

RESEARCH

Interdisciplinary approach to cybersecurity studies

ROZANA SANI
rsani@nsl.com.my

In the 1980s, when the internet was still in its infancy, cybersecurity was not an issue. To protect themselves from cyber threats, users used simple security approaches by controlling what was coming into and going out of their personal computer.

Fast forward to today, the spread of networked applications has set the stage for complex cyber attacks, which have increased significantly.

"Globalisation and digitisation have made life easier, through greater accessibility and collaboration via advances in technology. But they are making connected IT [information technology] systems vulnerable to attack," said Multimedia University (MMU) Faculty of Information Science and Technology dean Associate Professor Dr Lau Siong Hoo.

In a changing world of new security paradigm with the widespread of information communication technologies, Lau said research in information security was critical to secure information of electronic transactions in public networks and computer systems.

"Here at MMU, we are taking an interdisciplinary approach to tackling the challenges and opportunities created by ever-changing technical advances. Key to this effort is the Centre for Ubiquitous Computing and Communication, which was established in 2009 through the Digital Security Special Interest Group.

The centre conducts research and development in cryptography, biometrics, network security and cyberlaw to meet the multifaceted requirements and objectives of securing information and user privacy. Its aim is to be a premier research and development centre that will have positive impacts at the institutional and national levels," he said.

Among the research that the centre is conducting is on cloud-based connected car services.

Lau said as vehicle IT became more complex, the risk of cyber attacks grew.

"Researchers are studying and developing integrated end-to-end IT security concepts for vehicle-to-vehicle (V2V) communication that will ensure authenticity, integrity and confidentiality whenever sensitive data is exchanged," he said.

V2V communication lets a vehicle broadcast its position, speed, steering-wheel position, brake status and other data to other vehicles within a



We aim to assist government and private organisations in terms of cybersecurity policies, frameworks, standard of procedures, best practices and local cyberlaws.

SITI NORUL HUDA SHEIKH ABDULLAH
UKM Center for Cyber Security chairman



Multimedia University researchers with a Cloud-based Connected Car Services application at an exhibition recently.

range of a few hundred meters.

It is expected that the communication between vehicles can provide drivers with more information about their surroundings, allowing them to make better decisions.

The centre also focuses its research activities on cryptography and network security.

"Cryptography is the practice and study of methods to secure communication in the presence of adversaries. It is a key technology for achieving information security in communications and computer systems," he said.

"Network security refers to the practice and study of methods to analyse, trace and respond to network incidents caused by unauthorised access, misuse, modification, or denial of the network services and network-accessible resources.

"The research focuses on wireless and mobile communication security, intrusion detection systems and technologies, malware analysis, web security and digital forensics," said Lau.

Universiti Kebangsaan Malaysia's Center for Cyber Security, which was established in January last year, takes an interdisciplinary approach to research. This is reflected through its talent roll-call comprising associates from the university's Faculty of Law, Faculty of Human and Social Science, Faculty of Economics and Management and Faculty of Engineering and Built Environment, and Faculty of Science and Technology.

It also has associate fellows from Universiti Sains Islam Malaysia, the industry and an adjunct professor from CyberSecurity Malaysia.

The Centre for Cyber Security chairman, Associate Professor Dr Siti Norul Huda Sheikh Abdullah, said there were four active research labs at the centre: namely the digital forensics lab, computer security and software verification lab, cyber intelligence lab and information governance lab.

"The digital forensics lab focuses on, among others, development of forensics tools and big data analytics. We look at the process of collecting, analysing and reporting of digital data that may subsequently become digital evidence in the criminal justice system to ease the task of the law enforcement in handling, analysing and presenting the digital evidence for criminal investigation," Siti Norul Huda said.

In the computer security and software verification lab, the focus is on defence technology and science for digital space.

The security model that underpins our

work is the 'CIA' triad; confidentiality, integrity and availability. The research focuses are authentication, steganography, privacy, cryptography, watermarking, intrusion detection system, physical security, security evaluation, blockchain and cryptocurrency. This lab owns the Information Security and Financial Technology Security Tracks of the [university's] Master of Cyber Security Programme," said Siti Norul Huda.

The cyber intelligence (CyberIntell) lab focuses on the fundamental and applied research in intelligence informatics, social media analytics, cybersecurity and modelling and simulation. The lab has the capabilities of modelling the human in cybersecurity, social-media-based cyber-situational understanding, and intelligent information gathering and analysis, such as malware analytics.

The information governance lab aims to develop and implement policies, framework, procedures, processes, roles, control, standards, metrics, technology and people who can treat information as a valuable business asset.

"The uniqueness of the Centre of Cyber Security is that we never give up to explore new ideas and innovations in the field of cyber security and digital forensics, and disseminate directly new knowledge and skills to our respective audience, both undergraduate and postgraduate students.

"With a similar motivation, we aim to assist government and private organisations in terms of cybersecurity policies, frameworks, standard of procedures, best practices and local cyber-laws to increase organisational adoption in combating cybercrimes," she said.

To nurture cyber security guardians, as well as digital forensics professionals, the centre has proposed to hold the Cyber Resilience Conference (CRC2018) in November with the agenda to bring together Asean to combat cybercrimes.

This inaugural conference will gather all participants, professionals and practitioners in the research area of cyber security into a single platform of knowledge dissemination and lessons learnt.

"With Towards a Resilient Asean, as its motto, the conference aims at strengthening Asean cyberspace security. We hope to share and interact with Asean researchers and practitioners in cyber security, as well as other cyber security experts around the world."

Research involving experts in various fields will have a positive impact on the institutional and national levels.



Factories ordered to close for causing pollution

By Ranjit Singh
ranjit@mmail.com.my

BANTING — Authorities ordered three plastic factories in Kuala Langat to shut down permanently as they have been identified for causing pollution.

In a media briefing, Selangor executive councillor Ng Sze Han said the operation found only three factories licensed out of the 35 inspected.

The briefing was also attended by Banting assemblyman Lau Weng San and Selangor environment committee chairman Hee Loy Sian.

Ng said the authorities decided to take action after residents complained of odour and contaminated water in Kuala Langat.

The three factories ordered to close are One Plastic Sdn Bhd, Chromaz Sdn Bhd and YMF Sdn Bhd.

"The dumping of plastic resin has become a major problem after China's ban on the importation of the item. Malaysia, Vietnam and Poland face this problem due to the low cost of production," said Lau.

Ng said many Approved Permits (AP) were given out before the May 9 general election for the importation of plastic waste for recycling.

He said there were many containers at Port Klang waiting to be sent all over the country for processing.

Hee claimed that nine people came to see him purporting to be businessmen dealing in plastics on Monday night, asking him not to take action against them.

He alleged that they offered to bribe him and said he was considering reporting the matter to the Malaysian Anti-Corruption Commission (MACC).

The Water, Land and Natural Resources Ministry has also ordered the suspension



A Department of Environment official inspects a plastic recycling centre in Jenjarom, Selangor, yesterday.
— Picture by Ahmad Zamzahuri

of waste plastic recycling factory activities in Kuala Langat following complaints of pollution and increasing health risks to residents.

The minister Xavier Jayakumar, who is

also the Kuala Langat MP, urged Tenaga Nasional Berhad (TNB) and Syarikat Bekalan Air Selangor (Syabas) to carry out inspections on the plants and their waste dump sites.

Yesterday, British daily *The Guardian* reported that tonnes of waste plastic from the United Kingdom were exported to various countries including Malaysia and Turkey.

MTDC says it will continue to invest in Bioalpha

DUNGUN: The Malaysia Technology Development Corporation (MTDC) will continue to invest in local health supplement manufacturer Bioalpha Holdings Bhd (Bioalpha) after seeing the company successfully penetrate local and Asian markets.

MTDC CEO Datuk Norhalim Yunus said this would be part of the medium-term plan with Bioalpha, which is growing its business

through various research and development (R&D) programmes related to food technology, marketing and opening up job opportunities at its newly-launched Pasir Raja Herbal Park.

"As a Bioalpha shareholder, it is a company that we invest in using the Commercialisation of Research and Development Fund. We will continue to support the growth of the company as it is expanding not only locally

but also in Indonesia and China.

"We are (also) investing because it also provides job opportunities, especially to the people of Pasir Raja, and also developing its own technologies and products that can compete in international markets, as well as conducting R&D with experts from local universities," he told Bernama after the recent launch of the Pasir Raja Integrated Herbal Park. - Bernama



Bioalpha Holdings Bhd's Pasir Raja Integrated Herbal Park in Dungun, Terengganu. The health supplement manufacturer is growing its business through research and development related to food technology and marketing. BERNAMA PIC

EXPANSION PLANS

MTDC to continue investing in successful Bioalpha

DUNGUN: Malaysia Technology Development Corp (MTDC) will continue to invest in health supplement manufacturer Bioalpha Holdings Bhd as the company has successfully penetrated local and Asian markets.

MTDC chief executive officer Datuk Norhalim Yunus said this would be part of the medium-term plan for Bioalpha, which was growing its business through research and development (R&D) related to food technology and marketing, and providing jobs at its newly-opened Pasir Raja Integrated Herbal Park.

"We will continue to support the company's growth as it is expanding not only locally but also in Indonesia and China.

"We are also investing because it provides job opportunities, especially for the people of Pasir Raja, and develops technologies and products that can compete in international markets," he said after the opening of the Pasir Raja Integrated Herbal Park, here, recently.

Bioalpha managing director William Hon said the company was conducting R&D to penetrate the European and United

States market after successfully entering Indonesia and China.

"Apart from sales promotions at exhibitions, we are also performing clinical tests and gathering data to prove to European and US companies that our herbs work.

"We are carrying out tests with food experts from local universities and also in India and Taiwan, as well as appointing experts from a university in Hong Kong to reassure the parties in Europe and US that our herbs are safe to be eaten (as supplements)," he added. **Bernama**

Penduduk Selangor Diancam Pencemaran Kilang Plastik

Permit import sisa plastik dibekukan serta-merta

Kilang-kilang kitar semula plastik di seluruh negara diberi tempoh tiga bulan untuk mohon semula permit import plastik

KEMENTERIAN Perumahan dan Kerajaan Tempatan menghentikan pengeluaran permit import (AP) sisa plastik kepada 114 syarikat dan kilang di seluruh negara bagi tempoh tiga bulan berkuat kuasa semalam.

Menterinya, Zuraida Kamaruddin berkata, tindakan itu diambil susulan laporan komprehensif *Kosmo!* mengenai pencemaran serius di Kuala Langat, Selangor yang dikatakan berpunca daripada kilang memproses plastik import dari seluruh dunia sejak dua tahun lalu.

Beliau berkata, selaras dengan pembekuan itu, semua pihak berkuasa tempatan (PBT) di seluruh negara terutama di Selangor diarah membuat pembersihan dengan mengenal pasti hanya kilang yang mendapat kelulusan kementerian dan melaksanakan pengurusan sisa plastik mengikut piawaian alam sekitar antarabangsa dibenarkan beroperasi.

Menurutnya, antara syarat untuk memohon semula AP plastik ialah pemohon perlu mendapat kelulusan pematuan kilang daripada Jabatan Alam Sekitar, memiliki lesen premis daripada PBT, mendapat syor kelulusan pemeriksaan kilang oleh Perbadanan Pengurusan Sisa

Pepejal dan Pembersihan Awam serta bukti bergambar bahawa sisa plastik yang diimport bersifat seragam.

"Selepas tempoh tiga bulan itu berakhir, PBT akan mengambil tindakan tegas jika mereka meneruskan aktiviti kitar semula plastik tanpa mengikut syarat yang ditetapkan," katanya pada sidang akhbar di lobi Bangunan Parlimen, Kuala Lumpur semalam.

> BERITA DI MUKA 2, 3, 4 & 6

Selangor diancam pencemaran kilang plastik

KERATAN *Kosmo!*
23 Julai 2018.

Menteri arah henti operasi kilang plastik

KERATAN *Kosmo!*
24 Julai 2018.



ANGGOTA pelbagai agensi penguat kuasa menyerbu kilang memproses plastik yang beroperasi secara haram di Kuala Langat semalam.

SEBAHAGIAN warga asing yang ditahan pihak berkuasa dalam operasi membanteras kilang plastik haram di Jenjarom.

Penduduk Selangor Diancam Pencemaran Kilang Plastik

Kerajaan beri tempoh tiga bulan untuk semua kilang kitar semula mohon AP

Lesen Import sisa plastik dibekuk

KUALA LUMPUR – Kementerian Perumahan dan Kerajaan Tempatan (KPKT) membatalkan Lesen Import (AP) sisa plastik yang dikeluarkan kepada 114 syarikat dari kilang di seluruh negara bagi tempoh tiga bulan berkuat kuasa kini.

Menteri berkenaan, Zuraida Kamaruddin berkata, tindakan itu diambil susulan laporan akhbar *Kosmo!* mengenai pencemaran serius yang melanda Kuala Langat, Selangor yang dikatakan berpunca daripada kilang yang memproses sisa plastik import secara haram.

Menurut beliau, berikutan pembatalan dan pembekuan pengeluaran AP baharu dalam tempoh tersebut, semua pihak berkuasa tempatan (PBT) seluruh negara terutama di Selangor diarah membuat pembersihan dengan mengonsumi pasty hanya kilang yang mendapat kelulusan KPKT dan melaksanakan pengurusan sisa plastik mengikut piawaian alam sekitar antarabangsa dibenarkan beroperasi.

"Dalam tempoh tiga bulan itu, semua kilang yang dikehendaki permit perlu membuat permohonan semula dengan kriteria baharu bagi memastikan tidak ada penyalahgunaan kuasa dan pelanggaran piawaian berlaku," kata beliau pada sidang akhbar di lobi Parlimen semalam.

Katanya, pemohon AP sisa plastik bertarif HS Kod 3915 perlu melepasi kriteria ketat dikenakan Jabatan Pengurusan Sisa Pepejal Negara (JPSPN) selain pengimport juga perlu mendapatkan surat kelulusan pematihan kilang daripada Jabatan Alam Sekitar (JAS).



TIMBUNAN sampah yang diletakkan di sebuah kilang kitar semula di Jalan Klang-Banting di Kuala Langat yang mencetuskan kebimbangan penduduk daerah itu.

tar (JAS) dan mempunyai lesen premis PBT.

Selain itu, jelas Zuraida, syarat tambahan lain turut memerlukan pengesahan kelulusan pemeriksan kilang oleh Perbadanan Pengurusan Sisa Pepejal dan Pembersihan Awam (SWCorp) dan bukti bergambar bahawa sisa yang diimport adalah bersifat homogenus, bersih dan bukan dalam kategori bahan terbuang berjadual.

"Syarat ketat lain bagi kelulusan AP sisa plastik juga memerlukan semua pembekal sisa plastik mempunyai persijilan ISO14000 yang mengimakan sistem pengurusan alam sekitar yang efektif dan bertanggungjawab."

"Sisa plastik yang dibawa masuk juga hendaklah diproses sepenuhnya oleh kilang pengimport (yang memiliki AP) dan wajib me-

lakukan mahu masalah pencemaran di Kuala Langat dihindarkan segera

PBT diarah tutup kilang kitar semula

KUALA LUMPUR

Kerajaan telah memutuskan untuk menutup kilang kitar semula di Kuala Langat, Selangor, yang telah beroperasi selama beberapa tahun.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.

Keratan *Kosmo!* semalam.



SEORANG penduduk di Jenjarom yang terpaksa menggunakan topeng mulut bagi mengatasi masalah pencemaran udara akibat operasi kilang kitar semula yang memproses sisa plastik.

INFO Lesen Import (AP) Sisa Plastik

- Jabatan Pengurusan Sisa Pepejal Negara (JPSPN) bertanggungjawab mengeluarkan Lesen Import (AP) sisa plastik.
- Perintah Kastam (larangan mengenai import) (pindaan) 2015 mensyaratkan sisa plastik dengan tarif HS Kod 3915 yang mahu diimport ke Malaysia memerlukan AP.
- Prosedur permohonan AP
 - Perlu mendaftar dengan Bahagian Kelulusan dan Pelesenan JPSPN
 - Mempunyai surat kelulusan pengeksport. Pemohonan hendaklah dikemukakan secara bertulis kepada Bahagian Teknologi Penyelidikan, Sisa Binaan dan Industri JPSPN dan Pembersihan Awam (SWCorp)
 - Pemohonan AP secara online boleh dilakukan melalui sistem ePermit di laman web <http://epermit.dagangnet.com/jpspn>
- Kilang yang menghasilkan sisa plastik (pengeksport/pembekal) perlu mendapat sijil pengiktirafan ISO14000 atau setaraf
- Pematuhan operasi kilang perlu dirujuk kepada Jabatan Alam Sekitar (JAS)

ADUN dedah masih banyak sampah menunggu dihantar ke Kuala Langat

KUALA LANGAT – Pengerusi Jawatankuasa Tetap Alam Sekitar, Teknologi Hijau dan Hal Ehwal Pengguna, Sains, Teknologi dan Inovasi Selangor, Hee Loy Sian mendakwa masih banyak kontena berisi sisa plastik yang diimport dari seluruh dunia berada di Pelabuhan Klang dekat sini bagi menunggu muna untuk dihantar ke kilang-kilang kitar semula di Kuala Langat.

Menurut beliau, bagi memastikan sisa

plastik itu diproses di kilang-kilang yang berlesen, pihak berkuasa akan memastikan kilang-kilang haram yang wujud di Kuala Langat ditutup terlebih dahulu.

"Apabila kilang haram proses sisa plastik ditutup, pengimport sisa plastik tiada pilihan dan akan menghantar sisa plastik itu ke kilang yang berlesen. Masalah ini akan selesai," kata beliau ketika ditemui semasa membuat tinjauan kilang haram di sini semalam.

Dalam pada itu, Ahli Dewan Undangan Negeri (ADUN) Kajang itu memberitahu, beliau kesus dengan kerajaan terdahulu yang telah meluluskan banyak Lesen Import (AP) sisa plastik sehingga 'sampah' dari seluruh dunia masuk ke negeri ini.

"Perkara itu mungkin berlaku kerana pihak-pihak terbabit mendapat keuntungan banyak sehingga menghantar sisa plastik ke kilang-kilang haram di negeri ini terutama di Kuala Langat," kata beliau.

Penduduk Selangor Diancam Pencemaran Kilang Plastik



ANGGOTA penguat kuasa memeriksa sebuah kilang memproses sisa plastik dalam operasi bersepadu di Jenjarom, Kuala Langat semalam.



SEBAHAGIAN daripada pekerja warga asing yang ditahan dalam operasi di kilang kitar semula di Jenjarom, Kuala Langat.

Kerajaan Selangor akan ambil tindakan ke atas 29 lagi premis kitar semula sisa plastik

6 kilang Kuala Langat ditutup

KUALA LANGAT — Kerajaan Selangor semalam menutup enam daripada 35 buah kilang kitar semula haram yang beroperasi di daerah ini kerana mengancam kesihatan 300,000 penduduk di sini ekoran terpacak asap daripada aktiviti memproses sisa plastik yang diimport dari serata dunia.

Pengerusi Jawatan Kuasa Tetap Kerajaan Tempatan, Pengangkutan Awam dan Pembangunan Kampung Baru Selangor, Ng Sze Han (**gambar kecil**) berkata, enam buah kilang yang semuanya terletak di Jenjarom ditutup dalam operasi bermula pada pukul 10 pagi hingga pukul 5 petang melibatkan 100 anggota penguat kuasa (PHT) daripada pelbagai agensi.

"Mengikut maklumat rasmi kerajaan negeri, Kuala Langat mempunyai 35 buah kilang kitar semula sisa plastik namun hanya tiga daripadanya mempunyai lesen bagi operasi tersebut," kata beliau selepas operasi

di enam buah kilang itu.

Menurut beliau, selepas operasi semalam, pihaknya dan PBT agensi lain yang terlibat akan mengadakan mesyuarat dalam masa terdekat bagi merancang operasi dan seterusnya sekali gus menutup semua kilang haram di daerah tersebut.

Antara PBT yang terlibat dalam operasi itu ialah Jabatan Alam Sekitar (JAS) Selangor, Jabatan Imigresen, Majlis Daerah Kuala Langat (MDKL) dan Jabatan Kastam Diraja Malaysia.

Mengulas lanjut, Sze Han memberitahu, kerajaan negeri memandang serius mengenai isu pencemaran alam sekitar kerana memproses sisa plastik boleh mengundang bahaya kesihatan kepada penduduk yang mendiami di kawasan berdekatan kilang-kilang itu.

"Dalam masa sama, kerajaan negeri melalui agensi-agensinya akan mengemaskini data untuk mengenal pasti kilang-kilang haram di Selangor. Kita



ANGGOTA penguat kuasa terpaksa menggunakan tukul besi memecahkan pintu zink selepas pemilik kilang kitar semula di Jenjarom, Kuala Langat enggan membuka pintu.

juga akan memantau operasi kilang berlesen bagi memastikan mereka beroperasi mengikut prosedur operasi standard (SOP)," jelasnya.

Katanya, pemilik tanah juga diberi amaran agar tidak menyewakan tanah kepada penguat kuasa yang menjalankan kegiatan

haram tersebut kerana pemilik tanah yang berbuat demikian juga boleh dikenakan tindakan.

Sze Han berkata, dalam operasi selama tujuh jam tersebut pihak penguat kuasa menahan 16 pekerja warga asing yang bekerja di enam buah kilang itu selain merampas komputer, televisyen,

pam air dan penjana elektrik.

Kosmo! pada Isnin lalu melaporkan kesihatan kira-kira 300,000 penduduk Kuala Langat terancam apabila daerah itu mempunyai lebih 30 buah kilang kitar semula sisa plastik yang beroperasi sejak dua tahun lalu akibat pelepasan asap daripada aktiviti memproses sisa plastik.

Terdahulu, tinjauan Kosmo! di sebuah kilang kitar semula yang disusur mendapati para pekerja premis tersebut cuba menghalang pihak berkuasa masuk ke dalam kilang dengan meletakkan forklift di belakang pintu kilang.

Berikutan itu, pihak berkuasa terpaksa mengambil masa kira-kira 15 minit mengumpul pagar zink sebelum berjaya memasuki kilang itu. Pemeriksaan di dalam kilang tersebut mendapati ketika itu ia tidak beroperasi dan tiada pekerja di dalam premis.

Pihak berkuasa mengesyaki semua pekerja di kilang itu sudah melarikan diri selepas mereka mendapat maklumat pihak berkuasa menuju ke kilang tersebut.

ADUN dakwa sindiket kilang kitar semula tawar habuan

KUALA LANGAT —

Gara-gara kepantasan dengan pendedahan Kosmo! berhubung pencemaran yang dibesilkan dari kilang kitar semula sisa plastik di sini, seorang Exco Kerajaan Negeri Selangor mendakwa beliau ditawarkan habuan oleh dalang sindiket tersebut bagi memastikan aktiviti haram itu tidak diganggu oleh pihak berkuasa.



Pengerusi Jawatan Kuasa Tetap Alam Sekitar, Teknologi Hijau dan Hal Ehwal Penggub, Sains, Teknologi dan Inovasi Selangor, Hee Loy Sian (**gambar**) berkata, seramai sembilan individu datang ke pejabatnya kelmari dan mereka menawarkan sejumlah habuan bagi melindungi aktiviti kilang-kilang itu.

Menurut Loy Sian yang juga Ahli Dewan Undangan (ADUN) Kajang, sembilan individu tersebut melibatkan warga tempatan dan tualah dari negara China berjanji mahu menawarkan sejumlah habuan tetapi mereka tidak memperincikan jumlah atau jenis habuan tersebut.

"Saya menolak tawaran itu sebaliknya memaklumkan operasi kilang kitar semula plastik harus dilakukan ikut peraturan termas-

uk mendapatkan kelulusan daripada Jabatan Alam Sekitar dan pihak berkuasa tempatan," kata beliau ketika ditemui selepas menyertai operasi menutup kilang haram di sini semalam.

Katanya, beliau tidak bercadang untuk melaporkan perkara tersebut kepada Suruhanjaya Pencegahan Rasuah Malaysia (SPRM) selepas memberi amaran kepada kumpulan tersebut supaya tidak mengulangi per-

buatan mereka yang cuba merasukannya.

"Saya tidak mempunyai butiran terperinci mengenai kumpulan tersebut tetapi dalam kalangan mereka dipercayai ada yang menjadi dalang, orang tengah, pihak ketiga dan tualah kilang haram kitar semula. Bagaimanapun, jika selepas ini saya fikir perlu dibuat laporan kepada SPRM, saya akan buat," jelasnya.

Penduduk Selangor Diancam Pencemaran Kilang Plastik

Desak pihak berkuasa turut bertindak serbu kilang keluarkan asap berbahaya

Penduduk masih tidak puas hati

KUALA LANGAT - Operasi membanteras kilang memproses sisa plastik yang menyebabkan pencemaran dan mendatangkan bahaya kepada kesihatan orang ramai di daerah di sini semalam dilihat sekadar melepaskan batuk di tangga.

Meskipun enam daripada 35 buah kilang memproses sisa plastik yang haram ditutup pihak berkuasa di Jenjarom di sini, ia dianggap masih belum memuaskan hati penduduk di

kawasan tersebut.

Seorang penduduk, Tan Ching Hin, 62, berkata, jumlah kilang yang diserbu pihak berkuasa semalam bukan sahaja tidak banyak, malah bukan premis yang dipercayai mengeluarkan asap berbahaya.

"Kenapa pergi ke kilang-kilang yang tidak mengeluarkan



CHING HIN



SEONG

asap? Lagipun kilang-kilang yang diserbu bukan milik tauke dari China.

"Kita minta pihak berkuasa bertindak lebih menyeluruh untuk menutup semua kilang memproses sisa plastik yang haram di daerah ini," katanya kepada *Kosmo!* semalam.

Seorang lagi penduduk, Gan

Seong, 44, pula berterima kasih atas tindakan yang telah diambil pihak berkuasa terhadap kilang-kilang terbabit.

"Kami sudah lama menghidu bau busuk daripada kilang-kilang ini. Hari ini (semalam), pihak berkuasa telah memutuskan bekalan elektrik di kilang-kilang haram terbabit.

"Kalau boleh bukan sekadar tutup premis, malah hantar puang tauke China yang menjadi operator kilang berkenaan ke negara asal mereka," ujarnya.

Sementara itu, Tan Che Wei, 22, memberitahu, dia yang sudah beberapa tahun menghidu udara busuk dari kilang terbabit mahu pihak berkuasa tempatan bertindak terhadap semua premis memproses sisa plastik yang wujud di daerah ini.

"Saya berharap kilang-kilang memproses sisa plastik di kawasan penempatan penduduk juga akan diambil tindakan segera oleh pihak berkuasa selepas ini," ujarnya.

LAMPIRAN 5 (SAMBUNGAN)
KOSMO (LAPORAN KHAS): MUKA SURAT 6
TARIKH: 25 JULAI 2018 (RABU)

Penduduk Selangor Diancam Pencemaran Kilang Plastik



SEORANG pegawai Majlis Daerah Kuala Langat memakai penutup mulut ketika melakukan pemeriksaan dokumen dalam serbuan di sebuah kilang kitar semula plastik di Jenjarom, Kuala Langat semalam.



TIMBUNAN sisa plastik ditemui dalam serbuan pihak berkuasa di sebuah kilang kitar semula plastik di Jenjarom, Kuala Langat semalam.



BAHAN plastik yang diimport bertimbun dan berlonggok sehingga menyebabkan pencemaran bau busuk ketika serbuan dijalankan di kilang-kilang di sekitar Jenjarom, Kuala Langat.



KEADAAN di sekitar kawasan memproses sisa plastik di sebuah premis di Jenjarom, Kuala Langat.



MESIN-MESIN yang digunakan untuk memproses sisa plastik dirampas pihak berkuasa.



ANGGOTA penguat kuasa cuba membuka pintu bilik yang diduduki pekerja asing ketika menjalankan operasi di sebuah kilang kitar semula plastik di Jenjarom.



SEORANG anggota penguat kuasa Majlis Daerah Kuala Langat melakukan pemeriksaan di sebuah kilang kitar semula plastik di Jenjarom.

Masih tak tahu kendali buangan terjadual

SEREMBAN - Kebanyakan pengusaha bengkel kenderaan di negeri ini didapati masih kurang pengetahuan dalam mengendalikan buangan terjadual yang dihasilkan dari bengkel mereka.

Pengarah Jabatan Alam Sekitar (Jas) Negeri Sembilan, Norhazni Mat Sari berkata, penting bagi mereka mengetahui teknik pengenalpastian, pengendalian, pelabelan, pengangkutan dan penstoran buangan terjadual supaya ia tidak memberi kesan kepada alam sekitar.

"Terdapat enam kategori untuk barangan industri tapi masih ada pengusaha yang tak pasti sama ada barangan buangan itu tertakluk pada peraturan Jas atau tidak.

"Kesemua barangan itu juga perlu dihantar atau dijual kepada kontraktor yang berlesen saja dan pengusaha yang tidak menghantar kepada premis ditetapkan berdepan tindakan mengikut Peraturan 4 yang boleh dikenakan kompaun sebanyak RM2,000," katanya selepas Seminar Pematuhan Akta Kualiti Alam Sekeliling 1974 Untuk Bengkel-Bengkel di Negeri Sembilan, di sini, semalam.

Selain itu, katanya, sebanyak 194 siasatan penguatkuasaan telah dijalankan ke atas premis bengkel dan sebanyak 16 kompaun telah dikeluarkan terhadap pengusaha yang melakukan kesalahan mengikut Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005 sepanjang tempoh 2014 sehingga kini.

Sementara itu, seramai 110 pengusaha bengkel kenderaan di seluruh Negeri Sembilan hadir ke seminar berkenaan.

TPM terima kunjungan juara dunia

PUTRAJAYA 24 Julai - Timbalan Perdana Menteri, Datuk Seri Dr. Wan Azizah Wan Ismail hari ini menerima kunjungan hormat saintis muda negara, Dr. Siti Kayriyyah Mohd. Hanafiah bagi meraikan kejayaan wanita berkenaan mengungguli gelaran juara dunia pertandingan FameLab International 2018 baru-baru ini.

Dalam pertemuan kira-kira sejam di Bangunan Perdana Putra di sini, Dr. Wan Azizah turut meluangkan masa untuk berbual dengan Siti Kayriyyah mengenai usaha memperkasakan penglibatan wanita dalam bidang penyelidikan selain meningkatkan minat masyarakat terhadap sains.

Menurut Dr. Wan Azizah, beliau melahirkan rasa bangga terhadap kejayaan Siti Kayriyyah yang menempa namanya di persada antarabangsa dan membuktikan keupayaan rakyat Malaysia dalam aspek komunikasi berhubung bidang sains.

"Saya amat berbangga dengan kejayaan Dr. Siti Khairiyyah yang telah menunjukkan keupayaan rakyat Malaysia di peringkat dunia.

"Beliau menunjukkan kualiti rakyat Malaysia, terutama wanita, mampu bersaing di persada antarabangsa dan berjaya mengalahkan semua peserta dari seluruh dunia," katanya dalam satu kenyataan sempena pertemuan berkenaan di sini, hari ini.

Hadir sama, Naib Canselor Universiti Sains Malaysia (USM) Prof. Datuk Dr. Asma Ismail.

Pada 7 Jun lalu, Siti Kayriyyah yang juga Pensyarah di Pusat Pengajian Sains Hayat, USM berjaya menjadi juara pertandingan FameLab International 2018 di The Arena, Cheltenham, United Kingdom (UK) menerusi pem-



WAN AZIZAH WAN ISMAIL menyampaikan sijil penghargaan kepada Siti Kayriyyah Mohd. Hanafiah di Putrajaya, semalam. Turut hadir Asma Ismail. - UTUSAN/ZAKI AMIRUDDIN

bentangan mengenai penggunaan pasangan antibodi-antigen untuk diagnosis tibi.

FameLab International adalah pertandingan menguji kemahiran lisan saintis muda dalam menyampaikan teori dan konsep sains dalam bentuk kreatif dan penyampaian yang mudah untuk difahami oleh khalayak ramai dalam tempoh tiga minit sahaja.

Dalam pada itu, menurut Siti Kayriyyah, langkah ke hadapan

baginya adalah meningkatkan lagi pemahaman masyarakat mengenai bidang sains serta meneruskan lagi kajiannya dalam diagnosis tibi.

"Kita juga sebenarnya ada ramai wanita dalam bidang penyelidikan tetapi tidak ramai daripada wanita berkenaan adalah pemimpin bagi penyelidikan, saya berpendapat kita perlu ada polisi yang berstruktur untuk menggalakkan lagi wanita sebagai pemimpin penyelidikan," katanya.

TPM terima kunjungan saintis muda

Putrajaya: Timbalan Perdana Menteri, Datuk Seri Dr Wan Azizah Wan Ismail semalam menerima kunjungan hormat saintis muda Malaysia, Dr Siti Kayriyyah Mohd Hanafiah yang baru-baru ini dinobatkan sebagai juara dunia pertandingan FameLab International 2018.

Pertemuan hampir sejam itu berlangsung di pejabatnya di Perdana Putra di sini.

Yang turut hadir, Naib Canselor Universiti Sains Malaysia (USM), Prof Datuk Dr Asma Ismail.

TPM bangga kejayaan Dr Siti Kayriyyah

Wan Azizah berkata, beliau bangga dengan kejayaan Dr Siti Kayriyyah yang membuktikan keupayaan rakyat Malaysia di pentas dunia.

"Beliau menunjukkan kualiti rakyat Malaysia terutama wanita yang mampu bersaing di persada antarabangsa dan berjaya mengalahkan semua peserta da-

ri seluruh dunia," katanya dalam satu kenyataan, semalam.

Dalam pertandingan yang diadakan di The Arena, Cheltenham pada 7 Jun lalu itu, Dr Siti Kayriyyah, 33, yang juga pensyarah di Pusat Pengajian Sains Hayat, USM, berjaya menewaskan 11 peserta lain melalui pembentangan mengenai penggunaan pasangan antibodi-antigen untuk diagnosis tibi.

Sementara itu, Dr Siti Kayriyyah berkata, dalam pertemuan bersama Dr Wan Azizah, mereka membincangkan usaha yang boleh dilakukan bagi melonjakkan wanita terutama dalam bidang sains untuk menjadi pemimpin dan penyampai yang baik.

"Malaysia antara negara yang mempunyai ramai wanita yang terbabit dalam bidang sains namun terdapat kekangan yang menyebabkan pemimpin itu tidak lahir dalam kalangan wanita.

[FOTO MOHD FADLI HAMZAH/BH]



Dr Wan Azizah menyerahkan sijil penghargaan kepada Dr Siti Kayriyyah selepas dinobatkan juara dunia dalam pertandingan FameLab International 2018 di Putrajaya, semalam.

LAMPIRAN 9
NEW STRAITS TIMES (HIGHER ED): MUKA SURAT 2
TARIKH: 25 JULAI 2018 (RABU)

EVENTS

Platform for the exchange of research

MEOR AHMAD NASRIIN RIZAL ISHAK
meor.ahmad@bh.com.my

THE recent Researcher Mixer Programme (Program Rampai Penyelidik) held at Universiti Kebangsaan Malaysia (UKM) main campus in Bangi, Selangor provided members of the academia the opportunity to share information and widen their research network.

Themed STEM (Science, Technology, Engineering and Mathematics) for the Community, the event, which is in its sixth series, gathered scientists from numerous institutions to explore and collaborate in various fields.

UKM vice-chancellor Professor Tan Sri Dr Noor Azlan Ghazali said the tertiary institution has always encouraged cross-discipline, cross-faculty and cross-institute research in line with the Education Ministry's initiative.

He said the programme enables the research community to convene, interact and exchange research information based on specific themes.

"It is very much relevant in meeting the demands of the Fourth Industrial Revolution (4IR), enabling researchers to compete at the global level.

"This also ensures they can stand up to the challenges that arise from 4IR which include the rise of the digital economy," he told reporters after officiating the launch of the programme.

The one-day event was organised by UKM's Faculty of Education. Also present were faculty dean Professor Datuk Dr Norazah Mohd Nordin and UKM deputy vice-chancellor (research and innovation affairs) Professor Dr Mohd Ekhwan Toriman.



(From right) Mohd Ekhwan Toriman, Noor Azlan Ghazali and Norazah Mohd Nordin paying a visit to one of the booths after the launch of the programme.
PICTURE BY SAIFULLIZAN TAMADI

STEM for the Community seeks to generate knowledge, create wealth and ensure the well-being of society towards achieving a highly competitive, sustainable and inclusive high-income economy.

Noor Azlan said this cross-disciplinary partnership enables researchers to enhance collective research partnerships.

"As an example, while a certain faculty may produce a beauty product that has a positive impact on the physical appearance, the researchers must know whether it is against certain faiths to use it.

"Researchers can share their opinions with experts in the field of religion at the event and ensure that the product meets industry requirements."

A sore point over an explosive issue

Experts wary of amount of dynamite to be used on Penang highway tunnel

By CHONG KAH YUAN
kyuan@thestar.com.my

GEORGE TOWN: A lack of details on how much explosives will be used to blast underground granites to build proposed tunnels connecting Gurney Drive to Penang airport became a sore point for those studying the Detailed Environmental Impact Assessment (DEIA) of the project.

A table in the DEIA showing the "estimation of explosives for tunnel blasting works" states that 717.4kg of Emulite, a brand of emulsion

charge, would be needed.

An expert, however, did not find this to be a full disclosure of the amount of explosives needed.

Dr Mohd Hazizan Mohd Hashim feels that the stated amount probably applied to only one blasting event.

Dr Mohd Hazizan, who is Universiti Sains Malaysia School of Materials and Mineral Resources Engineering programme chairman, said 717.4kg was insufficient for blasting rocks in such a massive project as the Pan-Island Link (PIL) I.

"I do not hold a copy of the DEIA,

so I am speaking in my personal belief that the amount refers to the maximum amount of explosives allowed for each blasting event.

"It is definitely insufficient for blasting works of such a massive project of a few kilometres of tunnels," he said yesterday.

However, Dr Mohd Hazizan said as long as the blast designs follow the necessary procedures and regulations, the work should be carried out safely regardless of how many tonnes of explosives the whole project entailed.

He said for a normal case, every

blasting event would generate ground vibrations expressed in millimetres per second (mm/s), and the threshold for Malaysia would be 5mm/s. He said for noise, the blasts should not exceed 134 decibel.

"Development cannot be avoided, and the best we can do is to strictly adhere to standard operating procedure and enforce regulations and minimise the impact to people and surroundings," he said.

He was commenting on fears raised by Penang Forum, a coalition of about 40 NGOs when social activist Anil Noel Netto pointed out in his

blog that the state government should reveal the total tonnage of explosives needed to build the six-lane highway.

The Penang Forum steering committee member stated that "in the absence of official figures, some have estimated that almost 15,000 tons of explosives will be used to construct all the tunnels".

Anil expressed worry that extensive blasting, especially in the boulder-ridden foothills of Ayer Itam and Paya Terubong could affect the stability of the many high rises near the planned alignment of the highway.

Penang group wants PM to intervene on highway project

GEORGE TOWN: The Penang Citizen Awareness Chant Group (Chant) has urged Prime Minister Tun Dr Mahathir Mohamed to intervene on the proposed Pan-Island Link (PIL) I which it claims could have an environmental impact on the Penang City Park.

Its adviser Yan Lee said trees in the area would have to be chopped to pave the way for a feeder road for the 19.5km PIL I highway from Gurney Drive to the Penang International Airport.

"When the elevated highway is built, the trees in this area would have to be removed.

"Two lanes will link up with the PIL from here, and the feeder road will cut through the park and it will change the entire outlook.

"Thousands come here to exer-

cise every weekend and they will have a six-lane highway running above their heads," he said during a press conference at the entrance to Persiaran Kuari yesterday.

Yan Lee said the country should be looking at improving public transport as a whole.

"Kuala Lumpur is an example. For the past 20 years, we kept building more highways but it did not work at the end of the day.

"When they built the MRT and LRT lines, it made a lot of KL people happy because it has cut down on their travelling time.

"Similarly at the Lim Chong Eu Expressway, where travelling from Gurney Drive to the airport used to take around 18 minutes, now it takes 45 minutes.

"Five to 10 years down the road,

we will be looking at the same thing happening to the PIL.

"This is the Pakatan Harapan government and a new Malaysia. We should be going for sustainable development and strive for green development instead of more highways," he said.

It was reported that the Penang government is mulling a RM1bil soft loan from the Federal Government to start the Penang Transport Master Plan (PTMP).

Consumers Association of Penang president S.M. Mohamed Idris has also called for the suspension of the PTMP until a comprehensive review is done and the affected communities could provide their feedback, following the recent release of the Detailed Environmental Impact Assessment for the PIL.



Bad call: Yan showing an illustration of the feeder ramp which he said will be harmful to the Penang City Park.

Geologist: Install more tsunami sirens along Tawau coast

TAWAU: Universiti Malaysia Sabah geologist Prof Dr Felix Tongkul has called for more tsunami sirens to be installed along the coast here due to the threats of seismic seawave from its location near to Indonesia and the Philippines.

He said he would bring the matter up to the Meteorological Department.

"If a tsunami is generated, it can reach Tawau in half an hour and the only preparation we have is the siren. There is only one, which is not enough.

"It is better to have the sirens at all places so everybody can hear the warning when a tsunami strikes," he said after presenting a paper on "Tsunami Disaster in Tawau" in conjunction with a public education programme on Tawau Earthquake and Tsunami Disaster yesterday.

Earlier, when presenting the paper, Tongkul had said that, like earthquakes, it was hard to predict tsunamis.

"A tsunami can be produced along the Manila Trench, the Mindoro Trench, the Cotabato Trench in the Philippines as well as the North Sulawesi Trench in Indonesia while an underwater landslide can happen on the slopes of the Sabah seabed in the South China Sea," he added.

A simulation, he said, showed that the tsunami waves could reach Sabah in between 30 and 120 minutes, lashing the shores with waves measuring between 1m and 5m-high.

On the tsunami threat in Tawau, he said it depended on the width of the seabed in Tawau as well as its distance from the tsunami source.

Tongkul also expressed the need for detailed mapping of high-risk areas to identify evacuation and escape routes.

He said a computer simulation to predict the arrival of a tsunami and the height of its waves – as well as distance from land, should be as accurate as possible. — Bernama

Out to reduce fabric waste at landfills

Plantation group invites public to join its initiative to recycle textile waste from clothes, toys and bags

By **BRENDA CH'NG**
brenda@thestar.com.my

WE ALL know how to recycle and re-purpose waste such as plastic, paper and cans, but what about fabric from unwanted clothing and soft toys?

They often end up in landfills, where textile waste contributes to about 4% of total waste generated in the country.

To reduce fabric waste in landfills, Sime Darby Plantation and Kloth Cares has launched its Fabric Recycling Initiative at the Sime Darby headquarters in Ara Damansara.

"This is part of our bigger waste recycling plan for Sime Darby Plantation to reduce the number of landfills in our operations through waste segregation.

"Due to such recycling initiatives, we have successfully reduced our 157 landfills by 37% and we hope to reduce it by 50% in 2021 and 70% by 2023," said Sime Darby Plantation chief sustainable officer Dr Simon Lord before launching the fabric recycling programme.

Present at the launch was Selangor Princess Tengku Zatahah Sultan Sharafuddin Idris Shah who is a strong advocate for recycling and green initiatives.

Lord said in Malaysia, about 2,000 tonnes of textile waste was



produced daily.

He said the initiative would start at Sime Darby Plantation before any expansion.

"I want to drive change within the company first, before spreading across the country," he said.

For now, there are two 1.82metre-high fabric recycling bins within their office premises, where old clothes, toys, bags and other fabric items are accepted.

Once the bins are full, Kloth Cares will collect the contents and segregate them at its collection centres.

Items in good condition will be

sent to charitable organisations locally and abroad while others that cannot be used will be made into cleaning cloths or fabric pallets for Sime Darby Plantation to fuel their boilers.

"This recycling initiative has been around since 2016 when we first launched our War on Waste programme that also revolved around tackling waste," he said.

In September, the company will launch a Zero Plastic Initiative.

Tengku Zatahah said, "The importance of embracing reduce, reuse and recycle is a lifestyle choice which we should all be

doing in some way or other, so it is wonderful for large corporations to undertake such initiatives," she said, adding that it was crucial for individuals to adopt this too.

Tengku Zatahah, who also has her #sayno2plastic campaign, said Malaysia had a "throw-away culture" where things were just thrown away once they were no longer wanted or needed.

She said people could reduce waste in landfills by segregating and re-purposing things.

"Kloth Cares collects unwanted fabrics before they are thrown into landfills, and it has collected

10,000kg of old fabric and recycled them into cleaning cloths, pillows and even bedding items since 2017," she said.

In her speech, she told the audience of her green habits, such as using recycled woven bags instead of plastic ones and metal straws.

"I bring my own bamboo cutlery instead of using plastic ones and I share my daily habits to help inspire others to join me in this movement," she said.

Those who want to re-purpose unused fabric can drop it at nearby recycling bins for textile items or pass it to Kloth Cares.



Tengku Zatahah and Lord launching the Fabric Recycling Initiative at the Sime Darby Plantation headquarters in Ara Damansara.



(Left and far left) Guests at the launch of the Fabric Recycling Initiative checking out the recycled items re-purposed from unwanted textile waste on display at the event.



LONGGOKAN plastik dari beberapa kilang disita dalam Operasi Bersepadu Kilang Haram oleh Majlis Daerah Kuala Langat.

Pencemar alam

■ Keadaan tempat kerja 17 PATI ditahan kotor melampau

Ruwaida Md Zain
cnews@hmetro.com.my

Kuala Langat

Seramai 17 pendatang asing tanpa izin (PATI) ditahan dalam Operasi Bersepadu Kilang Haram di beberapa lokasi di kawasan pentadbiran Majlis Daerah Kuala Langat (MDKL).

Mereka ditahan di salah satu daripada tujuh kilang haram yang disita dalam operasi yang bermula kira-kira jam 10 pagi dan berakhir 6 petang, semalam.

Menurut Ketua Imigresen Pelabuhan Klang, Syed Abdul Rahman Syed Mahmud, seramai 16 warga Bangladesh dan seorang warga Indonesia ditahan dalam operasi berkenaan.

"Ketika ditahan semua PATI itu sedang bekerja di kilang terbabit dan mereka

patuh dengan arahan kami (tidak melawan)," katanya.

Tinjauan NSTP mendapati, ketujuh-tujuh kilang kitar semula plastik yang beroperasi itu berada dalam keadaan kotor, busuk, memualkan selain longgokan plastik yang hendak diproses bercampur dengan sampah.

Ada yang dibina di kawasan ladang kelapa sawit serta di kawasan semak dan tersorok, malah beberapa kilang juga terpaksa diumpil dan dipecahkan pintunya.

Ketika operasi dijalankan, semua pekerja di enam daripada tujuh kilang terbabit dipercayai berjaya melarikan diri.

Pihak MDKL memaklumkan, semua kilang haram yang disita itu sudah diberitahu notis amaran sebelum ini dan operasi juga dijalankan berdasarkan aduan umum kepada MDKL.

Selain itu, bekalan elektrik dan air juga dipotong

serta merta ketika operasi terbabit.

Sementara itu, Exco Kerajaan Tempatan, Pengangkutan Awam dan Pembangunan Kampung Baru, Ng Sze Han yang turut serta dalam operasi berkata, kilang haram seperti itu tidak sepatutnya wujud di Selangor.

"Melihat keadaan kilang itu, saya terkejut kerana ia sangat teruk dan langsung tiada langkah keselamatan serta sangat berbahaya kepada pekerja.

"Kilang seperti ini tidak sesuai dan tidak patut ada di Selangor malah mencemarkan alam sekitar.

"Kita tidak akan membenarkan kilang seperti ini wujud, pihak terbabit perlu segera menghentikan operasi dan bersihkan tapak kilang sebelum tindakan undang-undang diambil," katanya.

Hadir sama, Exco Alam Sekitar, Teknologi Hijau,

Sains, Teknologi dan Inovasi (STI) dan Hal Ehwal Penggunaan, Hee Loy Sian, Ahli Dewan Undangan Negeri (ADUN) Banting, Lau Weng San dan Yang Dipertua MDKL, Mohamad Zain A Hamid.

Ng berkata, Majlis Mesyuarat Kerajaan Negeri (MMKN) memutuskan kerajaan negeri tidak teragak-agak mengambil tindakan terhadap aktiviti yang menyebabkan pencemaran.

Operasi bersepadu itu melibatkan 100 pegawai, kakitangan serta penguat kuasa pelbagai agensi termasuk MDKL, Imigresen Pelabuhan Klang, Jabatan Alam Sekitar (JAS), Suruhanjaya Perkhidmatan Air Negara (SPAN), Tenaga Nasional Berhad, Jabatan Kastam, Polis Diraja Malaysia (PDRM), Pejabat Daerah Kuala Langat dan Syarikat Air Selangor.



Inovasi pelajar guna bahan terbuang

SMK St. Michael dan SK Lok Yuk Inanam di Sabah dianugerahkan *Green Flag* atas usaha keras mereka memulihara alam sekitar serta melaksanakan pelbagai aktiviti hijau.

KEHLIAUAN pokok-pokok yang tersusun rapi di dalam bekas plastik dikitar semula malah ada juga digantung di sepanjang kawasan pejalan kaki membuntikan pemandangan di Sekolah Menengah (SM) St. Michael, Penampang, Sabah cukup menyenangkan. Disenaraikan sebagai salah sebuah sekolah yang terlibat di dalam Program Eco-Schools (ESP), SM St. Michael terlibat dalam program melestarikan alam sekitar.

Menurut Presiden Kelab ESP, SM St. Michael, Nojuel Je Soluku, 16, ESP menjadi titik permulaan untuknya memberi sumbangan kepada alam sekitar.

"Saya mula menyertai kelab ini sejak berada di

tingkatan satu apabila diperkenalkan oleh pelajar senior.

"ESP memberi pendedahan serta berpeluang bekerjasama dengan pelbagai sekolah di bawah ESP' lantas membuatkan saya berkeyakinan untuk bercakap di hadapan orang ramai," katanya ketika ditemui *Kosmo!* di sekolah tersebut baru-baru ini.

Sekolah tersebut yang dianugerahkan Bendera Hijau (*Green Flag*) pada tahun 2015 sangat aktif dalam melakukan pelbagai aktiviti alam sekitar seperti menanam semula pokok, membersihkan kawasan dan mengikuti persidangan.

Antara aktiviti yang dijalankan ialah membuat bebola lumpur, baja kompos, menanam pokok bakau di Sulaman



DAPHNE



SITI YUSLAINI

Lake Replanting Site, Tuaran, Sabah, membersihkan serta merapikan kawasan dan menghasilkan inovasi daripada barang terpakai.

Terang Nojuel, pada tahun 2015 dan 2016, sekolah tersebut tersenarai dalam *Malaysia Book Of Records* apabila berjaya menghasilkan magnet peti sejuk dan penanda buku daripada bahan terbuang paling banyak.

Berprestij

Jelas anak kedua daripada empat beradik itu, pengalaman mengikuti pertukaran sekolah

ESP di Filipina merupakan momen terindah kerana ia merupakan pertama kali berjauhan dengan keluarga apatah lagi keluar negara.

ESP merupakan program pembangunan pendidikan alam sekitar yang diterapkan di sekolah-sekolah.

Di negara ini, Tabung Alam Malaysia (WFP-Malaysia) merupakan Pengendali Kebangsaan bagi program tersebut bagi lebih 200 buah sekolah.

Dalam pada itu, anugerah *Green Flag* adalah pengiktirafan berprestij di peringkat antarabangsa untuk sekolah yang menjalankan amalan pendidikan dan pengurusan alam sekitar terbaik.

Sementara itu, Guru Koordinator ESP, SM Aerene Gabril, 43, berkata, pelajar didedahkan dengan inovasi dan mereka perlu mencari permasalahan serta menyelesaikannya.

"Antara inovasi menarik yang dihasilkan oleh pelajar ialah Go Green Pot iaitu pasu yang diperbuat daripada bekas telur dan kanji bagi menggantikan polibeg.

"Inovasi pasu tersebut telah mendapat anugerah khas dan pingat emas di Romania pada tahun 2016," tuturnya yang berpengalaman selama 21 tahun sebagai guru bahasa Inggeris.

Selain itu, pelajar juga menghasilkan palet makanan



LANDSKAP taman daripada barang terbuang yang dihasilkan oleh warga Sekolah Kebangsaan Lok Yuk Inanam, Kota Kinabalu, Sabah.

BAJA kompos dan enzim yang dihasilkan daripada sisa kantin di SK Lok Yuk Inanam.

LAMPIRAN 14 (SAMBUNGAN)
KOSMO (INFINITI): MUKA SURAT 31
TARIKH: 25 JULAI 2018 (RABU)

4 ayam daripada bahan organik dan sabun petai yang mempunyai khasiat kesihatan.

Beliau yang berasal dari Penampang, Sabah itu, memberitahu, aktiviti kelab ESP kebiasaannya dijalankan selepas tamat sesi persekolahan ataupun pada hujung minggu.

Aktif

SM St. Michael merupakan Sekolah Kluster Kecemerlangan Alam Sekitar.

Kelab tersebut aktif menjalankan program tanggungjawab sosial korporat seperti *Enviro Walk* iaitu berjalan sambil mengutip sampah di luar kawasan sekolah dan memasang paip air di kawasan kampung yang tidak mempunyai bekalan air paip diwart.

Sehinggalah sekolah yang dianugerahkan *Green Flag* ialah Sekolah Kebangsaan (SK) Lok Yuk Inanam, Kota Kinabalu, Sabah.

Guru Koordinator, SK Lok Yuk Inanam, Siti Yuslani Mohd. Samsuri, 43, berkata, semua pelajar sekolah itu yang terdiri daripada 348 orang pelajar terlibat dalam ESP.

"Sekolah ini turut melakukan pelbagai aktiviti berkaitan alam sekitar seperti penanaman hidroponik, membuat landskap taman daripada bahan terbuang, membela ikan dan kura-kura.



NOJUEL

"Kami juga menjadikan Klinik Kesihatan Inanam sebagai klinik angkut dengan melakukan aktiviti gotong-royong membersihkan dan mencantikan kawasan sekitarnya," ulasnya yang berasal dari Pontian, Johor.



AERINE

Ujar guru Pendidikan Islam itu, di sekolah tersebut mempunyai lapan buah taman antaranya taman herba, buah dan bunga.

Di samping itu, setiap bilik darjah mempunyai tiga sudut penting iaitu hasil kraf tangan pelajar, taman mini dan info alam sekitar.

Bukan hanya persekitaran sekolah yang indah tetapi tandasnya juga sangat bersih dan cantik sehingga SK Lok Yuk Inanam mendapat tempat kedua



SMK ST. MICHAEL merupakan sekolah Kluster Kecemerlangan Alam Sekitar.

pertandingan Tandas Bersih bagi kategori Sekolah Rendah Pinggir Bandar pada tahun 2017 serta mendapat lima bintang bagi Pengauditan dan Star Rating Kebersihan Tandas Awam pada tahun 2017.

SK Lok Yuk Inanam turut mengadakan lawatan integrasi dengan sekolah ESP di luar negara seperti Australia, Indonesia dan Singapura.

"Lawatan sebegini memberi input dan idea kepada kami untuk meningkatkan kecemerlangan sekolah dan ESP."

Disiplin bergajaran

"Sebagai contoh, kami melaksanakan sistem disiplin bergajaran seperti dilakukan oleh sebuah sekolah di Australia.

"Disiplin bergajaran ini memberi merit bagi setiap kelakuan baik pelajar dalam pelbagai aspek dan hadiah akan diberikan berdasarkan

jumlah kebaikan yang berjaya dikumpul," jelasnya yang bertugas selama 16 tahun di SK Lok Yuk Inanam.

Seorang pelajar SK Lok Yuk Inanam, Daphne Jacelle Jackson, 12, berkata, ESP memberinya banyak maklumat mengenai alam sekitar dan bernas sangat mengharganya.

Akui Daphne, ESP banyak merubah pandangannya terhadap alam sekitar dan menyedari betapa pentingnya alam sekitar kepada kehidupan.

"Aktiviti yang paling menyeronokkan ialah ketika mengikuti projek kitar semula kerana barangan terpakai itu boleh dijadikan pelbagai produk menarik.

"Saya juga seronok berkongsi maklumat alam sekitar dengan orang lain dan dapat berjumpa ramai kawan yang terlibat dengan ESP," ceritanya yang bercita-cita menjadi pramugari.



ANUGERAH *Green Flag* adalah pengiktirafan berprestij di peringkat antarabangsa untuk sekolah yang menjalankan amalan pendidikan dan pengurusan alam sekitar terbaik.

INFO Program Eco-Schools

- Ditubuhkan oleh Yayasan Pendidikan Alam Sekitar dan Denmark
- Malaysia mengikuti Program Eco-Schools sejak tahun 2012 dan disertai lebih 200 buah sekolah
- WWF-Malaysia merupakan Pengendali Kebangsaan bagi program ini
- Program Eco-Schools bermula 25 tahun yang lalu di seluruh dunia
- Anugerah *Green Flag* adalah pengiktirafan berprestij di peringkat antarabangsa untuk sekolah yang menjalankan amalan pendidikan dan pengurusan alam sekitar terbaik

Sekolah pendidikan alam sekitar terbesar di dunia

BAK kata pepatah, melentur buluh biarlah dari rebungnya sangat bertepatan dengan Program Eco-Schools (ESP) ini kerana ia mendedahkan pelajar seawal usia tujuh hingga 17 tahun dalam pengurusan alam sekitar terbaik.

Aktiviti alam sekitar dan kemasyarakatan yang dijalankan oleh para pelajar ketika mengikuti ESP dapat menanamkan rasa cinta kepada alam serta mendidik mereka untuk lebih bertanggungjawab.



PEI JING

ESK merupakan sekolah lestari terbesar di dunia yang kini dijalankan di lebih 67 buah negara.

Pengurus Pendidikan, Program Eco-Schools, Tabung Alam Malaysia (WWF-Malaysia), Chew Pei Jing berkata, ESP ditubuhkan oleh Yayasan Pendidikan Alam Sekitar (FEE) dari Denmark sejak

25 tahun yang lalu.

"ESP mula disertai oleh sekolah-sekolah di Malaysia pada tahun 2012.

"Objektif program ini adalah untuk membina rasa

tanggungjawab kepada alam sekitar dan mengamalkan gaya hidup lestari dalam kehidupan seharian.

"Ia memberi struktur kepada sekolah dalam pengurusan alam sekitar dan melesarkan sekolah tersebut," katanya ketika dihubungi *Kosmo!* baru-baru ini.

Jelas Pei Jing, terdapat tujuh langkah yang perlu diimplmentasikan oleh sekolah ESP iaitu penubuhan jawatan kuasa ESP, audit alam sekitar, pelan tindakan, pemantauan dan penilaian, kerja kurikulum, pembentukan dan penglibatan

serta kod eko.

Tumbuhnya, sekolah-sekolah tersebut yang menjalankan amalan pendidikan dan pengurusan alam sekitar terbaik akan dikurniakan anugerah *Green Flag*.

Bagi mendapatkan anugerah tersebut sekolah itu perlu memenuhi beberapa kriteria yang ditetapkan seperti mewujudkan perkongsian pengalaman dengan sekolah tempatan atau antarabangsa serta komuniti setempat.

Selain itu, membina rangkaian dan komunikasi dengan sekolah-sekolah di dalam dan luar negara.

LAMPIRAN 15
UTUSAN MALAYSIA (MEGA SAINS): MUKA SURAT 18
TARIKH: 25 JULAI 2018 (RABU)



DR. ZAIROSSANI MOHD NOR (tengah), Dr. Asrul Mustafa dan Pak-Kuen Chan (kanan) menunjukkan pewarna cat yang dihasilkan daripada getah asli.

Inovasi cat mesra alam

MENGHASILKAN lukisan yang cantik dan berseni mahupun mengecat dinding bangunan memerlukan kita untuk menggunakan pewarna atau cat untuk menjadikannya lebih menarik.

Namun, kebanyakan pewarna yang digunakan sama ada pewarna lukisan atau cat dinding diperbuat daripada bahan sintetik yang memberi kesan yang kurang baik kepada persekitaran.

Oleh itu, penghasilan inovasi *Getah Color* berasaskan bahan semula jadi iaitu getah asli yang lebih mesra alam.

Menurut Pegawai Penyelidikannya dari Lembaga Getah Malaysia (LGM), **Dr. Asrul Mustafa**, inovasi tersebut dihasilkan dengan cara

menggantikan polimer yang berasaskan petroleum dengan hasilan semula jadi susu getah.

Katanya, komponen asas dalam penghasilan cat iaitu agen pengikat dan polimer diubah dengan memasukkan unsur getah asli.

"Sebagai polimer semula jadi, susu getah asli ditambah dengan bahan-bahan lain untuk mendapatkan kelikatan yang sesuai dan untuk mencegah pembekuan semasa digunakan pada berus.

"Seterusnya, susu getah asli yang telah distabilkan dengan baik ini digunakan sebagai pengikat dalam cat yang mengandungi pelikat dan pigmen secara amnya," katanya.

Tambahnya, inovasi *Getah Color* ini sekiranya

dapat digunakan dalam sukatan pelajaran seni visual di sekolah dapat meningkatkan pengetahuan murid dan pelajar mengenai hasil komoditi negara yang serba guna.

"Berdasarkan sejarah, pada suatu ketika dahulu, getah pernah menjadi *nation builder* bagi negara ini.

"Rasanya ada dalam kalangan generasi muda yang tidak mengenali pokok getah atau getah asli. Oleh itu, jika *Getah Color* ini boleh dimasukkan dalam sukatan pelajaran sudah tentu dapat memberikan pengetahuan mengenai kegunaan getah asli kepada mereka," jelasnya.

Katanya lagi, kerja-kerja membangunkan inovasi tersebut masih dijalankan dalam usaha memperbaiki kualitinya ke tahap maksimum yang dikehendaki oleh pelukis.

Oleh itu, dengan kerjasama Balai Seni Negara baru-baru ini menganjurkan pameran *Rub'A Paint* di Balai Seni Negara bertujuan mempromosi inovasi penggunaan getah asli sebagai medium baharu bagi lukisan *Getah Color*.

"Selain itu, kita juga mendapatkan maklum balas daripada pelukis yang telah mencuba inovasi ini, bertanya pendapat dan memperbaikinya supaya menepati kehendak industri seni," ujarnya.



PEWARNA cat yang dihasilkan daripada getah asli lebih mesra alam.

Nuke launch site 'being dismantled'

North Korea tearing down key facilities, says US research group

SEOUL: A US research group says North Korea has started dismantling key facilities at its main satellite launch site in what appears to be a step towards fulfilling a commitment made by leader Kim Jong-un at his summit with President Donald Trump in June.

An official from South Korea's presidential office yesterday said Seoul has also been detecting dismantlement activity at North Korea's Sohae launch site but did not specify what the North was supposedly taking apart.

While the official said such moves could have a "positive effect" on the North's denuclearisation, analysts say such steps wouldn't reduce North Korea's military capabilities unless the country dismantles the whole site.

The North Korea-focused 38 North website said satellite images between July 20 and 22 indicate the North began dismantling key facilities at the site.

The facilities being razed or disassembled include a rocket engine test stand used to develop liquid-fuel engines for ballistic missiles and space-launch vehicles and a rail-mounted processing building where space launch vehicles were assembled before being moved to the launch pad, according to the report.

"Since these facilities are believed to have played an important role in the development of technologies for the North's intercontinental ballistic missile programme, these efforts represent a significant confidence building measure on the part of North Korea," analyst Joseph Bermudez wrote in the report.

Lee Choon Geun, a missile expert at South Korea's Science and

These efforts represent a significant confidence building measure.

Joseph Bermudez

Technology Policy Institute, said the North is giving up little in dismantling the rocket engine test site when it seems clear the country is satisfied with the current design of long-range weapons.

However, Lee said that the supposed move to dismantle the rail-mounted processing building was more notable as it potentially indicated to broader dismantlement at the site.

"If North Korea goes further and dismantles the entire Sohae site, that would meaningfully reduce the country's long-range missile capability by eliminating a facility where it could fire multiple ICBMs in succession," Lee said.

After his summit with Kim in Singapore on June 12, Trump said he was told by Kim that the North was "already destroying a major missile engine testing site" without identifying which site.

The leaders concluded their summit by declaring their vague aspirational goal of moving towards a nuclear-free Korean Peninsula, but there's lingering doubt on whether Kim would agree to fully give up the nuclear weapons he may see as a stronger guarantee of his survival that whatever security assurances the United States can provide. — AP

Food waste factor in climate change

ACCORDING to the Food and Agriculture Organization's "Food loss and waste facts" (FAO 2011), one-third of all food produced in the world for human consumption never reach the consumer's table.

This is equivalent to 1.3 billion tonnes of fruits, vegetables, meat, dairy, seafood and grains that are lost either at the points of production, during distribution or are thrown away from grocery stores, restaurants and home kitchens.

This is about four times the amount of food needed to feed nearly 800 million people around the world who go to bed hungry every night.

Not only is food wastage a massive economic burden and critical social problem, it is also a serious factor in climate change. Food waste, which ends up in landfills, produces methane gas, one of the greenhouse gases warming up the earth now. Based on estimates worked out by the Intergovernmental Panel on Climate Change (IPCC), methane is 86 times more warm-

ing over a 20-year period than the same amount of carbon dioxide.

According to a FAO assessment in 2017, 6.7% of all global greenhouse gases come from food waste, leading to the analogy that "If food waste were a country, it would be the world's third largest emitter of greenhouse gases behind the US and China."

Apart from releasing greenhouse gases, food waste also results in water wastage.

According to FAO, the "total volume of water used each year to produce food that is lost or wasted (250km³) is equivalent to the annual flow of Russia's Volga River, or three times the volume of Lake Geneva."

In terms of energy consumption, more than 3.3 billion metric tonnes of carbon dioxide are generated in the production, harvesting, transport and packaging processes of food that goes to waste.

However, food waste is perhaps the easiest to deal with in terms of mitigating climate change as everyone can chip in by doing simple things

in their daily life.

These include planning their meals so that they only have enough for their immediate needs, reducing their meat intake and buying local products, which would reduce their carbon footprint as well.

These simple steps will also save money and lead to healthier lifestyles.

Composting leftovers and other spoiled food is another way to target the factors that cause climate change.

NUR IMANI ABDULLAH
Forum Air Malaysia
Petaling Jaya

Hundreds missing in Laos dam collapse

BANGKOK — Hundreds of people are missing and an unknown number believed dead after a partly constructed hydropower dam in southeast Laos collapsed, sending flash floods surging through six villages, state media reported yesterday.

Communist Laos is traversed by a vast network of rivers and there are several dams being built or are planned in the impoverished and landlocked country, which exports most of its hydropower energy to neighbouring countries like Thailand.

Laos News Agency said the accident happened on Monday evening at a dam in the country's far south, close to the border with Cambodia, releasing five billion cubic metres of water — more than two million Olympic swimming pools.

The agency said there were "several human lives claimed, and several hundreds of people missing" while some 6,600 people had been made homeless as authorities scrambled to evacuate villagers from the devastation.

Aerial footage posted on the Facebook page of local news outlet ABC Laos showed a vast brown inundation swamping houses and jungle alike over a huge area.

Nearly 24 hours after the dam's collapse, local authorities said they were struggling to

gauge the extent of the disaster.

"We do not have any formal information yet about any casualties or how many are missing," an official in Attapeu province, where much of the flooding occurred, said on condition of anonymity, adding that was "no phone signal" in the flooded region.

A Thai company involved in the hydropower project confirmed that a 770-metre long auxiliary dam used to divert river water had failed after heavy rainfall.

"The incident was caused by continuous rainstorm which caused a high volume of water to flow into the project's reservoir," Ratchaburi Electricity Generating Holding said in an English language statement.

The US\$1.2 billion (RM4.9 billion) dam is part of a project by Vientiane-based Xe Pian Xe Namnoy Power Company, or PNP, a joint venture formed in 2012.

South Korea's Korea Western Power and the state-run Lao Holding State Enterprise are also involved in the joint venture.

The 410-megawatt capacity dam was supposed to start commercial operations by next year, according to the venture's website.

It planned to export 90 per cent of its electricity to energy-hungry Thailand and the remaining amount was to be offered up on the local grid. — AFP



A screengrab from ABC Laos yesterday shows an aerial view of the flooded plains in Attapeu province after the dam collapsed on Monday. — Picture by AFP

Laos dam collapse



Hundreds missing
as hydropower dam
collapsed on Monday



Xepian-Xe Nam Noy
Project under construction

RECORD BREAKING

Japan declares heatwave a natural disaster

TOKYO: An "unprecedented" heatwave in Japan has killed at least 65 people in one week, government officials said yesterday, with the weather agency now classifying the record-breaking weather as a "natural disaster".

In the week to Sunday, at least 65 people died of heatstroke, while 22,647 others were hospitalised, the Fire and Disaster Management Agency said.

Both figures were "the worst-ever for any week during summer" since the agency began recording fatalities resulting from heatstroke in July 2008.

The agency yesterday said 80 people died from the heat since the beginning of this month and more than 35,000 had been hospitalised. **AFP**

LAMPIRAN 20
UTUSAN MALAYSIA (LUAR NEGARA): MUKA SURAT 12
TARIKH: 25 JULAI 2018 (RABU)



PENYELIDIK Cambridge University menggunakan sel stem tikus untuk menghasilkan struktur seperti embrio buatan. — AGENS!

Pasukan saintis Britain cipta embrio buatan

LONDON 24 Julai - Pasukan saintis Britain mendedahkan kejayaan menghasilkan embrio buatan dalam satu kajian makmal mengenai kesuburan baru-baru ini.

Menurut portal *Mail Online*, penyelidik dari Cambridge University menggunakan sel stem tikus untuk menghasilkan struktur seperti embrio buatan yang mampu berkembang sehingga proses gastrulasi.

Gastrulasi adalah perkembangan penting kehidupan yang berlaku apabila sel-sel embrionik mula berkembang menjadi struktur yang baik untuk membentuk embrio.

Kejayaan itu menceraikan harapan untuk mengatasi salah satu punca ketidaksuburan apabila embrio gagal dimasukkan ke dalam rahim.

Selama bertahun-tahun ahli biologi berusaha menghasilkan embrio dari sel-sel stem bagi mewujudkan bekalan tanpa had yang boleh digunakan untuk penyelidikan perubatan.

Tetapi usaha saintifik mem-

bentuk sel-sel stem menjadi struktur tiga dimensi kompleks seperti embrio di makmal sebelum ini telah berulang kali gagal.

Sel stem embrionik tidak bertukar menjadi bentuk silinder dengan sendiri, tetapi memerlukan bantuan sel-sel lain yang ada di dalam tubuh.

Pasukan antarabangsa yang diketuai oleh Cambridge University sebelum ini mencipta struktur yang lebih mudah menyerupai embrio tikus menggunakan kaedah kultur.

Berdasarkan kajian yang diterbitkan dalam jurnal *Nature Cell Biology* itu, struktur akhirnya mirip dengan perkembangan embrio semula jadi.

Para penyelidik percaya mereka kini akan berupaya untuk memahami dengan lebih jelas bagaimana tiga jenis sel stem berinteraksi untuk membolehkan embrio berkembang.

Mereka berharap dapat melakukan eksperimen lanjut dengan sel stem manusia dalam usaha mewujudkan embrio manusia daripada sel stem.