



UNIVERSITI MALAYSIA PAHANG
**SUSTAINABILITY
REPORT 2018/2019**



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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 1). Last year (2018) 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 Forest Research Institute Malaysia (FRIM) distributed 1000 trees from 24 species including *Eurycoma longifolia*, *Millettia atropurpurea*, *Shorea leprosula* Miq, *Neobalanocarpus heimii*, *Garcinia hombroniana*, *Terminalia catappa*, *Dyera costulata*, *Scorodocarpus borneensis* Becc, Malacca teak and others to UMP for collaborative projects and sharing expertise in cultivation forests in UMP Pekan Campus. As the texture of the land at UMP Pekan is comprised of disturbed land (Dld), this cooperation brings expertise between UMP and FRIM to work together in the development of the Pekan UMP landscape and its environment to be more conducive. This Green Sustainable Campus Project led by Head of Biomass Technology Program from FRIM, Dr. Wan Asma Ibrahim.



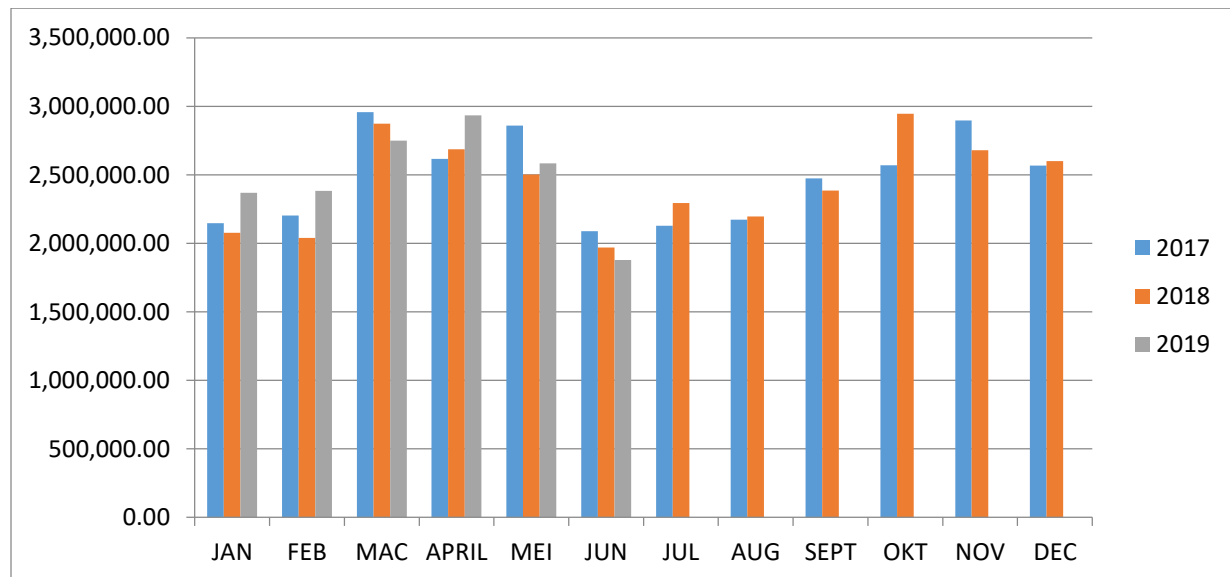
In order to utilize free space around in campus, UMP Technology Sdn. Bhd. (UMPT) which is UMP's subsidiaries are responsible to promotes entrepreneurial and commercialize of UMP's product by initiate the UMP Pilot Fertigation Plant. This 3.86-acre fertilization site has planted 15,000 eggplants for commercial purposes and another 1,000 dedicated to the experimentation and refinement of UMP related technologies and products, bringing the total number to 16,000 planted eggplants. Research and planning for this project has begun since the middle of last year however work on the project site and others has only begun in January this year with the approval of university management and UMP Holdings. These eggplants began to be sown before being transplanted to a polygon that was provided at the nursery in March and April and the eggs were harvested since mid-May. The eggplant has been harvested with a yield of around 250 to 350 kg every two days and is expected to increase from 1.2 to 1.5 tonnes daily starting mid-June. These crops are expected to continue to harvest until November.



UMP continues its effort to greening the campuses.

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.



Total Electricity usage(kWh) UMP All Locations, for 2017 – 2019 (September)

MONTH	2017	2018	2019
Jan	2,147,134.00	2,076,332.00	2,368,893.20
Feb	2,202,965.00	2,040,064.00	2,382,481.00
Mac	2,957,281.00	2,873,200.00	2,750,665.00
April	2,616,264.00	2,686,140.65	2,932,960.00
Mei	2,858,377.00	2,502,970.00	2,584,435.00
Jun	2,089,633.15	1,969,595.60	1,879,333.00
Jul	2,128,594.00	2,294,412.00	2,150,345.00
Aug	2,173,215.00	2,197,052.00	2,061,041.00
Sept	2,474,720.00	2,386,215.00	2,448,202.00
Okt	2,568,678.00	2,946,092.00	-
Nov	2,896,704.00	2,679,915.00	-
Dec	2,566,980.95	2,600,970.00	-
Total	29,680,546.10	29,252,958.25	21,558,355.20

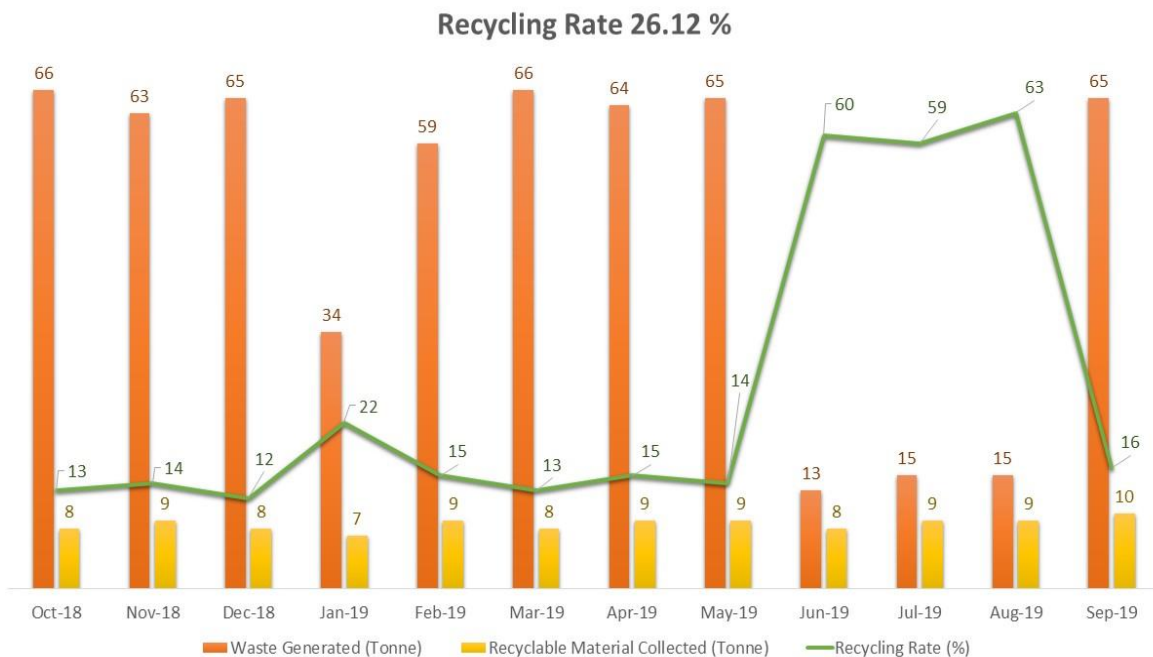
The total electricity usage of University Pahang Campus in last 12 months (Oktober 2018 – September 2019) is **29,785,332.20** kWh.

In 2018, UMP consumed 29,252,958 kWh of electrical energy for the whole year. On average, electrical energy consumption in 2017 was 2,437,746 kWh monthly. In 2019, until September, UMP consumed 21,558,355 kWh electrical energy, but the buildings area keeps increasing on the site. The average electrical energy consumption in 2019 is 2,395,372 kWh monthly.

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.



Recycling Rate of UMP

Recycling program is managed by EcoGreen Cluster of UMP. The cluster, with the help of other department provide facilities and system to accommodate the recycling process. Recycle bin is provided in the building and also outside of the building. Collection of recyclable waste is monitored to measure the recycling rate in UMP. We have been getting a better data on collection of recyclable material from a few departments, hence we are getting higher number of recyclable material collected resulting in higher recycling rate compared to previous years. The recycling data do include green waste & food waste generated and composted. Recycling of organic waste is significantly higher compared to recycling of inorganic waste.

PERIOD	WASTE GENERATED (TONNE)	RECYCLABLE WASTE COLLECTED (TONNE)	RECYCLING RATE (%)
OCT 2017 – SEPT 2018	488	20	5.22
OCT 2018 – SEPT 2019	591	104	26.12

Compost & Recycle Centre, UMP Gambang and Pekan manage collection of recyclable material & composting at UMP. Compost & Recycle Centre in UMP Pekan is equipped with rain water harvesting and powered by solar energy. Both centre manage organic & inorganic waste in UMP.



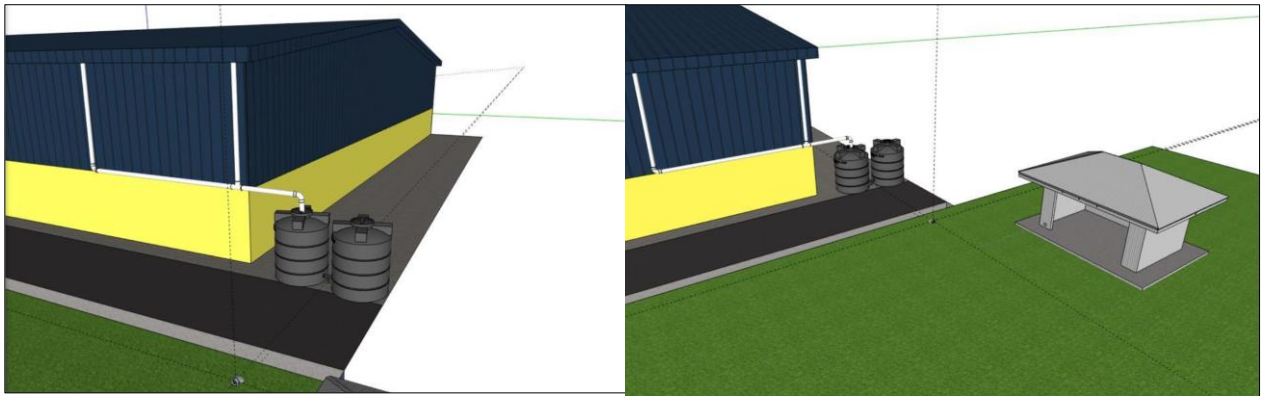
Waste Audit Conducted at Compost & Recycle Centre, UMP Gambang



Compost & Recycle Centre, UMP Pekan

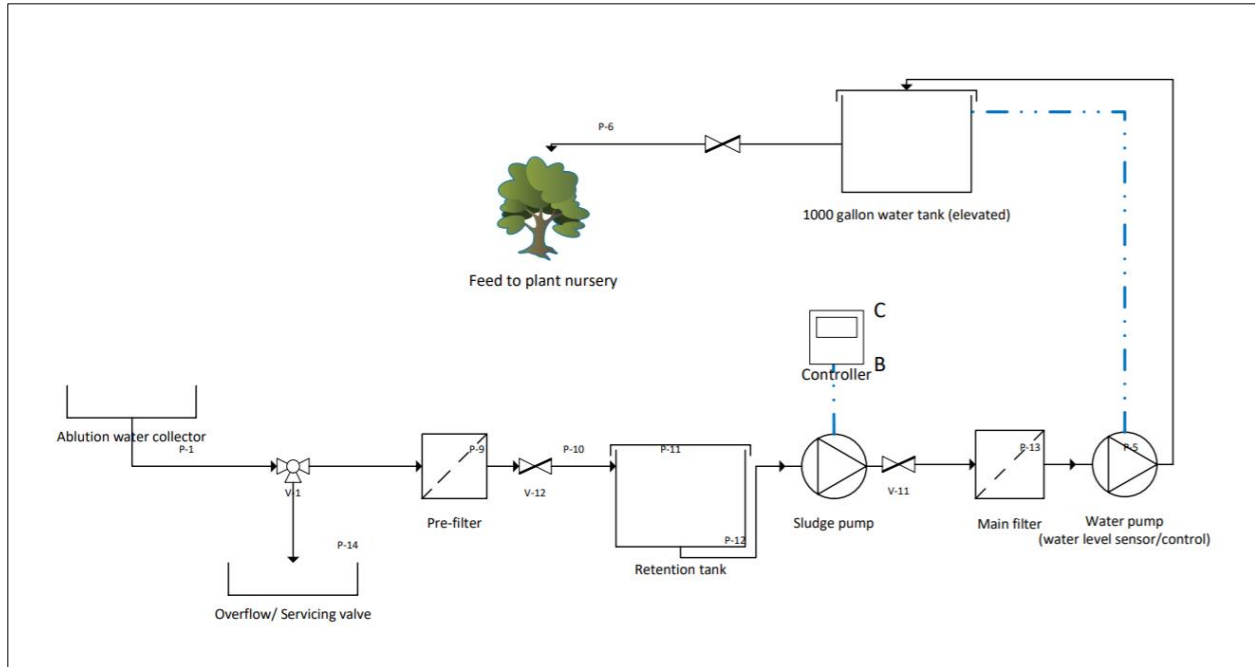
6. Water

This year we are working on Water Conservation Program- Rainwater Harvesting System at Sport's Complex, UMP Gambang Campus. This project is a part of water conservation program. The rainwater harvesting system will be installed at Sport's Complex, UMP Gambang Campus. The collected rainwater will be used to water the UMP Gambang football field.



Water Conservation Program- Rainwater Harvesting System at Sport's Complex, UMP Gambang

Under water recycling program university has agreed to allocate RM26,500 for Water Recycling Program- Recycled Water Ablution System at Masjid UMP Gambang Campus. The recycled water abluion system with filtration will be installed at Masjid UMP Gambang Campus. The recycled water will be used to water the UMP nursery plant.



Water Recycling Program- Recycled Water Ablution System

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.

UMP provide free shuttles for students to commute from UMP@City to UMP Pekan Campus. Beside that our students in both campus also can enjoy public bus services (with minimal payment) to commute from campus to Kuantan town.



8. Education

Universiti Malaysia Pahang (UMP) has recently embarked on its Green Policy, and launched the “Let’s Break Up with Single-Use Plastic” campaign on February 19, 2019, at its Sports Complex, Gambang Campus, to encourage students and faculty members alike to reduce the usage of plastics.

The Policy is the result of an initiative by the UMP Sustainability Committee, which falls under the purview of the Waste Management Cluster, to inculcate greater awareness on the need to reduce and eventually abandon single-use plastics on university ground.

Dubbed 6R, the Policy focuses on six principles – namely, Refuse, Reduce, Reuse, Recycle, Rot and Re-Think – in the aspect of waste management, which forms part of the university’s healthy living environment initiative.

The campaign was launched by UMP previous Vice-Chancellor, Professor Dato’ Sri Dr. Daing Nasir Ibrahim, during his 2019 Annual Mandate event, as a proactive move by the university in response to the Government’s call for Malaysia’s Roadmap Towards Zero Single-Use Plastics 2018-2030 – which was unveiled by the Ministry of Energy, Science, Technology, Environment & Climate Change (MESTECC) on October 17 last year.



On that same breadth, this campaign also aims to create an increased awareness of the importance and responsibility of UMP residents to cut down the generation of domestic household solid waste – which will subsequently lessen the waste tonnage sent the disposal site

and consequently, will reduce pollution to the environment and green-house effects, both of which have had irreversible negative impacts on the global climate.

In support of the on-going UI Greenmetric Programme, Universiti Malaysia Pahang (UMP) Library has embarked on a payment mode of fines dubbed Waste4Fine – via plastic drinking bottles and cans – and has implemented it beginning March 13, 2019. The main objective of Waste4Fine is to inculcate greater awareness on the importance of recycling, and that students who face financial constraints can actually opt to pay their fines with the Waste4Fine alternative. By turning in 1-liter plastic drinking bottles, students will earn a 10 sen discount on their Library fines, while similar bottles with more than 1-liter capacity will earn them 20 sen discounts. Students can also pay their fines in full with these plastic drinking bottles. However, this initiative available only on Wednesdays during the library’s operational hours.



In this regard, several programmes have been and will continue to be implemented by the Occupational Safety & Health Management Office (OSHMO) to create a greater awareness of this Green Policy initiative in a sustainable manner. Among them is “MYTAPAU”, wherein UMP residents are given incentives if they bring along their own containers to pack the take-away food.

In another programme, UMP is collaborating with the Kuantan Community Rehabilitation Centre (PPDK) to recycle printed materials, such as advertisement banners, into reusable grocery bags.

9. Healthy Lifestyle

In our effort to promote healthy lifestyle in campus, UMP actively organize an events. Early this year The Department of Student Affairs & Alumni (JHEPA), Universiti Malaysia Pahang (UMP) has organised a charity run in a move to raise funds for the Palu Humanitarian Mission in Indonesia which was badly hit by natural disaster.

It was an initiative organised together with UMP Consumer Student Movement (GPS) and Association of Chemical Engineering Students (CHEST) led by Ezwan Shah Mohd Nordin, who is also the Student Representative Council for Volunteerism and Community Service exco member. The run was held on February 23, 2019 and started at 7am. The run began at the Sports Complex, Gambang Campus and was flagged off by Deputy Vice-Chancellor (Student Affairs & Alumni), Professor Dato' Dr. Yuserrie Zainuddin.

The run, which was opened to the public, was also aimed at promoting a healthy lifestyle and produced students of healthy mind and body.



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 (Phase 5), 26 Oct 2017, Reserved Forest Bera Lake

ii. Go Green with SASET, 25 Ogos 2019, Hutan Simpan Terekai



Appendix I

Dr. Nazikussabah Zaharudin	Leader for UIGWUR/Lecturer, Faculty of Industrial & Science Technology
Mrs. Hazlina Faizal	Secretariat/Senior Executive, Branding & Rankings
Mrs Nor Azlin Mohd Azman	Assistant Administrative Officer, 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
Mr. Mohd Marzuki Mohamed	Deputy Director, Safety & Occupational Health Management

Cluster Transportation

Dr. Ahmad Shukrie Md Yudin	Lecturer, Faculty of Mechanical Engineering
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Cluster Education

Prof. Dr. Mimi Sakinah Abdul Munaim

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

Appendix 2

No	Initiative	Quantity (nos)
1	Forest Research Institute Malaysia (FRIM)	1000
2	UMP Pilot Fertigation Plant	16000
3	Casuarina equisetifolia planting project	100
4	Go Green Initiative - Earleaf acacia planting	30
5	Earleaf acacia planting by staff of UMP's Planting & Landscape Management Unit	167
6	"MyTreeVolution Programme, vol. 1	300
7	"MyTreeVolution Programme, vol. 2	1000
8	One-Tree, One-Life Programme	100
9	Landscape project at for Bio-aromatic Park Gabion Wall and Tun Razak Chancellory	590
10	Trees planting at Students Resident 5, Faculty, Nursery, Tun Abdul Razak Chancellory	1896
11	Trees planting project at UMP Multipurpose Hall	48
12	Trees planting project for pedestrian walkway: BPA to Container café	714
13	Landscape project at Halal Gelatin Manufacturing Building	1177
14	Trees planting project at New Sports Complex Facility (Surau)	7
15	Trees planting project at staff housing area	18
16	Trees planting project at Bio-aromatic Park entrance	92
18	Trees planting project for pedestrian walkway: Tun Abdul Razak Chancellory	452
19	Trees planting project: Lepisanthes alata	10
20	Trees planting project: Cocos nucifera 'Matag'	35
21	Trees planting project: UMP's Landmark	15
22	Trees planting project: UMP's Multi-Purpose Hall (Arecaceae)	13
23	Trees planting project: Afforestation UMP – FRIM (Plot I) <ul style="list-style-type: none"> ▪ Forest trees: 1500 	3000

	▪ Acacia trees: 1500	
24	Trees planting project: Earleaf acacia at Tun Abdul Razak Chancellery	50
25	Trees planting project: Angsana trees at Kolej Mawardah	30
26	Trees planting project: Earleaf acacia at Faculty of Electric & Electronic	1036
27	Trees planting project: Earleaf acacia at Students Health Centre	140
28	Trees planting project: Earleaf acacia at Red Cafe	240
29	Trees planting project: Earleaf acacia at FRIM Afforestation site project (Plot 2)	133
30	UMP's Orchard	42
31	Trees planting project: Peltophorum pterocarpum (Batai Laut)	30
32	Trees planting project at Extinct Fruits Site	57
33	Trees planting project: UMP's Multi-Purpose Hall	54
34	Trees planting project: Bio-aromatic Park	120
33	Trees planting project: UMP entrance	200
34	Trees planting project: Lake B	116
Total		29012

Appendix 3

<http://news.ump.edu.my/general/frim-serah-1000-anak-pokok-hutan-untuk-kampus-hijau-lestari>

<http://news.ump.edu.my/index.php/general/ump-embarks-6r-campaign-sustainable-green-campus>

<http://news.ump.edu.my/index.php/research/penyelidik-ump-hasilkan-alat-penyedut-madu-kelulut-lebih-berkualiti>

<http://news.ump.edu.my/general/ump-petron-pupuk-kesedaran-keselamatan-jalan-raya>

<https://www.sinarharian.com.my/article/46699/EDISI/Pahang/SASET-tanam-700-anak-pokok-nadir-di-Hutan-Simpan-Tekai>

<http://news.ump.edu.my/index.php/general/500-participants-took-part-ump-charity-run-palu-humanitarian-mission-fund>