forest Bukit Ibam
- iii. Program Koi Sayang Alam Sekitar, 2 - 4 Mar 2018, Felda Kumai, Bera, Pahang Darul Makmur
- iv. Program Koi Sayang Alam Sekitar 2nd Serie, 5 Mar - 30 Sep 2018, Felda Kumai, Bera, Pahang Darul Makmur
- v. Go Green with SASET (Phase 5), 26 Oct 2017, Reserved Forest Bera Lake



Appendix I

Mr. Abd Hamid Majid	Chief Operating Officer
Dr. Irene Ting Wei Kiong	Director International Branding & Rankings
Dr. Nazikussabah Zaharudin	Leader for UIGWUR/Lecturer, Faculty of Industrial & Science Technology
Datin Fazia Ali	Managing Director – Research & Innovation Department
Mrs. Hazlina Faizal	Secretariat/Senior Executive International Branding & Rankings

Cluster - Setting & Infrastructure

Mr. Izwan Ismail	Engineer/Cluster Leader
Mrs. Noorafiza Abd Rafar	Executive Planting & Landscape Management Unit

Cluster - Energy & Climate Change

Prof. Ir. Dr. Hassan Ibrahim	Lecturer/Cluster Leader
Mr. Mohd Nurulakla Mohd Azlan	Energy Manager

Cluster - Waste

Mr. Hairynizam Muhd Taib	Director, Safety & Occupational Health Management
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Mr. Mohd Marzuki Mohamed

Deputy Director, Safety & Occupational Health
Management

Cluster Transportation

Prof. Dr. Rizalman Mamat

Dean, Faculty of Mechanical Engineering

Dr. Ahmad Shukrie Md Yudin

Lecturer, Faculty of Mechanical Engineering

Cluster Education

Prof. Dr. Mimi Sakinah Abdul Munaim

Deputy Dean, Post-Graduate Institute/Lecturer,
Faculty of Technology