

UTM PROSPERING LIVES



April - July 2019



Community Engagement

UTM has a longstanding commitment to engaging and serving our communities. Increasing social complexity creates an imperative for the University and communities to work together and share ideas, knowledge and expertise in handling critical issues such as health and wellness, social justice, education, science, business, the environment and community wellbeing. UTM carries out research-based CSR hand in hand with industries and NGOs on 5 Community Engagement Focus Areas.





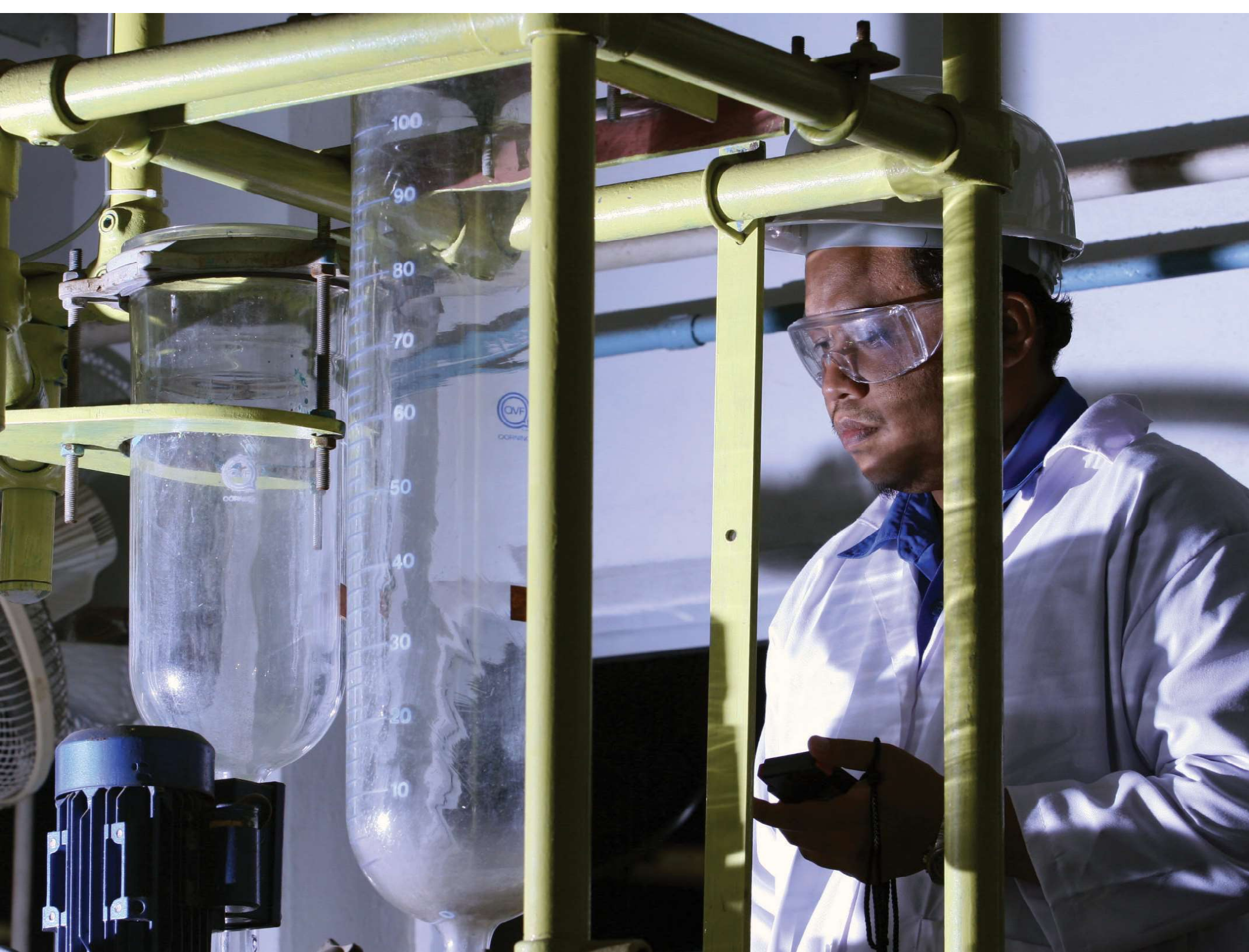
Community
Engagement (CE)
Programmes
(Jan - June 2019)
in Numbers

13 High Impact CE Projects

RM14.1 Mil Fund Utilized

68 CE Programmes





Among High Impact CE Projects in 2019

**Dr. Norziha Binti
Megat Mohd
Zainuddin**

Project :
Mobile Application
Dictionary for Deaf
Students

**Assoc. Prof. Dr. Fatin
Aliah Phang Binti
Abdullah**

Project :
Problem-based Learning
in STEM Education to
Develop 21st Century
Skills and Low Carbon
Awareness

**Assoc. Prof. Dr Shahida
Binti Sulaiman**

Project :
Sustainability of Human
capital in the Rural
Area (KAMIL) via the
Establishment of Centre
for Advancement in Rural
Educations Informatics
(ICARE) UTM-KEJORA

**Assoc. Prof. Dr.
Gurupiah Mursib**

Project :
Community Services,
Rehabilitation and Knowledge
Transfer Program (Technique
of Palette Furniture
Manufacturing) for Children
residing at Bukit Puchong Low
Cost Apartment Community.

**Prof. Dr. Zaleha Binti
Ismail**

Project :
Problem Solving Skills
based on Integrated STEM
Education Model Among
High School Students

**Dr. Aini Zuhra Binti
Abdul Kadir**

Project :
Development and Analysis
of Portable Low Direct
Current Stimulation Device
For Medical Applications

**Assoc. Prof. Dr. Hairul
Nizam Bin Ismail**

Project :
Exploring Factors of
Vulnerability Influencing
Business Women's
Community to Seasonality,
Trends And Shock In
Tourism Entrepreneurship

**Assoc. Prof. Dr Mohd
Nazri Bin Kama**

Project :
Selangor Islamic Gateway
Portal System - Phase 2
Stage 1

**Dr Aini Zuhra Binti
Abdul Kadir**

Project :
Workshop on TDCSMINDS
Future Strategies, RCT
And Directions

Dr. Sapura Bt Mohamad

Project :
Outdoor Learning Through
Homegrown Farming For
Middle Childhood Social
Behavioral Stimulation

Dr. Ong Pei Ying

Project :
Comparative Effect of
Organic or/and Inorganic
Soil Enhancer on the Soil
Physiochemical Properties,
Enzymatic Activities and
Crop Yield in Polycropping
System.

Dr. Leong Hong Yeng

Project :
Knowledge Transfer
of Effective Microorganism
(EM) Application

**Dr Hema Rosheny
Binti Mustafa**

Project :
English Enhancement
Program For SK Taman
Cahaya Masai Through
English-in-Action Camp



UTM Transforming Communities @ Low - Medium Cost Stratified Housing in Malaysia

“The first objective of Dasar Komuniti Negara (DKN) is to empower the local communities, to encourage the people to involve themselves more in community activities such as to manage and take care of the public assets in the community,”

Zuraida Kamaruddin
Minister for Housing & Local Government.
(Feb, 2019)





Catalyzing Change for PPR Community - The UTM for Society Model

There is an urgent need to address and identify sustainable solutions to overcome issues arising from PPR low-medium cost housing communities. In February 2019, the Dasar Komuniti Negara (DKN) was launched by the Ministry of Housing & Local Government with the aim to transform and rejuvenate communities residing in these sectors via programs organized in partnership with the government, private sector and NGO.

Prior to DKN, UTM had carried out numerous community capacity building programs which focused on shifting the mindset of the PPR community and instill a sense of ownership and responsibility for them to become a model citizen and agent of change. Additionally, UTM PPR Community projects aim to improve the psycho socio-economic status of the community and foster a compassionate, proactive and productive community.

Since 2018, UTM has implemented three (3) signature PPR / Stratified Housing Community Projects in which 2 were successfully implemented in the State of Johor at Flat Taman Plentong Utama Johor Bahru and Rumah Pangsa Bandar Baru Kangkar Pulai and 1 project located at Pangsapuri Bukit Puchong, Selangor. The project has gained the support from Majlis Bandaraya Johor Bahru, Majlis Perbandaran Subang Jaya, Yayasan Raja Zarith Sofiah Negeri Johor (YRZSNJ), Yayasan Sultan Ibrahim Johor (YSIJ) and Corporate Sponsors to ensure measurable and sustainable impact could be realized.

We believe that the model and program developed by UTM have shown significant impact to the PPR housing community that we have reached out too and can be replicated in other PPR's and similar sectors across Malaysia.

Plentong Utama Flat Sustainable Environment Development Program is a community project led by the Faculty of Built Environment & Surveying & UTM School of Education.



Rejuvenation 560 Program for Pangsapuri Bukit Puchong” is a community project led by the Faculty of Built Environment & Surveying & UTM Institut Sultan Iskandar.



‘Bangsa Johor Bahagia’ (BJB) is a pilot community project equipped by the support of UTM expertise and other collaborators in facilities management, building design, social engineering and digital transformation to assist Flat Kangkar Pulai, Johor community transformation. This project is funded by Yayasan Raja Zarith Sofiah Negeri Johor (YRZSNJ) and Yayasan Sultan Ibrahim Johor (YSIJ).



Beneficiaries



> 1500 residents for 3 PPR & Low-Medium Cost Housing Projects



> 10 (NGO, Gov Agency, University, Company)



English, Artwork, ICT

Social Return of Investment (SROI)

It is important to ensure that our PPR community projects are able to indicate the “social return” which goes beyond financial returns to the community. Known as the SROI acronym, Social Return of Investment is a method applied by our team with the aims to identify societal returns. For the Bukit Puchong Rejuvenation Project, the SROIs are :





Pangsapuri Bukit Puchong

Rural Development Policy Outlines

Rural Development Policy outlines 10 thrusts, 33 policy statements and 88 strategies which will be executed until 2030. It sets the direction framework for rural development in Malaysia which will help transform it into a developed & high-income nation by 2025. The consultation group was led by Professor Dr. Ibrahim Ngah together with the other 6 namely PM Dr. Hamid Saad, PM Dr. Kassim Thukiman, PM Dr. Mohd Azhar Abd. Hamid, Prof. Asan Ali, PM Dr. Nanthakumar and Dr. Hisyam Kamaruddin from UTM and also the team from UNIKL and UKM (in infographic).





Flat Kangkar Pulau

UTM helps to address societal challenges

Closer to home, UTM Academic analysis provides local governments and communities with a robust evidence to inform public policy. At an institutional level, UTM is well positioned to offer comprehensive, independent assessments of issues. UTM academics engage in such work not as consultants or handmaidens to government, but as critical allies.

astro AWANI Kenal pasti arah angin untuk tahu punca pencemaran bahan kimia



Pelajar Sekolah Kebangsaan (SK) Tanjung Puteri Resort yang terjerjak akibat pencemaran udara dimandikan di Stadium Tertutup Majlis Perbandaran Pasir Gudang (MPPG) pada Isnin. - Gambar BERNAMA

TRAGEDI pencemaran udara yang menyebabkan sejumlah pelajar sesak nafas sebaik waktu persekolahan dibuka di Pasir Gudang boleh dikesan dengan merujuk semula kepada pergerakan angin sejak beberapa hari lalu.

Menurut Pensyarah Kanan dan Penyelidik Fakulti Sains Universiti Teknologi Malaysia (UTM), Dr. Raja Kamarulzaman Raja Ibrahim, penemuan Methyl Mercaptan iaitu bahan kimia yang digunakan dalam gas memasak bagi mewujudkan bau itu antara petunjuknya.

Bahan berkenaan, tegas beliau, tidak dibuang di dalam sungai, sebaliknya dari sumber lain yang dibawa melalui angin yang kuat.

"Kalau ikut laporan ada Methyl Mercaptan, ini bahan kimia digunakan dalam tong gas memasak apabila pengeluar memasukkan sedikit bahan ini sebagai indikator dengan mewujudkan bau gas kerana butane dan propane (gas memasak) tiada bau.

"Gas ini bukan dari sungai (bahan kimia yang terdapat) sebaliknya datang dari sumber lain," katanya.

Sementara faktor suhu pula, jelas Dr. Raja Kamarulzaman, turut memainkan peranan terutamanya berikutan kedudukan Pasir Gudang berhampiran laut.

Malah Volatile Organic Compound (VOC) benda asing, kata beliau, akan menjadi lebih berat kerana ketumpatan udara pada waktu pagi dan malam pada ketinggian tertentu.

"Waktu pagi dan malam suhu lebih rendah, jadi gas dan VOCs akan lebih sukar untuk naik ke atas (terperangkap pada tahap rendah). Namun bila udara panas, udara menjadi lebih ringan dan gas berbahaya serta VOCs akan lebih mudah terbang ke tahap lebih tinggi.

"Ini boleh dipergangah dengan tiupan angin, oleh kerana Pasir Gudang berhampiran laut. Jadi boleh kemas kini dengan abatan berkaitan untuk mendapatkan maklumat akan arah angin yang membawa VOCs dan gas tersebut," jelasnya.

Justeru, seperti yang dicadangkan sebelum ini, pemantauan udara perlu dipertingkatkan dalam memastikan tiada VOCs yang masih lagi boleh mengakibatkan kejadian sama berulang.

Dalam insiden Ahad lalu, 101 pelajar beberapa sekolah di Pasir Gudang mengalami sesak nafas, muntah-muntah dan pening

selepas terhidu bahan kimia ketika sesi persekolahan dibuka semula. Sementara itu, Timbalan Pengerusi Badan Bertindak Pencemaran Pasir Gudang, Mohd Rafee Abdullah, 46, berkata, sudah tiba masanya bagi kerajaan dan pihak kilang di daerah itu menyelesaikan isu tersebut.

Menurutnya, kejadian kali ketiga itu amat mengganggu penduduk selepas pinak berkuasa dan kerajaan sedang bertungkus lumus menyelesaikan insiden tersebut.

"Sudah memasuki kali ketiga kejadian ini berlaku, ia tidak sepatutnya berulang lagi jika pihak berkuasa dan yang bertanggungjawab menanganinya dengan berhemah.

Sumber: <http://www.astroawani.com/berita-malaysia/kenal-pasti-arah-angin-untuk-tahu-punca-pencemaran-bahan-kimia-211535>

UTUSAN ONLINE 3 pakar UTM dilantik urus jawatankuasa saintifik bencana



Bee Yin bertanding dengan tiga pakar dari Fakulti Sains, Universiti Teknologi Malaysia (UTM) dilantik sebagai ahli Jawatankuasa Sains bagi membantu memberikan maklumat dan pendapat saintifik kepada Jawatankuasa Bencana Pasir Gudang, di bangunan MPPG di sini sebentar tadi. - UTUSAN ONLINE/ NUR AZHAN MAZLAN

PASIR GUDANG 16 Mac - Tiga pakar dari Fakulti Sains, Universiti Teknologi Malaysia (UTM) dilantik sebagai ahli Jawatankuasa Sains oleh Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, Yeo Bee Yin bagi membantu memberikan maklumat dan pendapat saintifik kepada Jawatankuasa Bencana Pasir Gudang.

Kahlian jawatankuasa itu terdiri daripada agensi kerajaan dan pakar berkaitan antaranya Jabatan Alam Sekitar (JAS), Agensi Angkasa Malaysia (MYSA), Agensi Remote Sensing Malaysia (ARSM), Jabatan Meteorologi, Jabatan Kesihatan, Jabatan Kimia, UTM dan Petronas.

Unit HAZMAT Jabatan Bomba dan Penyelamat Malaysia, Jabatan Alam Sekitar, Jabatan Kimia Malaysia, Jabatan Keselamatan dan Kesihatan Pekerjaan (JKKP), Jabatan Meteorologi, Jabatan Kesihatan Negeri Johor, Agensi Remote Sensing Malaysia (ARSM), Petronas dan juga Environmental Resources Management (ERM).

Abdull Rahim berkata, mesyuarat pertama adalah dimulakan pada pukul 10 pagi Jumat lalu di Pusat Gerakan Bencana di bangunan Majlis Perbandaran Pasir Gudang (MPPG) di sini.

"Fungsi jawatankuasa ini adalah untuk mengenal pasti punca dan pergerakan bahan pencemar (environmental fate) dan kesannya terhadap alam sekitar dan kesihatan manusia.

"Jawatankuasa ini juga akan mengenal pasti langkah, tindakan dan kawalan bagi menangani pencemaran bahan kimia beracun di Sungai Kim-Kim ini," katanya ketika ditemui pemberita di sini hari ini.

Untuk itu, pihak UTM juga diberi tanggungjawab untuk menjalankan persampelan kualiti udara, air, tanah dan darah untuk analisa kimia bagi menentukan punca pencemaran dan cara mengatasinya di sini. - UTUSAN ONLINE

Sumber: <http://www.utusan.com.my/berita/wilayah/johor/3-pakar-utm-dilantik-urus-jawatankuasa-saintifik-bencana-1-962666>



Selepas 10 hari pencemaran, kerajaan terus buntu

Oleh TULISHAH ISHAHAK
di Pasir Gudang

KERAJAAN melakukan pelbagai usaha namun masih tidak dapat mengesan punca pencemaran udara di daerah ini yang sudah berlanjutan sehingga 10 hari, malah terus buntu.

Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar, Yeo Bee Yin berkata, bagaimanapun pihaknya tidak berputus asa dan usaha akan terus dilakukan.

"Pencemaran pada kali ini tidak sama dengan insiden di Sungai Kim Kim kerana sebelum ini kita tahu punca pencemaran. Contohnya pada kali ini punca yang menyebabkan pencemaran adalah melalui angin yang membawa bahan pencemar dari kawasan lain," katanya.

Juga salah seorang ahli Jawatankuasa Sains Pasir Gudang berkata, tiga jenis gas sudah dikenal pasti oleh UTM sebagai pencemaran yang terkuat dalam daerah ini.

"Saya pun tidak boleh mengesan punca pencemaran yang berlaku, namun tidak dapat di pastikan sama ada disebabkan oleh pencemaran atau keadaan kawasan sekitar," jelasnya.

Pencemaran pada kali ini tidak sama dengan insiden di Sungai Kim Kim kerana sebelum ini kita tahu punca pencemaran.

Menurutnya, kejadian kali ketiga itu amat mengganggu penduduk selepas pinak berkuasa dan kerajaan sedang bertungkus lumus menyelesaikan insiden tersebut.

"Sudah memasuki kali ketiga kejadian ini berlaku, ia tidak sepatutnya berulang lagi jika pihak berkuasa dan yang bertanggungjawab menanganinya dengan berhemah.

Sumber: <http://www.utusan.com.my/berita/wilayah/johor/3-pakar-utm-dilantik-urus-jawatankuasa-saintifik-bencana-1-962666>

mentantu kerajaan dalam isu pencemaran di daerah ini. Dalam sidang akhbar bersejarah pula, Bee Yin menekankan pentingnya pemantauan udara dan kita harap dapat wujudkan secepat mungkin," jelasnya.

Sementara itu, Dekan Fakulti Sains Universiti Teknologi Malaysia (UTM), Prof. Dr. Abdull Rahim Mohd Yusoff yang juga salah seorang ahli Jawatankuasa Sains Pasir Gudang berkata, tiga jenis gas sudah dikenal pasti oleh UTM sebagai pencemaran yang terkuat dalam daerah ini.

"Saya pun tidak boleh mengesan punca pencemaran yang berlaku, namun tidak dapat di pastikan sama ada disebabkan oleh pencemaran atau keadaan kawasan sekitar," jelasnya.

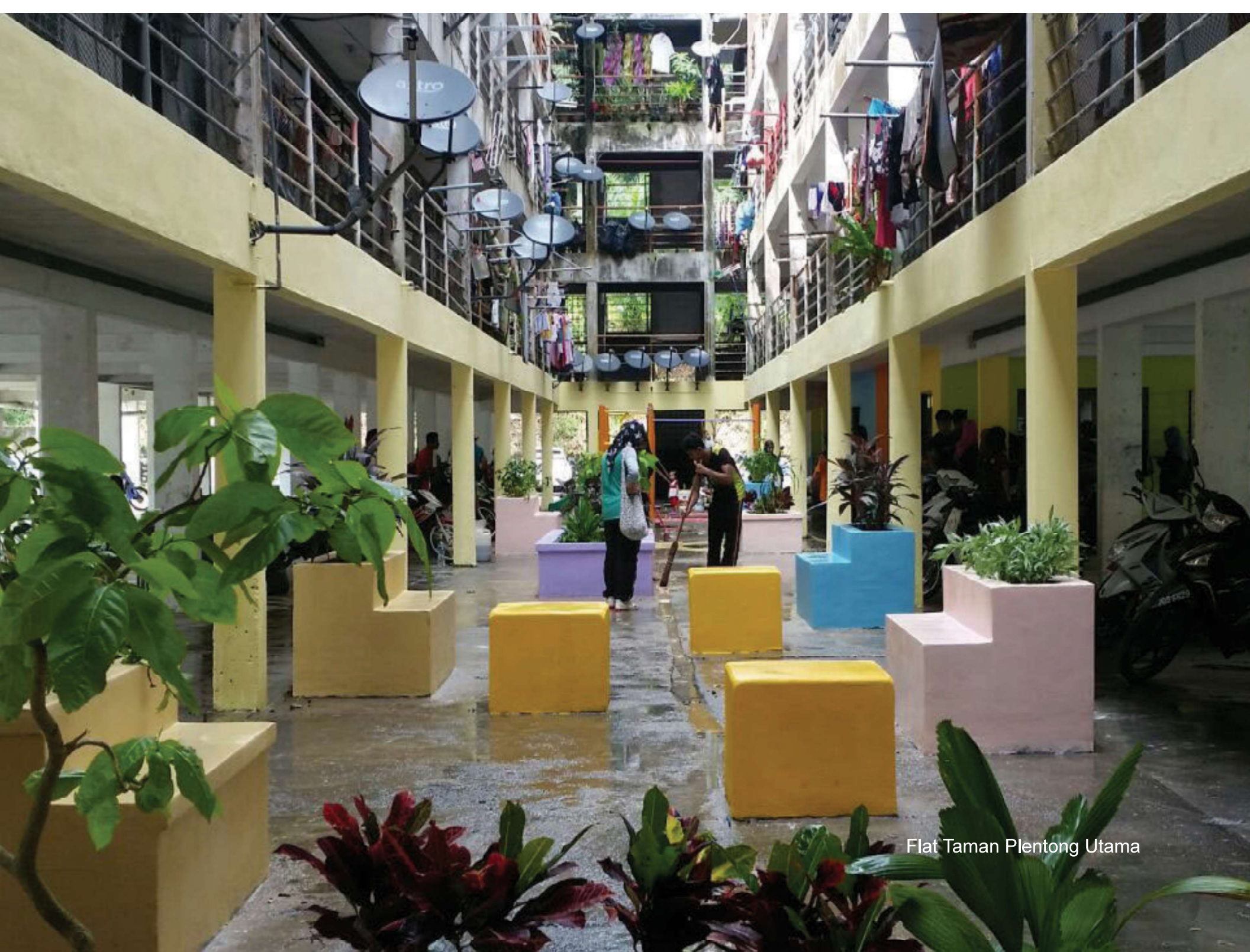
Tiada keperluan tutup sekolah - TPM

KUALA LUMPUR 16 Mac - Timbalan Perdana Menteri, Datuk Seri Dr. Wan Azizah Wan Ismail menegaskan buat masa ini tiada keperluan untuk menutup sekolah di Pasir Gudang, Johor.

Beliau berkata, walaupun terdapat beberapa guru dan pelajar mengalami sesak nafas, loya dan muntah.

Ditambahkan beliau, masalah ini adalah lebih kepada masalah pemantauan udara kerana sesetengah sekolah di kawasan ini telah ditutup. Beliau berkata, namun ia tidak mengesahkan secara keseluruhan secara keseluruhan pemantauan udara kerana sesetengah sekolah di kawasan ini telah ditutup. Beliau berkata, namun ia tidak mengesahkan secara keseluruhan secara keseluruhan pemantauan udara kerana sesetengah sekolah di kawasan ini telah ditutup.

UTM experts, Dean of Faculty of Science, Prof. Dr. Abdull Rahim Mohd Yusoff, Director of UTM's Environmental Unit, Occupational and Occupational Health Unit, Assoc Prof. Dr. Jafariah Jaafar and senior lecturer, Dr. Faizuan Abdullah were appointed as the Scientific Committee members by Minister MESTEC, YB Yeo Bee Yin to assist in resolving the problem of pollution cases in Pasir Gudang.



Flat Taman Plentong Utama

As educators, we are entrusted to equip our students with knowledge, skills, positive attitude and good character. We regard our students as our own family and adhere ourselves to the highest moral standards.

→ **MUKA SEPULUH**

DARI KACA MATA

➤ **Professor Datuk Ir Dr Wahid Omar**
Naib Canselor UTM

➤ **Prof Madya Dr Kassim Thukimin**
Fakulti Sains Sosial dan Kemanusiaan UTM



kan mereka.

Untuk pertama kalinya, pengempunannya ini untuk mereka yang saat ini sedang berjuang untuk membuktikan bahwa mereka adalah PKM bertakwa. Mereka yang ini manifestasinya dengan mengabdikan diri untuk umat Allah.

Inisiatif ini bertujuan untuk menaburkan kebebasan akademik, dan kebebasan bersuara di universitas. Untuk mewujudkan hal tersebut dengan "mexara gadang". Justeru universitas perlu dipulih dan dipulihkan semesta roh kewujudannya. Untuk itu universitas perlu dipulihkan dengan cawan-cawan nagan parti politik.

Collegial perseroan politik.

Ini pun perlu dipulihkan hadnya supaya semua pihak yang sama pemikirannya untuk memajukan bangsa dan memajukan negara. Untuk itu perlu memajukan pemikiran intelektual dan merealisasikan linnu bahu. Jelasnya, ini semua perlu dipulihkan untuk mengahap tingginya.

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UTM is focused towards defining and scaling the transformations to address Education 4.0 bridging to the Industrial Revolution 4.0

It supports the knowledge economy and provides the knowledge necessary for the social mobility and economic progress essential to societies across the globe.



Dr Athif (kanan) menunjukkan cara 'berjabat tangan' dengan robot Tele-Presence kepada Tun Dr Mahathir yang diiktiraf oleh Tham Weng Kit (kiri) ketika Pameran SG Malaysia yang diadakan di Putrajaya pada April lalu.

Robot bantu industri berbahaya

● Lengan mekanikal catat sejarah unik bersalam dengan Perdana Menteri

Oleh Mohd Khairul Anam Md Khairudin
khairul.anam@gh.com.my

Johor Bahru

Sejumlah penyelidik dari Sekolah Kejuruteraan Elektrik dan Pusat Kecerdikan Buatan dan Robotik (CAIRO), Universiti Teknologi Malaysia (UTM) berjaya membangunkan sebuah robot yang mampu

bergerak mengikut pergerakan manusia.

Ketua penyelidikannya, Prof Madya Ir Dr Ahmad Athif Mohd Fauzi, berkata produk itu amat sesuai diguna pakai dalam industri berbahaya

terutama bagi yang memerlukan kepakaran manusia. Beliau berkata, produk berkenaan boleh dimanfaatkan secara meluas seperti dalam industri kimia dan perubatan dengan robot boleh dikawal walaupun

terdapat perbezaan jarak serta lokasi.

Penciptaan produk berbentuk seakan-akan tangan manusia yang diberi nama Tele-Presence Robotik itu dibangunkan menerusi kerjasama UTM dengan syarikat telekomunikasi elektronik terkemuka Malaysia, Ericsson Malaysia Sdn Bhd.

"Melalui ciptaan inovasi ini, lengan mekanikal yang dihasilkan beroperasi melalui inverte kinematic robot yang dapat mengikut pergerakan lengan operator."

"Operator dikehendaki menaiki head-set realiti maya untuk melihat visual pergerakan dan meng-

rakkan tangannya yang dipasang dengan gelang khas, sekali gus berupaya mengesan arah pergerakan lengan operator itu sendiri," katanya kepada BH Versiti.

Salam Tun M

Arahan pergerakan lengan itu kemudiannya dihantar kepada lengan robot dan pergerakan lengan mekanikal akan bergerak mengikut arah pergerakan tangan operator terbalik.

Dr Ahmad Athif berkata, beliau memulakan projek berimpak tinggi itu ketika menjalani penempatan latihan di Ericsson melalui program CEO@Faculty 2.0

Cycle 2 anjuran Kementerian Pendidikan (KPM) di bawah program AxiCHANG-GE bermula September 2018 hingga Februari lalu.

"Ketika di sana, saya diminta untuk membangunkan sebuah demo robotik yang berupaya bergerak berdasarkan pergerakan manusia, malah pergerakan ini dapat dikawal dari jauh menggunakan teknologi tanpa wayar berlatensi rendah iaitu antara kelebihan teknologi 5G."

"Bagi menayakan projek ini, perbincangan bersama pihak Ericsson juga dibuat dan konsep kerja robot telah dipaparkan sebelum kerja pembangunan robot

ini bermula," katanya.

Selain dirinya, kumpulan kerja pembangunan robot berkenaan terdiri daripada empat mahasiswa pascasiswazah serta piasawazah di bawah seliaannya iaitu Tham Weng Kit, Wong Liang Xuan, Muhammad Zulhelmi Kamarudin dan Mohd Ridwan Johary.

Lebih membanggakan, penghasilan robot itu mencatat sejarah tersendiri apabila dapat 'berjabat tangan' dengan Perdana Menteri, Tun Dr Mahathir Mohamad bersempena Pameran SG Malaysia yang diadakan di Kompleks Pertadbiran Putrajaya pada 20 hingga 21 April lalu.

Engineering the country's future

BY ROZANA SANI
rsani@ast.com.my

ENGINEERS play an important role in society. They are the ones who take bench or lab discoveries and materialise their potential to an industrial scale. Their work has made life easier, practical and economical for people from all walks of life.

According to Universiti Teknologi Malaysia (UTM) Centre for Engineering Education (CEE) director Professor Dr Khairiyah Mohd Yusoff, developed countries like South Korea and Singapore have been investing heavily in engineering education because they see quality engineers as the wealth of the nation.

Therefore, she said, to prepare for the Fourth Industrial Revolution (IR 4.0), there is a great need for the same kind of engineers in Malaysia.

"If Malaysia is to be at the forefront of technology, to be the inventor that defines the future instead of merely users, then we really need good engineers."

Engineers are trained to solve novel problems and innovate, and to translate disruptive ideas and technologies into reality that we see and use today," said Khairiyah.

However, the requirements to educate and train them are very high.

At the same time, the ecosystem to retain these high-quality engineers and attract students to take up engineering should also be nurtured.

"With the drastic decline in the number of students taking up STEM (Science, Technology, Engineering and Mathematics) in school, we will be having an even smaller pool of potential engineers."

To be competitive and enable the transition to a knowledge (knowledge) economy, Malaysia needs to have engineers who are capable of doing research, design and product development," she said.

To nurture future-ready engineering graduates, universities need engineering



Telecommunication engineering students conducting research in Universiti Malaysia. A high quality curriculum is essential to promote engineering education in Malaysia.

educators who are not only experts, but also know how to incorporate digital technology into their field besides conducting innovative teaching and learning approaches to equip students with the attributes needed in IR 4.0, especially life-long learning.

"Universities and accrediting bodies are working together to produce a flexible and multi-disciplinary curricula. Although technical skills are important, cross-boundary knowledge is just as crucial to work with professionals from other fields."

While accrediting bodies are beginning to open up on flexibility, there are still hurdles to overcome even at university level," said Khairiyah, who is president of the Society of Engineering Education Malaysia (SEEM).

Getting the industry to help develop students, especially in the curricula, is a major challenge.

"Students need the opportunity to work with real-world problems and to have input from practising engineers. Problem- and project-based learning are proven and well-known approaches in producing good graduates."

"This requires interaction with engineers working in the field. In fact, many companies in Malaysia are willing to collaborate with universities," said Khairiyah.

To help the academia deal with challenges in engineering education, SEEM, which is affiliated to the International Federation of Engineering Education Societies (IFEEES), has embarked on several initiatives.

First, the society is providing a community for those who are passionate in advancing engineering education, which is essential to sustain their interest.

"While engineering education has grown

rapidly in North and South America, Europe and Australia, the scholarly interest started off quite late and is not that widespread."

SEEM is hosting the Malaysian community of practice (COP), who are connected through digital communication and events that are held not only locally, but globally.

"COP is necessary to support knowledge and skills sharing, exchange of ideas and support in implementing engineering education innovations," said Khairiyah.

SEEM also organises conferences and seminars to attract engineers to expand COP's network, as well as gaining visibility for engineering education.

"These conferences provide a platform that brings together educators, industry leaders and organisations to form fruitful and long-term collaborations."

SEEM had successfully co-hosted the 2017 World Engineering Education Forum (WEEF) and the 2017 Global Student Forum, which saw international experts and leaders in engineering education from more than 40 countries participating.

"WEEF 2017 has illustrated the importance of engineering education at the world stage, supports the formation of engineering education groups and centres in Malaysian universities," Khairiyah said.

A project that SEEM had just started in co-designing and offering training modules to support the development of engineering educators.

"We have offered several workshops and are coming up with modules to equip and mentor engineering educators in upcoming technologies, and innovative teaching and learning approaches."

In future, SEEM is focused on developing

high quality graduates who can compete in IR 4.0, and help Malaysia transform towards a knowledge economy.

Khairiyah said the society is collaborating with various university engineering centres, such as UTM's CEE and Universiti Teknologi PETRONAS' Centre of Excellence in Teaching and Learning.

It also issues with professional bodies such as the Engineering Accreditation Council, the IEEE Institute of Electrical and Electronics Engineers Education Society and the Malaysian Council of Engineering Deans to provide a platform to disseminate information.

"This is especially important in developing a high-quality engineering curricula. We need to have an open channel of communication to enhance collaboration and avoid misunderstanding among practitioners and stakeholders."

"The platform is also a good place to learn about the latest developments in Malaysia and overseas," said Khairiyah.

SEEM supports the development of engineering education through workshops, conferences, forums and other events.

It acknowledges the innovative practices by educators in schools and universities through its annual Innovative Practices in Higher Education (IPHE) exhibition.

In recognition of her work, Khairiyah was awarded the IFEEES' Duncan Fraser Global Award for Excellence in Engineering Education at last year's WEEF in the United States, and the 2017 Student Platform in Kuala Lumpur.

"We are getting national and international acknowledgement for the work that we are carrying out," she said.



Professor Dr Khairiyah Mohd Yusoff (left) showing the Student Platform in Engineering Education Development Mentorship Award that she received at the 2017 Global Student Forum in Kuala Lumpur.

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The four-year students are pursuing a bachelor's degree in technology with a minor in environmental and mechanical engineering, living skills and sports science.

Being the pioneer of Service Learning in the Middle East, SLAM used this educational approach for the programme.

Service Learning combines learning goals and community service to provide a progressive learning experience and fulfil the community's needs.

In his officiating speech, Mestec Secretary General, Dr. Ben Mohd Ashar Yahaya said, "We appreciate the efforts of SLAM in providing an opportunity for students of change to educate the society on environmental conservation."

Senior Lecturer, Ibrahim Hashim expressed his hope that through this programme, environmental awareness would increase with the aid of smart technologies.

"We hope to spread the values which are deeply rooted in Islam, such as with themselves, God and the environment," said Shahrin.

A highlight of SELAM15 was the Coral Reef Conservation in collaboration with non-governmental organisations, Reef

The SELAMATI sports festival saw local teams from several villages in the island of Sumatra competing in beach volleyball and beach takraw matches.

Programme director Muhammad Salleh Shihmi Ibrahim, 26 shared that the programme from the local community was credible.

"Around 100 participants joined the programme and the local community came to the motivation talk at SMK Tekong. I believe we had successfully improved the community's knowledge in environmental management and the mechanical engineering student."

The students put in strenuous effort in making this programme a reality.

Programme director Muhammad Salleh Shihmi Ibrahim, 26, said that he engaged students from three different programmes under the UTM School of Education worked together to make the programme. "To prepare everything in a short time frame, we put our blood, toil, sweat and tears in SELAMATI. I believe this programme has been successful and I am just overwhelmed with gratitude."

Muhammad Salleh Shihmi added: As the programme was a first of its kind, it cost as much in terms of transportation and food. Fortunately, our team handled this matter well and we got financial aid from the UTM and help from the Tioman community."

1. Universiti Teknologi Malaysia (UTM) students posing for a group picture on the beach. 2. Students crushing recycled glass bottles for the Coral Pot Demonstration. 3. SMK Telok students creating a tower from paper and other recycled goods during the motivational talk by UTM students. 4. UTM students striking a pose outside the Tioman Marine Park.

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kampus berkenaan.

Pro Naib Canselor (Kampus) UTM Kuala Lumpur, Prof Dr Shamsul Sabihuddin berkata, program itu seiring langkah memperkenalkan UTMKI sebagai kampus yang bukan hanya mempunyai gaya hidup urban, tetapi mementingkan kelestarian.

"Misi program ini untuk memperkenalkan teknologi penggunaan pengangkutan rendah tenaga dengan penyediaan alternatif pengangkutan dan menyelaraskan elemen kampus lestari di UTM.

"Langkah ini bagi menyokong pelan pengurusan karbon yang

Pada acara itu, turut diadakan sesi kupasan buku lestari oleh dua pensyarah universiti itu iaitu Prof Madyia Ir Dr M Fadhil Md Din dengan bertajuk 'The Greenman Guide to Green Living and Working'.

Dr Pramila Tamunai mengupas buku berjudul 'Cradle to Cradle: Remaking the Way We Make Things by William McDonough and Michael Braungart'.

DR SHAMSUL (tiga dari kanan) menyampaikan 'topi keledar' kepada pegawai keselamatan

Dr Shamsul berkata, pelaksanaan program, pelaksanaan antara lain akan membantu pemenuhan kebutuhan pangan nasional. "SDG telah memastikan akses kepada tenaga yang terampil, yang dapat dipercaya, lestari dan modern untuk semua."

Selanjutnya, Dr Mochyokong Matsuura Kemas, Kepala Biro Riset dan penerapannya manusia ilmiah, social, budaya dan teknologi, berpesan kepada para mahasiswa agar dapat meningkatkan kemampuan mereka dalam menghadapi tantangan global.

"Program ini adalah inisiatif awal universitas untuk meningkatkan kemampuan profesional kami. Kami akan memulai program Car Free Day pada 17 Agustus 2019, dan kami akan memulai pembangunan dan pemeliharaan infrastruktur kami," katanya.

Katanya, elemen dan aspek berkeadilan ini menumbuhkan kesadaran akan pentingnya keberagaman budaya, lingkungan, dan masyarakat. "Kami akan menggunakan pengetahuan dan keahlian kami untuk meningkatkan kualitas hidup masyarakat."

"Selain itu, kami juga akan meningkatkan kesadaran akan pentingnya keberagaman budaya, lingkungan, dan masyarakat."

Minimising plastic waste and observing car-free day among efforts to make campus a better place

By ESTHER TAN
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POROK BAKU! As swarms of one pest problem caused by single-use plastics grows, more states, organisations and institutions are taking steps to no longer wear them again, especially when it comes to packing food and beverages.

In June I saw a mail on one line a Facebook: Hologram Malaysia, which announced a hold move to minimise the usage of plastics among students and staff by encouraging them to bring their own reusable containers to campus.

In vice-chancellor Prof Dania Dr Mohd Omar said the university would be making it mandatory for meals and staff to bring their own food containers and cutlery when eating within the campus.

No single-use plastic objects will be allowed on the

UTM staff at the Hari Rassek Adiffidat celebrations using their own reusable containers.

er's official activities as well as the company's efforts to create an environmentally friendly image.

"We want to get you into the market with a very attractive price, and place this bag in the hands of the consumer," he said.

De Wabbe said that although the company's bags are made of 100% virgin PET, they lack coloration and are not as strong as those made of recycled PET.

He pointed out that ITM has been in the market for more than 20 years but has not as successfully marketed its products as others.

"From my own experience of working in the plastics industry, I know that the market of recycling waste is still very small," he said. "The use of the original volume of trash without reuse is still the dominant trend."

"That means we are still a very small company," he said. "We need to improve our work to keep up with the market."

De Wabbe said the steps to be taken to improve the company's work were:

• Develop a new product that does not require coloration; this would allow the company to reduce the price, thereby making it more attractive to the public, but also increasing the efficiency of taking care of the waste.

• Develop a new product that is made of 100% recycled PET.

According to MUSEC, the Association of Manufacturers of Plastics in Brazil, the market for PET plastic in the country is growing at an average of 10% per year. The association estimated that the total value of the production of PET plastic in Brazil in 2014 was R\$1.5 billion, with 100,000 tons of PET plastic being produced.

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Inovasi air hujan untuk wuduk, minum

UTM Emeritus Professors Engaging the World

UTM continues to contribute to the global growth and prosperity through our experts with emeritus recognition.



The divine law of Allah is the foundation of knowledge. In line with His Will, UTM strives with total commitment to attain excellence in science, technology and engineering for the well-being and prosperity of mankind

- UTM Philosophy





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