LAMPIRAN 1
UTUSAN MALAYSIA (UTUSAN): MUKA SURAT B12
TARIKH: 18 JULAI 2018

13 organisasi dapat pensijilan SIRIM QAS, IQNet

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KUALA LUMPUR 17 Julai - Sebanyak 13 organisasi menerima pensijilan daripada IQNet dan SIRIM QAS International pada Forum IQNet 2018 yang diadakan baru-baru ini.

Pengarah Urusan SIRIM QAS International, Mohd. Azanuddin Salleh berkata, dengan pensijilan tersebut menjadikan pensijilan SIRIM QAS International lebih mudah diterima di peringkat antarabangsa.

Katanya, ini kerana keahlian IQNet memberi manfaat kepada para pelanggannya dari segi akses pasaran yang luas.

"Selain itu, keahlian IQNet memberi kami akses kepada 20,000 juruaudit dan pakar yang membolehkan kami memberikan perkhidmatan pensijilan kepada para pelanggan kami di seluruh dunia," katanya dalam kenyataan di sini hari ini.

Forum IQNet ialah sidang kemuncak bagi Perhimpunan Agung IQNet Ke-30, diadakan selama seminggu yang pertama kali dianjurkan SIRIM QAS International. Ia dihadiri hampir 60 delegasi daripada 27 rakan kongsi IQNet seluruh dunia.

PRESIDEN IQNet, Alex Stoichitoui (dua dari kanan) menyampaikan sijil ISO 9001 kepada Pengurus Besar Lembaga Tabung Haji, Datuk Ahmad Sohaimi Abd. Rahim sambil disaksikan Pengarah Urusan IQNet, Pedro Alves (kiri) dan Mohd. Azanuddin Salleh di Kuala Lumpur, semalam.

SIRIM QAS International telah menjadi ahli IQNet sejak 2006.

Kesemua 13 organisasi tersebut adalah Angenet Sdn. Bhd; Canon Mailcom Malaysia Sdn. Bhd; Detrac Sdn. Bhd; Kementerian Kesihatan, Pejabat Kesihatan Daerah Hulu Perak; KPJ Ampang Puteri Specialist Hospital dan Leader Steel Service Centre Sdn. Bhd.

Organisasi lain termasuklah Lembaga Tabung Haji; Petronas Refinery & Petrochemical Corporation Sdn. Bhd; Radicare (M) Sdn. Bhd; SD Card Technologies Sdn. Bhd; Syarikat Trans Ismor Engineering Sdn. Bhd; Usaha Damai Sdn. Bhd. dan Zulkifli Bamadhaj Beverages Industries Sdn. Bhd.

Pensijilan yang dicapai oleh kesemua penerima termasuk ISO 45001/OHSAS 18001 sistem pengurusan kesihatan dan keselamatan pekerjaan, ISO 9001 sistem pengurusan kualiti (QMS), ISO 13485 QMS untuk peralatan perubatan, ISO 14001 sistem pengurusan alam sekitar dan ISO 22000 sistem pengurusan keselamatan makanan.

LAMPIRAN 2
HARIAN METRO (SETEMPAT): MUKA SURAT 5
TARIKH: 18 JULAI 2018

Gerhana bulan penuh paling lama

Kuala Lumpur: Gerhana bulan penuh pada 28 Julai ini dijangka berlarutan selama satu jam 42 minit 57 saat, sekali gus menjadikan ia sebagai fenomena alam paling lama bagi abad ke-21 (2001 hingga 2100).

Timbalan Ketua Pengarah Agensi Angkasa Negara (ANGKASA), Samsuddin Omar berkata, fenomena gerhana bulan penuh berkenaan adalah yang kedua berlaku tahun ini.

Beliau berkata, fenomena alam itu boleh dilihat di Australia, Asia (termasuk Malaysia), Afrika, Eropah dan Amerika Selatan bermula jam 01:14:47 pagi sebelum berakhir pada jam 07:28:38 pagi.

"Fasa gerhana penuh akan berlangsung selama satu jam 42 minit 57 saat dan tempoh ini menjadikannya gerhana bulan penuh paling lama bagi abad ke-21, namun ia mungkin berlarutan selama satu jam 47 minit.

"Gerhana bulan penuh berlaku apabila matahari, bumi dan bulan berada pada kedudukan sejajar atau sebaris. Ketika itu keseluruhan bulan merentasi bayang umbra bumi," katanya dalam satu kenyataan.

Samsuddin berkata, ketika fenomena alam itu berlaku bulan dengan perlahan-lahan bertukar daripada putih mutiara yang biasa dilihat kepada warna kemerahan kemudian kembali semula kepada warna asalnya dalam tempoh lima jam.

"Warna kemerahan yang dapat dilihat ketika fasa penuh gerhana bulan pada 28 Julai ini berbeza daripada gerhana bulan penuh yang lain bergantung kepada beberapa faktor termasuk keadaan di atmosfera atas bumi dan kedudukan bulan di sepanjang orbit.

"Gerhana bulan pada 28 Julai ini, boleh dilihat dari mana-mana kawasan di Malaysia bergantung kepada keadaan cuaca setempat.

"Bagaimanapun tidak semua tempat di Malaysia akan dapat melihat keseluruhan fasa gerhana yang berlaku kerana bulan terbenam lebih awal sebelum fasa tertentu berakhir," katanya.

Katanya, secara amnya penduduk di Malaysia akan dapat melihat hampir keseluruhan fasa gerhana sejak daripada mula berlakunya fenomena ini hingga bulan terbenam bergantung kepada lokasi di mana mereka berada.

"Ini bermaksud lokasi pencerapan paling baik untuk melihat gerhana bulan penuh kali ini adalah kawasan yang berada paling barat. Beberapa bandar terpilih di Malaysia bagi kenampakan gerhana dan bulan terbenam adalah Kota Kinabalu, Sabah, Kuching, Sarawak, Kuala Terengganu, Johor Bahru, Kuala Lumpur, Alor Setar dan Langkawi.

"Sempena fenomena berkenaan Observatori Negara Langkawi di Bukit Malut, Pulau Langkawi akan mengadakan beberapa aktiviti bermula jam 10 malam (27 Julai) dan berakhir 6.30 pagi (28 Julai) serta terbuka kepada orang ramai," katanya.

KEDUDUKAN SEBARIS

Fakta Grafik

Gerhana bulan penuh berlaku apabila matahari, bumi dan bulan di kedudukan sebaris dan bulan merentasi bayang umbra bumi.

Jadual berikut menunjukkan waktu berlakunya fasa-fasa gerhana bulan penuh pada 28 Julai 2018.

FASA	WAKTU MALAYSIA
Fasa Penumbra bermula	01:14:47 pagi
Fasa Separa bermula	02:24:27 pagi
Fasa Penuh bermula	03:30:15 pagi
Fasa Penuh maksimum	04:21:44 pagi
Fasa Penuh berakhir	05:13:11 pagi
Fasa Separa berakhir	06:19:00 pagi
Fasa Penumbra berakhir	07:28:38 pagi

Jadual bulan terbenam dan lokasi penampakan gerhana

Kota Kinabalu	*(kecuali Fasa Separa Tamat dan Fasa Penumbra Tamat)*
Kuching	*(kecuali Fasa Penumbra Tamat)*
K Terengganu	*(kecuali Fasa Penumbra Tamat)*
Johor Bahru	*(kecuali Fasa Penumbra Tamat)*
Kuala Lumpur	*(kecuali Fasa Penumbra Tamat)*
Alor Setar	*(kecuali Fasa Penumbra Tamat)*
Langkawi	*(kecuali Fasa Penumbra Tamat)*

LAMPIRAN 3
NEW STRAITS TIMES (HIGHER ED): MUKA SURAT 6
TARIKH: 18 JULAI 2018

What it takes to become a cybersecurity specialist

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WITH digital transformation and the rapid growth of digital economy and e-commerce, cybersecurity is a critical business factor.

Once a specialty only associated with government agencies and the defence industry, cybersecurity has now entered the mainstream.

According to the National ICT Association of Malaysia (Pikom), cybersecurity threats can cripple organisations, infrastructure and as well as "attack" countries. The impact can be devastating, such as financial and data loss and irreparable damage to reputation and credibility.

Pikom chairman Ganesh Kumar Bangah said: "If left unchecked, the potential fallout is huge, given the growing role of the digital economy and its rising contributions to the overall ICT industry and the Malaysian economy."

Ganesh Kumar Bangah

The Malaysia Computer Emergency Response Team, a unit under CyberSecurity Malaysia (the national cybersecurity specialist agency under the purview of the Ministry of Science, Technology and Innovation), recorded 3,280 cyber incidents reported up to June 30 this year.

The incidents are fraud (2,158), intrusion (514), malicious code (192), cyber harassment (170), spam (103), intrusion attempt (77), vulnerabilities (40), content related (23) and denial of service attack (3).

Demand for specialists in the field of cybersecurity is high. Industries such as health care, finance, manufacturing and retail all hire cybersecurity professionals to protect valuable information from cyber breaches.

CyberSecurity Malaysia chief executive officer Datuk Dr Amirudin Abdul Wahab said the country does not have sufficient talent in cybersecurity.

"We have recorded some 7,866 cybersecurity knowledge workers in the country as of this month. Our target is at least 10,000 knowledge workers by 2020. The cybersecurity domain is not a new industry but due to rapid technology development including emerging technologies, there's a huge shortage of skilled and qualified cybersecurity professionals," he said.

QUALIFICATIONS

Pikom's *ICT Job Market Outlook in Malaysia 2018* report highlighted that cybersecurity positions are among the top-paying jobs in each of five position levels from fresh graduate to senior manager (see table).

A critical shortage of specialised cybersecurity professionals worldwide who are able to protect organisations from the adverse risks of the sophisticated online attacks is the reason for the attractive remuneration.

"The cybersecurity domain is not a new industry but due to rapid technology development... there's a huge shortage of skilled and qualified cybersecurity professionals.

AMIRUDIN ABDUL WAHAB
CyberSecurity Malaysia chief executive officer

RANGE OF SALARIES OF CYBERSECURITY PROFESSIONALS IN 2017 IN EACH OF FIVE JOB CATEGORIES

Job Category	Type of Jobs	Salary Range (RM)
Entry Level	Security Analyst, Network Security Engineer, Security Engineer and Security Analyst	2,500-3,400
Junior Level	Application Security Specialist, Lead Cyber Security Consultant	6,000- 6,500
Senior Executive	IT Security Incident Response Analyst, Security System Engineer, Senior Security Solution Consultant	10,500-15,500
Manager	Security Architect, Cyber Security Manager, Security Incident Manager (Focus on Forensics)	11,000-17,500
Senior Manager	Cyber Security Senior Manager and Senior Manager for IT Security and Infrastructure	13,000-20,500

Source: PIKOM ICT Job Market Outlook in 2018 report

Most entry-level cybersecurity positions require a four-year bachelor's degree in cybersecurity or in a related field such as information technology or computer science.

Some employers require an advanced qualification such as a master's degree in cybersecurity. A master's degree course takes an additional one to two years to complete after the bachelor's degree programme and provides advanced instruction in protecting computer networks and electronic infrastructures from attack.

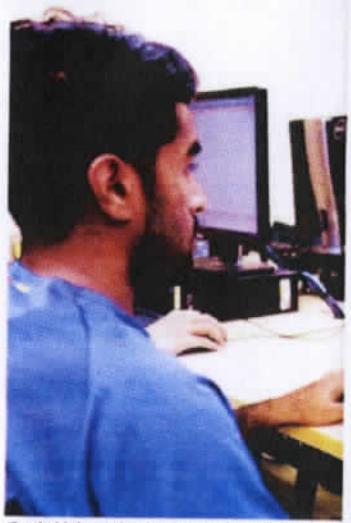
Cybersecurity professionals can also earn certification to boost their skills while working full-time to gain hands-on experience.

Professor Dr Mohamed Ridza Wahiddin, who is with the Kulliyyah of ICT at the International Islamic University Malaysia (IIUM), said a career path for cyber defenders normally starts with a diploma and progresses to an undergraduate programme in computer science or ICT. The high-level career requires an array of technical ICT skills and advanced analytical capabilities taught in continuing professional courses or postgraduate programmes.

Mohamed Ridza Wahiddin

"Important technical skills required of cyber defenders include a solid grounding in IT fundamentals (web applications, system administration), coding skills (C, C++, Java, PHP, Perl, Ruby, Python) and a good understanding of the architecture, administration and operating systems. However, to be successful, one needs to be well-equipped with both technical and soft skills such as teamwork, leadership and excellent oral and written communication," he added.

Cyber defenders can also participate in professional training and be awarded international certifications such as the international Information System Security Certification Consortium Inc (ISC)2 Certified Information Systems Security Professional and Information Systems Audit and Control Association Certified Information Security Auditor and Certified Information Security Manager.



Curtin Malaysia is introducing the Bachelor of Sci... board to a successful career as a cybersecurity spe...

UNDERGRADUATE PROGRAMMES

IIUM's Bachelor of Computer Science and Bachelor of Information Technology programmes cover cybersecurity.

"Principles of IT Security is a compulsory course for all Kulliyyah of ICT undergraduates to ensure they are exposed to issues

SAMBUNGAN..
NEW STRAITS TIMES (HIGHER ED): MUKA SURAT 7
TARIKH: 18 JULAI 2018

MMU Bachelor Information Technology (Honours) in Security Technology students at the varsity's Intelligent Lab to develop knowledge and skills in security management and technologies.

nce (Computing) Cyber Security programme as a spring- ialist.

chnology related to cybersecurity such curing IT-related assets, social engi- g, online attacks, securing software ations, encryption, hardening systems rfwork security," said Mohamed Ridza. M computer science students also en- security-related courses such as Net- security, Digital Evidence Forensic, and graphy. Students are not only taught oretical aspects, but also hands-on ses using Open Source or educational ı tools.

IT (non-Computer Science) students are taught Information Systems Management Security which covers risk management, disaster recovery and related matters based on ISO 27000 series of standards. These students are further exposed to case studies as part of their learning modules.

Mohamed Ridza said job prospects are promising for students who have a good security course background especially when they are exposed to tools while having a good foundation in programming and exposure to various operating systems (Windows, Linux, Android, IoS) and networks.

Curtin University Malaysia (Curtin Malaysia) will see the first enrolments in its three-year Bachelor of Science (Computing) Cyber Security programme this month.

Department of Electrical and Computer Engineering head Dr Lenin Gopal said the programme is an excellent springboard to a successful career as a cybersecurity specialist in the rapidly evolving ICT industry.

"The course focuses on key concepts and challenges in data and resource protection and computer software security. Students will examine the high level (cryptography theory, data access policy development and security programme management) and low level (computer forensics, network intrusion detection and incident handling) practical aspects of computer security.

"They will develop skills in identifying appropriate applications for specific scenarios, with an understanding of cultural and ethical issues related to protecting individual rights," Lenin said.

"Experts in the field are needed to create more effective, innovative and competitive cybersecurity solutions and work towards a safer cyber community. With the continual adoption of new technology, innovation and business practices, the need for cybersecurity to protect networks, computers, programmes and data from attack, damage and unauthorised access will be even greater," he added.

"Graduates can find employment as computer security experts such as cybersecurity analysts, forensic computer analysts, software developers, IT analysts and web application developers in many different organisations."

Multimedia University offers the Bachelor of Information Technology (Honours) Security Technology course at its Faculty of Information Science and Technology for those pursuing a career in the security industry.

The dean, Associate Professor Dr Lau Siong Hoe, said the security technology programme is designed to develop knowledge and skills in security management and technologies necessary for employment in areas such as government and corporate security, strategic facilities security, private sector and retail security, and financial institutions and major security organisations.

"The course emphasises the functions and management of security technology in the protection of assets and is supported by appropriate studies in cyber law and ethics. Graduates of this course will be equipped for a career in the security industry. Potential career prospects include security auditor, security penetration tester, computer forensic investigator, software engineer, systems analyst and programmer."

Lenin Gopal

Lau Siong Hoe

The three-year programme includes subjects such as Applied Cryptography, Information Theory, Password Authentication and Biometrics, Integrative Programming and Technologies, Ethical Hacking and Security Assessment, Malware and Intrusion Detection, and Digital Forensics.

"The majority of students at the faculty are enrolled in the Security Technology programme that provides a broad overview of the techniques of information security technology for safe communication and protection of data when storing or sending electronic data over the networked environment," said Lau.

He highlighted that organisations are applying artificial intelligence (AI) to bolster cybersecurity and offer more protection against sophisticated hackers.

"In order to meet future industry demand, we are planning and integrating more AI-related subjects such as machine learning and deep learning to equip students with skills and knowledge to enhance conventional cybersecurity protocols.

"As the new generation of cyber attacks evolves over time and can be difficult to detect, cybersecurity solutions that apply AI approach by using data from prior cyber attacks to respond to newer but somewhat similar risk will help to remediate the situation."

Turn to Page 8 for more on postgraduate and working professional programmes on cybersecurity

LAMPIRAN 4
NEW STRAITS TIMES (HIGHER ED): MUKA SURAT 8
TARIKH: 18 JULAI 2018

Keeping pace with cybersecurity technologies

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CONTINUOUS learning is necessary to stay ahead of the curve or at least keep pace with current developments in information and communication technology (ICT) security.

Cognisant of this, the Faculty of Information Science and Technology at Universiti Kebangsaan Malaysia (UKM) eyed working IT professionals as its target group when it developed the Master of Cyber Security programme.

Offered since 2013 with a one to two-year duration for full-time students and two to four years of studies for part-timers, the modular programme — a collaboration between UKM and CyberSecurity Malaysia — is designed to produce graduates who, among others, will be able to employ knowledge of principles, theories, and scientific methods to come up with effective solutions to cybersecurity problems; protect organisational cyber assets as well as plan, strategise and launch cyber counter-attacks; and implement a cybersecurity management standard for the organisation.

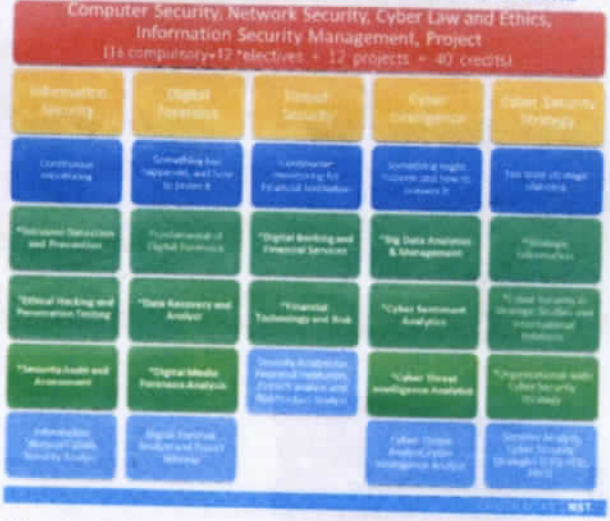
Associate Professor Dr Siti Norul Huda Sheikh Abdullah, chairman of the faculty's Center for Cyber Security, said: "We looked deep into the cybersecurity ecosystem with high consideration of industrial, professional and governmental human resource gaps in the market when we created this programme.

"Today a company only remains competitive if it acquires, develops and uses knowledge faster than its rivals. New knowledge and technology are quickly making what we learn today obsolete. As knowledge workers, we have to keep on learning throughout our lives, or else we will become unemployable or non-relevant to our work environment."

Today a company only remains competitive if it acquires, develops and uses knowledge faster than its rivals.

SITI NORUL HUDA SHEIKH ABDULLAH
UKM Center for Cyber Security chairman

UKM'S MASTER OF CYBER SECURITY PROGRAMME STRUCTURE



Working professionals attending classes under the Master of Cyber Security programme at UKM.

With a total of 40 credit hours, there are five core subjects amounting to 16 credits which encapsulate cybersecurity fundamentals and skill sets: Cyber Law and Ethics, Computer Security, Network Security, Information Security Management and Project.

The remaining credits are from a choice of five specialised tracks: Information Security, Digital Forensics, Financial Technology Security, Cyber Intelligence and Cyber Security Strategy.

"Cryptocurrency and Block Chain technology have become hot topics in the financial industry. Therefore, we grasp the opportunity to encourage either personnel from a financial or ICT background to upgrade their skills in fintech tools by emphasising financial security measures and policies.

"We blended finance and ICT together under the Financial Technology Security track and introduced new elective courses covering Digital Banking and Financial Services and Financial Technology Security and Risk."

Meanwhile, the Cyber Security Strategy Track was designed to accommodate information strategic planning of an organisation through collective and real-time information.

"Cybersecurity strategists, cyber troopers and cyber warfare analysts are in demand in the market. Some lectures will be conducted by experienced chief information officers to deliver knowledge transfer regarding top level strategic information planning. Elective courses in this executive track include Strategic Information, Cyber Security in Strategic Studies and International Relations, and Organizational-wide Cyber Security Strategy.

"In collaboration with CyberSecurity Malaysia, the courses are designed in such a way that face-to-face learning, which includes active learning, lab activities, discussion and case studies, is done in five days. Assignments need to be completed in the next three weeks for full-time students or seven weeks for part-timers. Ongoing assessment contributes to 60 per cent of the overall marks and the final examination accounts for the remaining 40 per cent."

At International Islamic University Malaysia, apart from master's and postgraduate cybersecurity programmes, the tertiary institution has a cyber-range programme which offers hands-on training on cybersecurity.

Dr Mohamed Rizon Wahiddin, a professor at the Kulliyyah of ICT in IIUM, said: "The cyber-range is our flagship activity. It is the first in Malaysia and was launched by the Minister of Science, Technology and Innovation in September 2016.

"A golfer frequents a driving range to practise golfing skills and some military personnel frequent a shooting range to hone shooting skills — this is the concept that Cyber Range Malaysia creatively innovated for cybersecurity professionals to practise cybersecurity defensive skills," he said, adding that participants will be Certified Cyber Defender Associates once they pass the examination.

LAMPIRAN 5
UTUSAN MALAYSIA (MEGA SAINS): MUKA SURAT 18
TARIKH: 18 JULAI 2018

Saintis UPM cemerlang penyelidikan biomas

DR. MOHD. ALI HASSAN

Oleh AQILAH MIOR KAMARULBAID
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SUMBANGAN yang tidak ternilai selama 35 tahun dalam bidang bioteknologi alam sekitar dan biomass termasuk menghasilkan pelbagai penyelidikan serta jaringan menjadi faktor utama Ketua Unit Jaringan Industri dan Masyarakat, Fakulti Bioteknologi dan Sains Molekul, Universiti Putra Malaysia (UPM), **Prof. Dr. Mohd. Ali Hassan** merangkul anugerah utama, Anugerah Khas Akademia Putra 2017 anjuran UPM pada tahun ini.

Beliau yang dilahirkan pada 1958 di Sungai Petani, Kedah banyak terlibat dalam projek berkaitan biomas atau sisa dari industri sawit dan perumahan seperti sampah serta sisa makanan.

Berkongsi lebih lanjut Mohd. Ali memberitahu, beliau menjana teknologi untuk menghasilkan produk yang bernilai tinggi dalam bentuk tenaga, bahan dan baja (kompos).

Dalam pada itu, beliau turut aktif di dalam bidang penyelidikan biogas dengan pembiayaan Lembaga Kemajuan Tanah Persekutuan (Felda) yang berjaya dikomersialkan oleh agensi tersebut dan Tenaga Nasional Bhd. (TNB) pada 2009, manakala pada 2011, Mohd. Ali dilantik oleh Kementerian Perumahan dan Kerajaan Tempatan (KPKT) sebagai Ketua Projek Biomas Serdang, yang merupakan usaha sama kerajaan dengan Jepun.

Menerusi projek tersebut, loji pepandu biomas iaitu *Biorefinery@UPM* dibina dengan pembiayaan KPKT, Felda dan Malaysian Technology Development Corporation (MTDC) dengan empat projek utama iaitu kompos, biogas serta *biochar* daripada biomas, dan biodiesel daripada minyak masak terpakai.

SULTAN SHARAFUDDIN IDRIS SHAH bergambar kenangan dengan penerima Akademi Putra pada majlis Gemilang Akademia Putra di Serdang baru-baru ini.

Dalam pada itu, beliau turut berkongsi projek kemasyarakatan yang dijalankan bersama kumpulannya bagi menggalakkan masyarakat mengitar semula minyak masak terpakai.

Minyak masak tersebut akan melalui satu proses di pusat pemprosesan di UPM dengan kadar bayaran RM1 untuk satu liter bagi menukarkannya kepada biodiesel yang boleh dijual pada kadar RM2 untuk seliter.

"Menerusi projek ini, ia membantu mengurangkan penghasilan karbon daripada diesel selain menjanakan industri baharu," katanya.

Pada 2014, beliau bersama Prof. Dr. Yoshihito Shirai berjaya mendapatkan geran Satreps dari JICA-JST Japan dan Kementerian Pendidikan Tinggi (KPT) untuk membangunkan teknologi mesra alam dan pembuangan sifar bagi industri sawit. Melalui projek kelestarian ini, satu loji pandu dibina dan beroperasi di Kilang Sawit Keningau, Sabah.

"Projek ini akan berterusan sehingga 2018 dan akan menyaksikan lebih banyak kilang sawit melaksanakan projek mesra alam berasaskan biomass yang melibatkan penambahan nilai, peluang pekerjaan dan pengurangan pencemaran.

"Kita memberi nilai tambah kepada bahan buangan untuk menghasilkan produk yang boleh diguna semula pada peringkat individu atau industri, kita menggunakan bahan buangan dan organik," katanya.

SULTAN Selangor diberi taklimat oleh Dr. Mohd. Ali Hassan sempena lawatan baginda ke ruang pameran di Dewan Besar UPM di Serdang, Selangor baru-baru ini. Turut kelihatan Dr. Aini Ideris.

Beliau menyatakan demikian pada majlis Anugerah Gemilang Akademia Putra di Serdang, Selangor baru-baru ini yang disempurnakan oleh Sultan Selangor, Sultan Sharafuddin Idris Shah yang juga Canselor universiti berkenaan. Turut hadir Naib Canselor UPM, Prof. Datin Paduka Datuk Dr. Aini Ideris.

Tambah Mohd. Ali, beliau berjaya menghasilkan teknologi yang mesra alam, rendah karbon dan menghasilkan pencemaran yang minimum seperti merawat sisa cecair daripada sawit sebersih air sungai.

"Ini bermakna kita boleh kitar atau lepaskan semula cairan tersebut ke sungai tanpa pencemaran," jelasnya.

Kepimpinan Mohd. Ali dalam pentadbiran, penyelidikan dan jaringan industri tidak boleh dipertikai. Kumpulan penyelidikan Bioteknologi Alam Sekitar yang ditubuhkannya sejak 2002 berjaya melahirkan ramai graduan dan tenaga mahir.

Beliau dilantik sebagai Pengerusi Jamaah Dekan UPM dari 2011 hingga 2014 selain merupakan Naib Presiden, Persekutuan Bioteknologi Asia (AFOB) dan juga Presiden AFOB Cawangan Malaysia sejak 2014.

Lebih membanggakan, Mohd. Ali berjaya menerbitkan lebih daripada 180 kertas kerja dalam jurnal berimpak *Scopus* dan mempunyai tujuh paten.

Ketokohan beliau mendapat pengiktirafan antarabangsa melalui Anugerah Pertukaran Penyelidikan dari Persatuan Bioteknologi Korea dan Biojurutera pada 2013 selain menerima Anugerah Saintis Penyelidik pada 2015 dan Felo Akademi Sains Malaysia (ASM).

Pada tahun lalu, beliau menerima dua anugerah lain iaitu Anugerah Malaysia Mikrobiologi 2017 dan Anugerah Bintang Penyelidikan Malaysia 2017.

Pengalaman dan kepakaran beliau sebagai seorang ahli akademik membawa kepada pelantikan dalam pelbagai jawatankuasa akademik, penyelidikan dan pengurusan pada peringkat universiti, kebangsaan dan antarabangsa.

Dalam masa sama beliau terlibat dalam penggubalan Strategi Nasional Biomas 2020, iaitu hasil penyelidikan dan paten beliau dijadikan sebagai salah satu projek utama.

Beliau juga adalah ahli senat UPM dan Ahli Lembaga Pengarah Universiti.

LAMPIRAN 6
THE SUN (SUN BIZ): MUKA SURAT 11
TARIKH: 18 JULAI 2018

'Audit power deals awarded since 2011'

> Affordable and equitable electricity tariff achievable only via fair, transparent competitive bidding process, says NGO

PETALING JAYA: The Association of Water and Energy Research Malaysia (Awer), which had consistently called on the Barisan Nasional government to abandon direct negotiations for power plant projects, has asked the Pakatan Harapan government to audit all approval processes and awards of power plant in KeTTHA, the Energy Commission and the Sustainable Energy Development Authority (Seda) from 2011 onwards.

KeTTHA is the Ministry of Energy, Green Technology and Water during the Barisan Nasional government.

Heartened by the recent announcement of the cancellation of four power plant projects that were awarded through direct negotiations and the review of others, Awer president S Piarapakaran urged the government to launch detailed investigations into power plant construction and costing to reduce overall cost impact on electricity tariff.

Investigations should include an audit of Planning and Implementation Committee for Electricity Supply and Tariff decisions, meeting minutes, documentations and presentations from 2012 onwards; the handling of competitive bidding process for new power plants and documentation including how nodal points and land requirements (greenfield and brownfield) are set should be looked into; waiver of 49% foreign equity limitation for power plant; extension process of old power plants and its bidding process; failure of Seda and FiT (Feed-in-Tariff) to meet renewable energy mix target; and Seda's mysterious set-up process and lack of transparency in the FiT mechanism.

Seda is a statutory body formed under the Sustainable Energy Development Authority Act 2011 (Act 726), to administer and manage the implementation of the feed-in tariff mechanism which is mandated under the Renewable Energy Act 2011 (Act 725).

Piarapakaran reiterated that power plant construction and its costing pose huge cost impact on electricity tariff, competitiveness, goods and services affordability, and investors' confidence.

He said direct negotiations of several gas power plants and large scale solar caused additional cost of over RM25 billion, when compared with projects awarded through competitive bidding, and this cost is paid by consumers. Electricity tariff has a multiplier impact on prices of goods and services. Any unfair increase in electricity cost will hamper the government's effort to manage the increase in cost of living.

"Awer stands firm in its belief that the country can only achieve affordable and equitable electricity tariff via fair and transparent competitive bidding. More than two thirds of electricity cost comes from generation sector," Piarapakaran said, adding that building new power plants via competitive bidding was a promise stated clearly in 10th and 11th Malaysia Plans.

"Cancellation of power plants awarded via direct negotiation will only reflect the correct policy implementation," he said in a statement.

LAMPIRAN 7
UTUSAN MALAYSIA (MEGA SAINS): MUKA SURAT 18
TARIKH: 18 JULAI 2018

Saintis muda teruskan kecemerlangan penyelidikan

SEPANJANG 10 tahun berkhidmat di UPM, **Dr. Hayrol Azril Mohamed Shaffril** dilihat sebagai muka baharu yang mampu meningkatkan nama institusi penggajian tinggi tersebut dalam bidang sains sosial.

Justeru tidak pelik apabila Hayrol Azril yang merupakan anak jati Kajang, Selangor memberi tumpuan dalam bidang penyelidikan berkaitan industri komuniti luar bandar khususnya nelayan serta isu berkaitan dengan adaptasi sosial terhadap perubahan cuaca, kesejahteraan subjektif serta penggunaan teknologi dalam komuniti diangkat sebagai penerima Kategori Penyelidik Muda bagi segmen penyelidikan dan Inovasi serta Kategori Penerbitan Makalah Jurnal.

Sehingga Mei 2018, beliau telah menyertai 50 projek penyelidikan dari pelbagai sumber dana tempatan, 11 projek konsultasi bersama pelbagai agensi kerajaan serta dua projek antarabangsa bersama Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) dan London School of Hygiene.

"Selain itu, antara kelebihan saya menerima dua anugerah ini juga dilihat daripada penglibatan secara aktif dalam beberapa tugas lain, keahlian dalam kesatuan, jaringan yang diwujudkan serta sumbangan penilai," katanya.

Dari segi penerbitan, beliau berjaya menerbitkan lebih daripada 130 artikel jurnal sebagai penulis utama dan penulis bersama. Sejumlah 97 daripada artikel ini diterbitkan di jurnal *Diindeks Scopus*, manakala 21 artikel lagi diterbitkan di jurnal *Diiindeks Web of Science*.

Hayrol Azril turut berkongsi H-Index terkininya adalah lapan. Selain penulisan artikel jurnal, beliau juga merupakan penulis bagi lima buah buku dan berjaya menerbitkan 13 bab dalam buku, membentangkan 23 kertas kerja penyelidikan pada persidangan tempatan serta antarabangsa, dan memiliki dua harta intelek (IP).

DR. HAYROL AZRIL MOHAMED SHAFFRIL menerima anugerah Penyelidik Muda dan Penerbitan Jurnal daripada Sultan Selangor baru-baru ini.

Selain itu, antara kelebihan saya menerima dua anugerah ini juga dilihat daripada penglibatan secara aktif dalam beberapa tugas lain, keahlian dalam kesatuan, jaringan yang diwujudkan serta sumbangan penilai."

"Dalam konteks penyelidikan, saya memberi tumpuan kepada persepsi nelayan terhadap kesihatan dari pelbagai aspek dan penggunaan teknologi komuniti seperti sistem penentu kedudukan global (GPS). Ini kerana majoriti nelayan di negara ini agak sukar menerima pembaharuan dan terikat dengan cara tradisional," jelasnya.

Selain itu, beliau juga merupakan penerima Anugerah Perkhidmatan Cemerlang 2008 dan 2016 selain memenangi sejumlah enam pingat emas, empat perak dan tiga gangsa sepanjang penyertaan dalam Pameran Reka Cipta Penyelidikan dan Inovasi (PRPI).

Beliau turut terpilih sebagai penilai artikel bagi jurnal terpilih dengan penerbit *Springer* dan juga *Sage*.

Selain penglibatan dalam dunia penyelidikan, beliau merupakan pengasas kepada Kumpulan Sokongan Pelajar, Institut Pengajian Sains Sosial (IPSAS), sebuah *Facebook Group* yang memberi pendedahan kepada pelajar pascasiswazah dan penyelidik berkaitan ilmu, tip, panduan serta perkongsian pengalaman dunia penyelidikan sains sosial. Kini kumpulan terbabit mempunyai lebih dari 4,000 ahli.

Beliau juga merupakan ahli dalam National Geographic Society.

"Saya jangka lebih banyak program yang melibatkan penyertaan antarabangsa pada masa akan datang. Saya akan cuba mencari jalan atau jaringan untuk menjalin kerjasama dengan penyelidik antarabangsa untuk membuat kajian di dalam negara.

"Pandangan orang luar jika disatukan dengan cara pemikiran orang tempatan mungkin akan memberi manfaat dalam bidang yang saya ceburi," katanya.

LAMPIRAN 8
UTUSAN MALAYSIA (MEGA SAINS): MUKA SURAT 18
TARIKH: 18 JULAI 2018

KEDUA-DUA pihak bergambar bersama selepas majlis menandatangani MoU di Serdang, Selangor.

UPM – Perdana University jalin kerjasama penyelidikan

UNIVERSITI Putra Malaysia (UPM) melalui Fakulti Perubatan dan Sains Kesihatan (FPSK) menjalinkan kerjasama dengan Perdana University bagi tujuan penyelidikan dan peningkatan akademik terutama dalam bidang terapi berkuda baru-baru ini.

Menurut Naib Canselor Perdana University, **Prof. Dr. Zabidi Azhar Mohd Hussin**, pihaknya mempunyai Sekolah Terapi Pekerjaan yang menggunakan kuda sebagai satu bentuk rawatan pemulihan untuk pesakit strok, autistik mahupun penderita palsi serebrum (*celebral palsy* atau CP).

Katanya, penyelidikan tersebut merupakan sesuatu yang baharu di Malaysia dan masih belum banyak data mengenainya ditemui.

"Telah terbukti bahawa semasa proses pemulihan, pergerakan kuda mempercepat pemulihan pesakit apabila diletakkan atas kuda.

"Ini akan menjadi peluang yang baik untuk UPM dan Perdana University bekerjasama dalam penyelidikan kerana masih belum banyak data tentang ini," katanya.

Memorandum persefahaman (MoU) itu ditandatangani beliau yang mewakili Perdana University dan Naib Canselor UPM, **Prof. Datin Paduka Datuk. Dr. Aini Ideris**.

Yang turut hadir ialah Timbalan Dekan Akademik (Perubatan) FPSK, Prof. Dr. Zamberi Sekawi dan Pendaftar Perdana University, Norpisah Mat Isa.

DR. AINI IDERIS (dua kiri) dan Dr. Zabidi Azhar Hussin (dua kanan) tertarik dengan buku *From Seed to Towering* pada majlis menandatangani MoU di Serdang, Selangor baru-baru ini.

Idea menjalinkan kerjasama tersebut timbul apabila pengurusan UPM mengadakan lawatan ke Kampus Perdana University pada 6 Julai tahun lalu sehingga membawa kepada kesepakatan untuk menandatangani MoU dalam memperkasa usaha-usaha penyelidikan perubatan.

Sementara itu, Dr. Aini berkata, MoU tersebut turut meliputi pertukaran akademik iaitu latihan dan penyelidikan, pertukaran pelajar pasca serta prasiswazah, pertukaran maklumat, dan aktiviti penyelidikan bersama.

"Selain itu, ia turut melibatkan latihan dan seminar bersama serta bengkel selain pelantikan kakitangan sebagai perunding atau penilai luar bagi pembangunan program akademik yang baharu.

"UPM amat terbuka dalam menyahut semangat keserakanan dan menjalin kerjasama dengan universiti dan institut penyelidikan yang lain.

"MoU ini akan menjadi pemangkin ke arah peningkatan kualiti program akademik dan penyelidikan di UPM khususnya dalam bidang perubatan dan sains kesihatan," ujarnya.

Selain itu, beliau berpendapat, kerjasama dengan institusi di dalam dan luar negara merupakan salah satu strategi untuk menghasilkan penyelidikan yang berimpak tinggi.

Kerjasama penyelidikan antara kedua-dua universiti itu dijangka akan bermula sekitar Januari tahun depan.

LAMPIRAN 9
NEW STRAITS TIMES (NATION): MUKA SURAT 18
TARIKH: 18 JULAI 2018

'MAY THIS HOUSE BE WELL REGARDED'

The following is the royal address by Yang di-Pertuan Agong Sultan Muhammad V at the first meeting of the 14th Parliament yesterday

Members of parliament listening to the royal address by Yang di-Pertuan Agong Sultan Muhammad V yesterday. PIC BY AIZUDDIN SAAD

PRESIDENT of the Senate, Speaker of the House of Representatives, Members of the Senate and Members of the House of Representatives.

Alhamdulillah. We express our utmost gratitude to Allah the Almighty, for it is with His Munificence, and His Leave, we are gathered here today for the opening ceremony of the first session of the 14th Parliament.

Today will mark a historical day for this august house with the second opening of Parliament within the same year with a significant number of new members of parliament.

Honourable members,

The 14th General Election has just concluded on May 9. We congratulate the new government led by the prime minister that has been given the mandate by the people.

We would like to thank all parties involved, especially the Election Commission, the security forces and various government agencies for ensuring the smooth running of the general election without any untoward incident.

We congratulate all members of parliament who have been elected by the people to represent them in this august house.

It is an enormous responsibility entrusted upon all honourable members, who are expected to perform their duties with dedication and integrity.

We believe the honourable members will take this opportunity to participate in healthy, mature and dynamic debates, to find and to uphold the truth, by conveying ideas as well as critics with wisdom and civility.

May this parliamentary institution continue to be well respected and highly regarded by the people and the world over.

The people have chosen. Therefore, all parties should accept and respect the result of the general election without being emotional, narrow-minded or having prejudicial and slanderous thoughts that are influenced by sensationalism and speculation.

We hope all parties will work together in striving towards a genuine and pure unity, as well as finding solutions for the good of the people and for the survival of the nation.

Honourable members,

We hope the newly-elected government will bring more success in various fields that have been achieved to date.

The public and private sectors, as well as the people, must work hand-in-hand to achieve greater heights, especially in improving the economy of certain quarters that are still marginalised.

> *We must put an end to all the negative elements as well as the irresponsible actions that threaten the essence of peace, well-being of the people and stability of the nation.*

Championing the rights of marginalised groups should not be looked upon as discrimination but an effort to establish social justice that is long overdue.

On the international front, we applaud the role taken by Malaysia in enhancing cooperation with the world, especially Asean, for the well-being of the people and the nation.

Honourable members,

We welcome the government's efforts to enhance transparency among others, by fully disclosing the government's financial position and re-evaluating expenditures, as well as practising prudent financial management.

In order to curb the rising cost of living, we support the move to abolish the goods and services tax (GST) as well as to stabilise fuel prices and to extend the *Bantuan Sara Hidup* so as to ease the people's burden.

We also applaud the people from all walks of life for their show of patriotism by donating to the Tabung Hutapan.

Honourable members,

Global economic uncertainties, political conflicts, humanitarian crisis and the threat of radicalism have significant repercussions on the world's geopolitics as well as economies. We hope the government will continue to address such challenges for the well-being of the people and nation.

The ability to forge ahead in the era of the Fourth Industrial Revolution is a new challenge for all countries. Hence, we welcome the government's initiatives through the formation of policies, strategies and legal frameworks to meet the challenges. We hope the benefits will not be solely economic, but also in terms of social development as well as in many other aspects.

The mid-term review of the 11th Malaysia Plan: New Direction 2018-2020 will be tabled this year as among the measures taken to face the challenges of the national development agenda.

The review is aimed at re-evaluating the directions and status of all programmes and projects that have been approved. We encourage all honourable members to participate in debating the said review and give useful input to the government.

Our government will continue the implementation of various programmes and projects to ensure that the people, including those in Sabah and Sarawak, can reap the benefits of development.

This is in line with the government's policy to provide better living standards for the people as well as ensuring just and fair distribution of the nation's wealth.

Honourable members,

The contribution of almost 15 million workers is significant to the nation's development. We hope that the workers will reap the reward from the introduction of initiatives, such as establishing the Equal Employment Opportunity Commission, standardising the minimum wage and creating more jobs.

The contribution of women towards the nation is monumental in various jobs and skills. We are confident that the role of women can be further enhanced.

Therefore, proper measures should be instituted to tap on their potential and talent so that they can further contribute to the nation and society.

At the same time, the stability of the family institution will always be a priority.

While we are progressing towards modernisation, religious duties and good moral values must be preserved. We urge all parties, including government agencies, non-governmental organisations and scholars to work together in finding solutions to curb social ills and negative elements that are affecting our societies.

We applaud the government's efforts to strengthen integrity, good governance, and the rule of law. Effective measures have to be taken to convince existing investors as well as to attract new investors to Malaysia.

Honourable members,

Ethnic, religious and cultural diversity such as in Malaysia are said to be the perfect recipe for disaster. Nonetheless, we are grateful that as a nation, we have proven otherwise. We urge every citizen to preserve and strengthen this peace and unity.

We must put an end to all the negative elements as well as the irresponsible actions that threaten the essence of peace, well-being of the people and stability of the nation.

Stop the bickering on racially sensitive issues and we welcome the suggestion to form the *Majlis Perundingan Rakyat* to help promote and enhance unity through various programmes.

We thank and appreciate the commitment of all who have contributed towards safeguarding and ensuring the security, peace and sovereignty of the nation that has enabled the country to progress and reap the benefits as planned.

Lastly, we pray that Malaysia and her people will continue to be blessed by Allah the Almighty with His Grace and Beneficence, so that we will always remain peaceful and united under His protection.

LAMPIRAN 10
UTUSAN MALAYSIA (RENCANA): MUKA SURAT 6
TARIKH: 18 JULAI 2018

WUJUDKAN PERPADUAN TULEN

TITAH Seri Paduka Baginda Yang di-Pertuan Agong XV, Sultan Muhammad V pada Istiadat Pembukaan Mesyuarat Pertama Penggal Pertama Parlimen Ke-14, semalam.

"Beta percaya ahli-ahli yang berhormat akan mengambil bahagian dalam perbahasan yang sihat, matang, dapat merangsang dinamik berfikir, bukan untuk mencari pihak yang benar tetapi untuk menemukan apa yang baik lagi benar."

ASSALAMUALAIKUM warahmatullaahi wabarakaatuh dan salam sejahtera. Yang Dipertua Dewan Negara, Yang Dipertua Dewan rakyat, ahli-ahli Dewan Negara dan ahli-ahli Dewan Rakyat sekalian.

Alhamdulillah, beta merafak kesyukuran ke hadrat Allah SWT, kerana dengan limpah rahmat dan izin-Nya memungkinkan beta pada hari ini hadir dalam istiadat pembukaan Penggal Pertama, Parlimen ke-14.

Mesyuarat kali ini telah melakar satu sejarah tersendiri kerana istiadat pembukaan penggal Parlimen diadakan dua kali dalam tahun yang sama dan dewan ini dapat menyaksikan penampilan bilangan yang besar anggota-anggota Parlimen yang baharu.

Negara kita baru sahaja selesai melaksanakan Pilihan Raya Umum Ke-14 pada 9 Mei 2018. Beta mengambil kesempatan ini mengucapkan tahniah kepada Yang Amat Berhormat Perdana Menteri dan barisan kepimpinannya yang telah berjaya dipilih untuk menerajui pentadbiran negara. Beta juga merakamkan penghargaan dan terima kasih kepada Suruhanjaya Pilihan Raya, anggota-anggota keselamatan dan semua agensi kerajaan yang telah terlibat dalam memastikan proses pilihan raya berjalan lancar dan tiada insiden negatif yang serius berlaku.

Tahniah kepada ahli-ahli Yang Berhormat yang telah dipilih oleh rakyat untuk mewakili mereka di dalam dewan yang mulia ini. Pemilihan tersebut adalah satu tanggungjawab yang besar. Ahli-ahli Yang Berhormat harus menggalas tugas dan titipan amanah yang diberikan dengan jujur dan penuh dedikasi. Beta percaya ahli-ahli yang berhormat akan mengambil bahagian dalam perbahasan yang sihat, matang, dapat merangsang dinamik berfikir, bukan untuk mencari pihak yang benar tetapi untuk menemukan apa yang baik lagi benar, memberi cadangan, teguran dengan penuh berhemah dan bijaksana, penuh kesopanan bertatasusila supaya institusi Parlimen terus dihormati, dipandang tinggi oleh rakyat dan dunia luar.

SULTAN Muhammad V berkenan berangkat ke Istiadat Pembukaan Penggal Pertama Parlimen Ke-14 yang turut dihadiri Perdana Menteri, Tun Dr. Mahathir Mohamad dan Yang Dipertua Dewan Rakyat, Datuk Mohamad Ariff Md. Yusof (kanan) di Bangunan Parlimen, semalam. - BERNAMA

Rakyat telah pun membuat keputusan. Justeru, semua pihak hendaklah akur dan berlapang dada, tidak emosional, tidak mewarnai pemikiran bermodal fitnah dan sentimen melulu, sempit dan tertutup. Pemikiran yang banyak dibentuk oleh media yang sarat dengan berita-berita sensasi dan spekulasi. Beta berharap semua pihak hendaklah berusaha melakukan penjernihan yang ikhlas dan sungguh-sungguh bagi mewujudkan perpaduan yang tulen dan murni. Mencari titik persamaan bukan perbezaan dengan bekerjasama untuk kesejahteraan rakyat dan survival negara.

Beta berharap semua kejayaan, pencapaian serta pengiktirafan dalam pelbagai bidang yang dicapai oleh negara sebelum ini akan dapat dipertingkatkan. Justeru, kerajaan, pihak swasta dan rakyat hendaklah terus bekerjasama dalam usaha menyusun masyarakat terutama memperbaiki ekonomi rakyat yang masih terpinggir. Pembelaan terhadap ekonomi rakyat yang terpinggir tidak harus dilihat sebagai dasar diskriminasi perkauman tetapi sebagai usaha menebus ketidakadilan sosial yang telah diwarisi sekian lama.

Di persada antarabangsa, beta amat menyokong langkah-langkah yang diambil untuk terus memperkukuhkan kerjasama yang terjalin dengan negara-negara anggota ASEAN khususnya dan dunia amnya demi kesejahteraan rakyat dan negara.

Beta mengalu-alukan pendekatan kerajaan dalam menegakkan ketelusan terutamanya dengan mendedahkan kedudukan kewangan negara yang sebenar serta mengkaji semula perbelanjaan, kos projek dan menguruskewangan secara berhemat bagi menangani kos sara hidup, beta menyokong langkah untuk memansuhkan cukai barang dan perkhidmatan (GST), menstabilkan harga minyak dan memberikan bantuan sara hidup yang diharap dapat meringankan beban rakyat. Pada masa yang sama, beta menghargai sumbangan rakyat tanpa mengira agama, bangsa dan umur yang disalurkan kepada dana Tabung Harapan sebagai tanda prihatin terhadap negara.

"Elemen-elemen negatif dan tindak tanduk, yang mengganggu-gugat kesepaduan dan keharmonian perlu dibanteras. Hentikan ungkitan terhadap isu-isu sensitif antara kaum."

Cabaran-cabaran seperti ketidaktentuan ekonomi global, konflik politik, krisis kemanusiaan di peringkat antarabangsa dan ancaman fahaman radikal akan terus mempengaruhi geopolitik dan ekonomi dunia. Dalam hal ini, beta berharap kerajaan akan terus berusaha mencari jalan untuk mendepani cabaran-cabaran tersebut bagi kebaikan kesejahteraan rakyat dan negara.

Era Revolusi Perindustrian 4.0 merupakan satu cabaran baharu yang perlu dihadapi oleh semua negara. Justeru, beta mengalu-alukan sebarang inisiatif melalui penggubalan dasar, strategi dan kerangka perundangan untuk mendepaninya. Beta berharap faedah yang diperoleh bukan hanya aspek ekonomi tetapi meliputi aspek sosial dan lain-lain.

Kajian Separuh Penggal Rancangan Malaysia Ke-11; Hala tuju Baharu 2018 - 2020 yang akan dibentangkan pada tahun ini adalah antara langkah kerajaan bagi mendepani cabaran-cabaran dalam agenda pembangunan negara. Kajian tersebut bertujuan untuk menilai semula program dan projek-projek yang telah diluluskan, hala tuju dan status pencapaiannya. Beta berharap ahli-ahli Yang Berhormat dapat mengambil bahagian dengan berbahas dan memberi pandangan bernas terhadap kajian tersebut.

Kerajaan beta akan meneruskan pelaksanaan pelbagai program dan projek bagi memastikan semua rakyat dapat menikmati manfaat pembangunan termasuk di Sabah dan Sarawak. Ini selaras dengan dasar kerajaan agar kehidupan rakyat dipertingkatkan dan kekayaan negara dikongsi secara adil dan saksama.

Sumbangan golongan pekerja yang berjumlah lebih kurang 15 juta orang amat besar kepada pembangunan negara. Beta berharap pengenalan insiatif-inisiatif seperti penubuhan suruhanjaya, cadangan menyamaratakan kadar gaji minimum di seluruh negara dan mewujudkan lebih banyak pekerjaan akan dapat mensejahterakan mereka.

Sumbangan golongan wanita kepada negara dan masyarakat sangat besar dalam pelbagai bidang pekerjaan dan kemahiran. Beta yakin penglibatan golongan wanita dapat dipertingkatkan lagi. Langkah-langkah menggilap potensi, kemahiran serta menggalakkan mereka untuk terus memberi sumbangan kepada masyarakat dan negara perlu diperkasakan. Walau bagaimana pun aspek penjagaan institusi kekeluarga tetap diberi keutamaan.

Dalam menuju ke arah pemodenan, kepatuhan kepada ajaran agama dan nilai-nilai murni tidak harus diabaikan. Beta menyeru semua pihak hendaknya lebih serius menangani gejala sosial dan elemen-elemen negatif yang boleh merosakkan masyarakat dan negara. Dalam hal ini, semua lapisan masyarakat, organisasi kerajaan, pertubuhan bukan kerajaan (NGO) dan para ilmuwan perlu duduk semeja untuk mencari penyelesaian ke atas masalah-masalah berbangkit.

Beta amat mengalu-alukan langkah kerajaan untuk meningkatkan integriti, tadbir urus dan prinsip kedaulatan undang-undang. Langkah-langkah bijak yang lebih meyakinkan pihak pelabur yang sedia ada untuk mengekalkan pelaburan mereka, di samping usaha menarik minat pelabur-pelabur baharu.

Terdapat anggapan bahawa kepelbagaian kaum, agama dan budaya yang wujud di negara ini adalah percikan bunga api yang akan membakar hangus kedamaian, kestabilan dan kerukunan hidup. Namun beta bersyukur anggapan tersebut meleset sama sekali kerana rakyat telah membuktikan sebaliknya. Beta menyeru agar perpaduan dan keadaan harmoni dalam kalangan rakyat negara ini terus dipelihara dan diperkukuhkan. Elemen-elemen negatif dan tindak tanduk, yang mengganggu-gugat kesepaduan dan keharmonian perlu dibanteras. Hentikan ungkitan terhadap isu-isu sensitif antara kaum. Beta juga menyambut baik cadangan mewujudkan majlis perundingan keharmonian rakyat agar program-program yang lebih berkesan bagi mempromosi perpaduan dapat diperbanyakkan.

Beta mengucapkan terima kasih dan menghargai komitmen serta sumbangan semua pihak dalam menjamin dan mengekalkan keselamatan, keamanan dan kedaulatan negara yang dengannya membolehkan pembangunan dan kemajuan negara berjalan dengan baik seperti dirancang.

Akhir titah, beta berdoa semoga Malaysia serta rakyatnya akan terus diberkati dianugerahkan oleh Allah SWT dengan taufik dan hidayah, aman sentosa serta hidup bersatu padu di bawah lindungan-Nya.

LAMPIRAN 11
NEW STRAITS TIMES (HIGHER ED): MUKA SURAT 4
TARIKH: 18 JULAI 2018

SATELLITE LAUNCH

UiTMSAT-1 puts Malaysia at the final frontier

ZULITA MUSTAFA
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THE launch of UiTMSAT-1 to the International Space Station (ISS) recently marked another milestone for Universiti Teknologi Mara (UiTM), as it has brought to fruition an idea that began two years ago.

Crafting the way for Malaysia to become a space-faring nation, the launch, which took place at Cape Canaveral Air Force Station Launch Complex in Florida, the United States, was witnessed by UiTM Vice-Chancellor Professor Emeritus Datuk Dr Hassan Said, deputy vice-chancellor (academic) Professor Dr Mohamad Kamal Harun, Faculty of Electrical Engineering dean Associate Professor Dr Mohd Nasir Taib and Centre for Satellite Communication director Associate Professor Dr Mohamad Huzaimy Jusoh via satellite feed at its main campus in Shah Alam.

UiTMSAT-1 is a product of Malaysia's collaboration with Japan and two other countries, Bhutan and the Philippines, in a project called Joint Global Multi-Nation BIRDS-2.

Through this collaboration project, UiTM becomes the first Malaysian university to produce and launch a satellite with minimal cost compared with the traditional satellite.

Hassan said the launch was a significant moment for Malaysia. "We didn't think we could do it," he said.

The nanosatellite, Malaysia's first to make it into space, was transported on board SpaceX's Dragon cargo spacecraft, which was launched into space by the Falcon 9 rocket.

The main objective of the project is to expose the participants to a comprehensive and state-of-the-art hands-on experience to develop a nanosatellite.

Bhutan and the Philippines also developed their own CubeSats - Bhutan-1 and Maya-1 - that will be delivered to Japan's ISS module, known as Kibo, and will be launched into orbit.

Each CubeSat, measuring 10cmx10cmx10cm and weighs 1kg, had to pass a technical and safety check by the Japan Aerospace Exploration Agency (JAXA) at the Tsukuba Space Centre, Japan, before being sent to Florida.

About 19 months in the making, the nanosatellite was developed by UiTM postgraduate students Syazana Basyirah Mohammad Zaki and Muhammad Hasif Azami.

The team consisted of 10 postgraduate students, including two from the Philippines, three Japanese and three from Bhutan, at the Laboratory of Spacecraft Environmental Interaction Engineering at the Kyushu Institute of Technology, Japan.

Universiti Teknologi Mara postgraduate students Syazana Basyirah Mohammad Zaki (left) and Muhammad Hasif Azami assembling parts of the UiTMSAT-1 at the Kyushu Institute of Technology in Japan.

(From right) Professor Emeritus Datuk Dr Hassan Said, Professor Dr Mohamad Kamal Harun and Professor Dr Mohd Nasir Taib watching the live feed from Cape Canaveral Air Force Station in Florida, the United States, at the launch of UiTMSAT-1 at UiTM's Faculty of Electrical Engineering in Shah Alam recently. PIC BY FAIZ ANUAR

SPACE MISSION

In preparation for the satellite launch, UiTM has arranged for an installation of the ground station at the Faculty of Electrical Engineering for remote operation and data acquisition. According to Huzaimy, UiTM's ground station has been fully operational since December.

He said the nanosatellites will be released into orbit by mid-August.

"If all goes well, the ground station at the faculty will receive the Morse Code signal from the nanosatellite 30 minutes after deployment. It will be a tense 30 minutes as we wait to see if our nanosatellite works," he added.

Huzaimy also said that they can transmit data from three ground stations in Japan, Bhutan and the Philippines.

"UiTMSAT-1 will enter into a low Earth orbit, about 400km above the clouds, and will remain in orbit for about two years. The short life span is because the Earth's gravitational force will pull the CubeSat out of orbit over time, and it will become non-functional.

"The satellite will be traveling at a speed of 28,000kph and pass over Malaysia five times a day," he said.

Huzaimy said there are six missions onboard the UiTMSAT-1.

The demonstration of an Automatic Packet Reporting System (APRS) Digipeater will enable the CubeSat to be a base station for amateur radio communication, while the demonstration of the nanosatellite's Store and Forward.

"We have antennas on UiTMSAT-1, which allows us to collect and transmit data from rural areas to our ground stations. It will also be an Earth Imaging Camera and a demonstration of UiTM's first commercial off-the-shelf global positioning system technology," Huzaimy said.

Then, there is the measurement of the Single Event Latch-up Detection, which he said is the measurements of electromagnetic and plasma radiation from the sun, which can affect and degrade the surface of the nanosatellite especially its solar panels.

"And finally, there is the measurement of the Magnetic Fields using an Anisotropic Magneto Resistance (AMR) Magnetometer.

"This is for magnetic measurements. The AMR Magnetometer is tasked to measure the space electromagnetic fields to comprehend the magnetic observation that we are measuring from six stations in Malaysia."

LAMPIRAN 12
THE STAR (SHOWBIZ): MUKA SURAT 13
TARIKH: 18 JULAI 2018

Towards a positive change

Malaysian director Mark Lee is one of two finalists of Picture This Festival For The Planet, which acknowledges efforts to better the environment through short films.

By MUMTAJ BEGUM
entertainment@thestar.com.my

HAVING championed environmental issues for some time now, Malaysian director/producer Mark Lee submitted his short film for competition in the Picture This Festival For The Planet. Last month, he emerged as one of the two regional finalists for his short titled *Mr Garbage*. The other finalist is Wally Tham from Singapore.

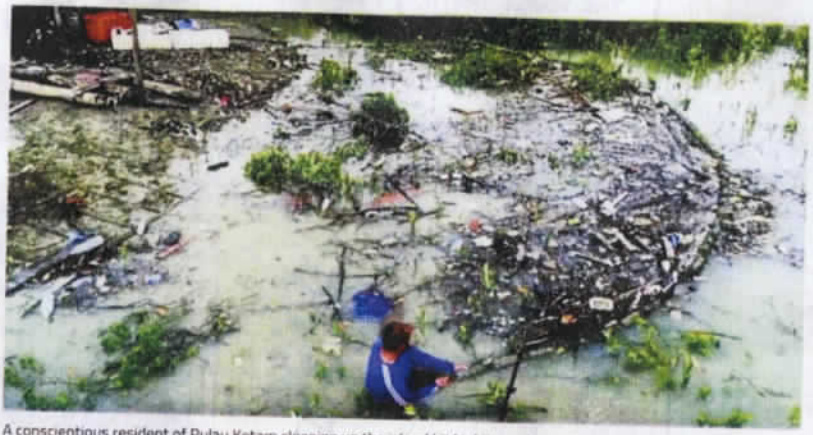
Picture This Festival is an initiative started by Sony Pictures Television Networks, in partnership with the United Nations Foundation in line with the goal to protect the planet and promote prosperity.

The festival aims to have emerging filmmakers worldwide showcase the positive future they see for the planet in a short film format.

In a press statement, Elizabeth Cousens, deputy CEO of the United Nations Foundation said: "The Picture This Festival For The Planet is an innovative new platform to connect global audiences to what is happening on the ground ... By celebrating individual stories of people around the world, actively working to protect people and planet, Picture This will help inspire others to join the effort to realise these ambitious, and achievable, goals."

Come July 29, Lee will be flying to Los Angeles to meet six other finalists, and also participate in the final round.

According to Lee, he will be there for 10 days and during this time he wants to find corporations to partner up with on the environment movement he started.



A conscientious resident of Pulau Ketam cleaning up the island bit by bit, as shown in the short film *Mr Garbage*. — Photos: Handout

Lee wants to inspire viewers with his short film *Mr Garbage*.

Lee – whose last film was *Rainbow's End* (2017) – is also the founder of #Hugprojects, a digital storytelling platform focusing on environmental issues with the hopes of creating an awareness on both nature and community.

He believes one can make a positive change to the environment through films and other similar mediums.

"Saving the environment may sound huge. In essence, it is. But, there are many simple ways you can do your bit to help. Every little action counts.

"You don't necessarily have to be an environmental scientist or outdoorsy type to work for the good of the environment," he said.

That notion is showcased in his three-and-a-half minute short. *Mr Garbage* revolves around two residents in Pulau Ketam, a fishing village off the coast of Port Klang, Selangor, who are doing all they can to clean the island of accumulated trash. Chua Hock Boon is a fisherman-turned-technician, and Loh Keat Geok is an environmentalist.

Lee explained why he picked the location as his subject matter: "Like all other islands on the planet, the issue of waste management continues. What makes this 63sq km island different from any other island is that it is in reality a mudflat.

"The island has no roads, so there are no garbage trucks. Even if trash is collected, there is no land to dump it on, so the villagers created a dumpsite.

"However, the dumpsite can no longer sustain and accommodate the volume of waste produced.

"This location is a good place to portray what will happen in the mainland soon if there is no transformational change in how we use and reuse materials.

"Mainlanders are still lucky to have places to set up landfills. But, sooner or later, these landfills will no longer be able to accommodate the growing populations' garbage disposal needs and more landfills would have to be created."

As the short shows, these two people then decide to do something about the growing trash at their backyard.

Lee shared that there are other residents who are following in their example.

"(But) what we are looking at is trash thrown into the sea for the past 50 or 60 years, including plastic that takes 400 years to degrade ... it's devastating."

Nonetheless, Lee remains positive. "We hope this film will give people a sense of how one community that's surrounded by trash is trying to help contain the problem.

"I hope it will inspire a change in our habits as consumers – to adopt more sustainable habits and products, wherever you live."

LAMPIRAN 13
SINAR HARIAN (CETUSAN): MUKA SURAT 49
TARIKH: 18 JULAI 2018

Teknologi pengaruhi generasi muda

Ta'dib

DR NIK ROSKIMAN ABDUL SAMAD *

Pada zaman Yunani dahulukala, ilmu dan maklumat mengambil masa yang lama untuk disebarkan dan sampai kepada masyarakat kerana pada ketika itu buku-buku berada dalam kalangan ilmuwan dan cerdik pandai sahaja.

Buku-buku tersebut pun ditulis tangan sahaja dengan kuantiti amat sedikit. Apabila muncul teknologi pembikinan kertas menjadikan kertas mudah diperoleh sekitar 1400, industri percetakan buku atau perbukuan pun bermula. Namun, buku-buku masih terhad kepada para ilmuwan dan pelajar sahaja.

Dengan perkembangan pesat teknologi masa kini, khususnya kewujudan media sosial menyebabkan penyebaran maklumat dan ilmu menjadi tersangat pantas yang luar biasa dalam sekelip mata sahaja.

Maklumat disebarkan di hujung jari dan kini tidak terhad kepada ilmuwan semata-mata. Apa yang membimbangkan perkembangan teknologi ini bukan sahaja menyediakan maklumat dan ilmu berguna tetapi juga boleh merosakkan pemikiran manusia kerana hampir semuanya mudah diperoleh melalui internet sehingga disebut *the internet of everything* (IoE).

Kesan ledakan maklumat ini telah banyak mempengaruhi gaya hidup dan pemikiran masyarakat. Hampir semua ada dalam internet, baik mahupun buruk, racun mahupun penawar, berita benar mahupun palsu atau *fake news*.

Fenomena Arab Spring yang dimulakan generasi muda di Tunisia dikatakan juga bermula melalui penyebaran maklumat menerusi media sosial yang kemudiannya menggerakkan kebangkitan rakyat hingga mampu menumbangkan sebuah kerajaan yang dilihat zalim.

Kita khuatir dengan perkembangan ini walaupun ada kebaikannya namun jika tidak dikawal, akan boleh merosakkan pemikiran generasi muda masa kini, seterusnya menghancurkan pegangan agama dan adab budaya masyarakat.

Hari ini kita dapati fahaman berasal dari tradisi Barat, mahupun fahaman sesat yang wujud dalam sejarah Islam silam mula cuba dihidup dan disegarkan kembali. Ada suara menyeru untuk kembali kepada fahaman Muktazilah kononnya inilah fahaman yang boleh membawa kemajuan kepada umat Islam berbanding al-Asha'irah manhaj Ahlul Sunnah wal Jamaah.

Sebelum itu, ada golongan yang menolak hadis dan mahu berpegang kepada al-Quran sahaja sepertimana kelompok yang pernah wujud zaman kerajaan Abasiyyah dikepalai Ibrahim al-Nazzam, kerana kononnya sukar untuk diterima Baginda SAW bertutur sedemikian banyak dan setiap pertuturan Baginda SAW itu dirakamkan setepatnya.

Fahaman sekularisme yang dibimbangi akan meresap masuk dalam masyarakat Islam hari ini nampaknya semakin kukuh dan membiak parah sehingga melahirkan pemikiran-pemikiran lain yang bertitik tolak daripada faham sekularisme tersebut.

Kita mula mendengar ada yang mempertikaikan Perkara 3(1) yang meletakkan "Islam Agama Persekutuan" kerana katanya ia menyukarkan pentadbiran kerajaan kerana urusan dunia dan agama tidak dipisahkan dan pertimbangan Islam kena sentiasa diambil kira dalam apa jua polisi dan tindakan kerajaan.

Pendukung gerakan pluralisme, feminisme, dan golongan lesbian, gay, biseksual dan transgender atau disebut LGBT bukan lagi suara asing di negara ini sejak kebelakangan ini. Kenapa hal ini berlaku? Kerana pengaruh daripada masyarakat Barat sama ada yang dibawa oleh mereka pernah menuntut atau berada di Barat, atau melalui pengaruh media sosial dan internet.

Jika dahulu masyarakat kita digelar moden yang masih menghormati dan memandang tinggi autoriti dan naratif agung, namun kemudiannya masyarakat diserang pemikiran pascamodenisme yang menolak autoriti dan menentang segala bentuk fahaman atau naratif agung yang bertapak dan diakui masyarakat.

Semakin ramai yang tidak sedar mereka sebenarnya telah terpengaruh dengan virus idea *deconstruction* yang dibawa oleh ahli falsafah Perancis kelahiran Algeria, Jacques Derrida (m.2004). Beliau menyeru dirungkaikan semua makna dan naratif agung yang dikongsi bersama dan dikembalikan kebebasan berfikir semula kepada manusia untuk membangunkan faham dan konsep mengikut acuan masing-masing.

Kita mula mendengar wujudnya kelompok Melayu ateis, suatu kelompok yang tidak pernah terbayang oleh fikiran kita 10 tahun dahulu. Kalau dahulu apabila disebut bangsa Melayu, yang terlintas ialah beragama Islam, namun hari ini Melayu belum tentu lagi beragama Islam.

Bagi mendepani cabaran pemikiran masa kini, sayugia kita memperkukuhkan faham agama terhadap anak-anak kita agar generasi akan datang tidak mudah terpengaruh dengan persekitaran yang semakin mencabar dan rosak ini.

*Penulis Felow Kanan, Pusat Kajian Syariah, Undang-Undang dan Politik IKIM

Ruangan ini dikelola oleh IKIM

LAMPIRAN 14
KOSMO (INFINITI): MUKA SURAT 31
TARIKH: 18 JULAI 2018

Ekopelancongan hubungkan alam sekitar dan manusia

EKOPELANCONGAN adalah pelancongan berasaskan sumber dan pemeliharaan alam semula jadi seperti flora, fauna, pantai, tasik dan sungai.

Aktiviti ekopelancongan menghubungkan orang ramai dengan alam semula jadi sekali gus memberi kesedaran agar mencintai alam sekitar.

Menurut Ketua Pegawai Eksekutif Persatuan Ekopelancongan dan Konservasi Malaysia (ECOMY), Andrew Sebastian, aktiviti pelancongan alam semula jadi selaras dengan

ANDREW

hala tuju kerajaan negara dan sekiranya diurus dengan baik akan memberi pulangan yang lumayan kepada negara.

"Sektor ekopelancongan sangat penting kepada dunia dan Malaysia tidak boleh ketinggalan dalam mempromosikan hutan hujan di negara kita.

"Perkembangan aktiviti ini membantu memelihara khazanah alam dan keseimbangan udara, oksigen, cuaca dan iklim," katanya ketika dihubungi *Kosmo!* baru-baru ini.

Justeru, Andrew mencadangkan agar sektor yang meningkatkan kehadiran pelancong berkunjung ke dalam negara itu terus dimajukan.

"Pemantauan dan penambahbaikan kemudahan asas yang disediakan di kawasan tarikan membantu memajukan sektor ekopelancongan negara.

"Kemudahan asas yang dibangunkan di kawasan semula jadi contohnya tandas, menara tinjau dan inap desa di kampung Orang Asli hendaklah ditambah baik tetapi perlu dipastikan ia tidak memudaratkan alam sekitar," jelasnya.

Mengulas lanjut, beliau berkata, kempen kesedaran kepada masyarakat tentang pentingnya menjaga khazanah semula jadi negara juga akan membantu sektor pelancongan.

"Selain itu, sokongan perlu diberikan kepada agensi dan jabatan terlibat seperti Jabatan Perlindungan Hidupan Liar dan Taman Negara (Perhilitan), Jabatan Perhutanan dan Perbadanan Taman Negara yang bertanggungjawab menjaga, mengurus dan memelihara flora dan fauna di negara kita," tambahnya.

PROTECTING DOMESTIC MANUFACTURERS

India imposes 25pc duty on China, Malaysia solar cells

MUMBAI: India has imposed a 25 per cent safeguard duty on solar cells from China and Malaysia, saying the overseas supplies have caused or threatened "serious injury" to domestic manufacturers.

The safeguard duty would be applicable for two years, said India's Directorate General of Trade Remedies (DGTR), a unit of the Commerce Ministry, in an order posted on its website on Monday.

The tariff will be lowered to 20 per cent for the first half of the second year and 15 per cent for the second half.

"Imposition of safeguard duty in this case would be in public interest because it will prevent complete erosion of manufacturing base of solar industry in the country," said the DGTR in the order.

India, the largest importer of Chinese solar equipment, first proposed a 70 per cent safeguard duty in January to protect its local industry. Solar project developers, who rely on overseas components, have countered that the move would jeopardise the nation's plans to boost its use of renewable energy.

The New & Renewable Energy Ministry estimated last year that India's annual solar cell manufacturing capacity of three gigawatts meant the country could only meet 15 per cent of its annual 20 gigawatts of installations required to meet government targets. **Bloomberg**

LAMPIRAN 16
THE STAR (WORLD): MUKA SURAT 28
TARIKH: 18 JULAI 2018

Explosive encounter: The roof of the tour boat is badly damaged after a projectile from the Kilauea volcano lands on it. — AP

'Lava bomb' from volcano injures 23 on boat

LOS ANGELES: A projectile from the Kilauea volcano in Hawaii struck a boat carrying people watching lava from the two-month-old eruption, injuring 23, the fire department said.

Thirteen of them required hospitalisation and the rest were treated at a harbour when the boat engaged in a "lava tour" returned to the Big Island, also known as Hawaii.

Lava flowing into the Pacific is a spectacular sight, producing a foggy haze known in Hawaii as "laze."

One woman was in serious condition with a fractured femur.

The total number of people on the boat was not immediately known, the Hawaii County Fire Department said.

In the early morning incident a "lava bomb" punctured the roof of the boat and damaged a railing, the department said. It gave no further details.

"It was an explosion, basically," said Janet Snyder, a spokeswoman for the county mayor, told the *Tribune Herald* newspaper.

"It punctured a hole right through the roof of the boat."

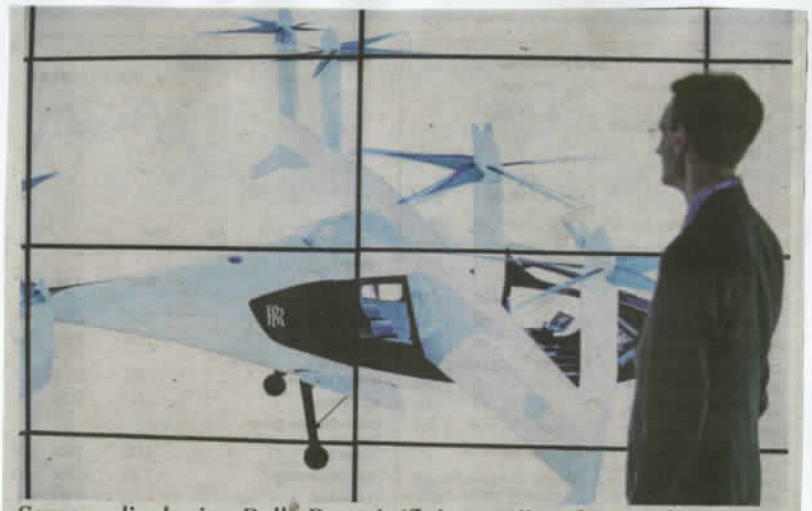
She described the boat as "covered with lava."

The eruption has destroyed hundreds of homes since it began on May 3.

Kilauea is one of the world's most active volcanos and one of five on the island.

One of the most active fissures, number 8, continues to erupt and its lava has formed a small "island" a few meters from the coast, according to the United States Geological Survey (USGS). — AFP

LAMPIRAN 17
NEW STRAITS TIMES (BUSINESS): MUKA SURAT B7
TARIKH: 18 JULAI 2018



Screens displaying Rolls-Royce's 'flying taxi' at the Farnborough Airshow southwest of London on Monday. AFP PIC

Rolls-Royce unveils 'flying taxi'

FARNBOROUGH: Rolls-Royce revealed plans this week to develop a hybrid electric vehicle, dubbed the "flying taxi", which takes off and lands vertically and could be airborne within five years.

The aerospace giant, which is based in Derby in central England, showed off the plans at the Farnborough Airshow for the first time, as other players also rush into the market segment.

Rolls-Royce said it hoped to manufacture a prototype version of its electric vertical take-off and landing (EVTOL) vehicle within the next 18 months, and could potentially take to the skies in the early 2020s.

The Rolls-Royce EVTOL plane will seat four or five people, with a flying range of 805km and a top speed of 322km per hour.

"In this market, you will see something like this flying within three to five years, and we will demonstrate the system in two years," said Rob Watson, head of Rolls-Royce's electrical team.

"At the end of next year we will be flight ready," he said at the group's Farnborough chalet.

The hybrid vehicle will use a traditional gas turbine engine with an electrical system wrapped around it.

Rolls-Royce is also researching an all-electric product but that is not as advanced as the EVTOL offering. **AFP**

LAMPIRAN 18
THE STAR (FOREIGN NEWS): MUKA SURAT 9
TARIKH: 18 JULAI 2018

Ascletis is HK's first pre-profit biotech IPO

HONG KONG: Ascletis Pharma Inc, the first biotech company to take advantage of new Hong Kong listing rules, is seeking to raise as much as US$457mil in an initial public offering in the city.

The company is offering 224.1 million shares at HK$12 to HK$16 apiece, according to terms for the deal obtained by Bloomberg. Singapore sovereign wealth fund GIC Pte agreed to buy US$75mil of stock as a cornerstone investor, the terms show.

Hangzhou-based Ascletis Pharma filed for its planned Hong Kong IPO in May, becoming the first biotech application after the city relaxed rules to allow listings from unprofitable early stage drug developers.

The IPO price range implies a market value of US$1.7bil to US$2.3bil, assuming a so-called over-allotment option is not exercised, according to the terms. Ascletis plans to take orders for the IPO through July 25 and expects to begin trading Aug 1. — Bloomberg

LAMPIRAN 19
UTUSAN MALAYSIA (LUAR NEGARA): MUKA SURAT 12
TARIKH: 18 JULAI 2018

Nilai semasa mampu menggegarkan ekonomi dunia

Lebih satu quadrilion tan berlian dikesan

PASUKAN saintis mengesan kewujudan lebih satu quadrilion tan berlian yang tertanam kira-kira 241 kilometer di bawah bahagian kerak bumi. – AGENSI

Mungkin terlalu sukar untuk mendapatkannya, tetapi kita dapat mengetahui bahawa masih ada lebih banyak berlian di kawasan itu daripada yang kita fikir sebelum ini."

ULRICH FAUL
Saintis penyelidikan di Jabatan Bumi, Atmosfera dan Sains Planet MIT

■ **LONDON 17 JULAI**

PASUKAN saintis mengesan kewujudan sejumlah besar berlian yang disifatkan paling berharga sehingga nilainya 'boleh menggegarkan ekonomi dunia'.

Menurut portal berita *metro.co.uk*, saintis dari Massachusetts Institute of Technology (MIT) mengesahkan terdapat lebih satu quadrilion tan berlian di seluruh benua tertanam di bawah kawasan batuan paling dalam yang terbentang di antara kerak dan mantel Bumi.

Batuan kuno itu dikenali sebagai akar 'cratonic' dan berlian yang tertanam di dalamnya terletak antara 144 hingga 241 kilometer di bawah permukaan Bumi.

"Satu tan berlian adalah 50,000,000 karat, bernilai sekurang-kurangnya 3,000 pound (RM16,018) setiap satu, jadi nilai keseluruhan berlian yang masih tertanam itu mungkin mencecah hampir 150 septilion pound (RM802 septilion).

"Mungkin terlalu sukar untuk mendapatkannya, tetapi kita dapat mengetahui bahawa masih ada lebih banyak berlian di kawasan itu daripada yang kita fikir sebelum ini," kata Ulrich Faul, seorang saintis penyelidikan di Jabatan Bumi, Atmosfera dan Sains Planet MIT.

Para penyelidik membuat kesimpulan bahawa wujud berlian di kawasan berkenaan kerana adanya anomali dalam data seismik di mana gelombang bunyi dilihat bergerak pantas.

Faul dan beberapa lagi saintis menganggarkan anomali tersebut berpunca daripada satu hingga dua peratus berlian di dalam akar 'cratonic'.

"Berlian adalah istimewa. Salah satu ciri khasnya adalah halaju bunyi dalam berlian adalah dua kali ganda lebih cepat daripada mineral dominan di atas batuan mantel," katanya.

LAMPIRAN 20
KOSMO (DUNIA): MUKA SURAT 48
TARIKH: 18 JULAI 2018

Cukup untuk bina 6,000 bom atom, berdepan risiko bencana dan pengganas

Stok plutonium Jepun berbahaya

TOKYO – Jepun mempunyai cukup plutonium untuk membina 6,000 bom atom sebagai sebahagian daripada program bahan api janakuasa nuklearnya, namun stok radioaktif tersebut dikhuatiri terdedah kepada pengganas dan bencana alam semula jadi.

Semalam, perjanjian berusia beberapa dekad bersama Amerika Syarikat (AS) yang membenarkan Jepun memproses semula plutonium telah diperbaharui tetapi pakatan itu boleh ditamatkan oleh mana-mana pihak menerusi notis enam bulan.

Pemprosesan semula plutonium dapat menghasilkan bahan api bebas pencemaran baharu untuk Jepun yang kurang sumber tersebut, namun saiz simpanan plutoniumnya mengundang kritikan, bahkan oleh sekutu-sekutu Tokyo sendiri.

REUTERS

IMEJ tidak bertarikh menunjukkan sebuah reaktor nuklear di selatan Jepun.

Plutonium boleh digunakan untuk menghasilkan senjata nuklear. Walaupun Jepun berjanji bahan api itu tidak akan sesekali digunakan untuk tujuan ketenteraan, ia kini mengumpulkan lebih banyak plutonium berbanding kegunaan semasa berikutan banyak janakuasa nuklearnya belum beroperasi selepas bencana alam di Fukushima pada tahun 2011.

Pakar-pakar memberi amaran bahawa stok yang semakin bertambah itu berbahaya jika berlaku bencana alam seperti gempa bumi dan tsunami yang mengakibatkan kebocoran bahan radioaktif seperti di Fukushima di samping menjadi sasaran menarik kepada pengganas.

Mereka juga bimbang rizab plutonium itu akan menggalakkan kuasa serantau lain termasuk China untuk memiliki keupayaan pemprosesan semula yang setanding dengan Jepun sekali gus meningkatkan jumlah plutonium gred senjata di Asia.

Sesetengah pakar berkenaan turut memberi amaran bahawa Korea Utara mungkin menjadikan simpanan plutonium Jepun sebagai alasan untuk tidak melucutkan senjata nuklearnya.

Jepun mempunyai simpanan plutonium berjumlah 10 tan di dalam negara dan 37 tan lagi di Perancis serta Britain. – AFP

LAMPIRAN 21
KOSMO (INFINITI): MUKA SURAT 36
TARIKH: 18 JULAI 2018

KAJIAN menunjukkan cuaca panas boleh mempengaruhi pemikiran orang individu. – Gambar hiasan

Cuaca panas melambatkan cara berfikir

SATU kajian oleh Sekolah Kesihatan Umum Harvard TH CHAN mendakwa cuaca panas boleh menyebabkan manusia berfikir 13 peratus lebih perlahan.

Kajian yang diterbitkan dalam jurnal PLOS Medicine meneliti prestasi kognitif dalam kalangan pelajar yang tinggal di bangunan tanpa penyaman udara dan mereka yang memiliki alat tersebut semasa gelombang panas Boston pada tahun 2016.

Penyelidik mendapati bahawa pelajar tanpa penyaman udara menunjukkan reaksi lebih 13 peratus berbanding mereka yang berada di dalam bangunan penyaman udara.

Bukan itu sahaja, pelajar yang berada di dalam bangunan penyaman udara lebih cepat memberi respon dan lebih tepat.

Kajian ini menunjukkan penurunan dalam keupayaan kognitif mungkin dikaitkan dengan kenaikan beban terma selain pengaruh gabungan faktor-faktor lain yang berkaitan dengan pendedahan haba termasuk tidak cukup tidur dan dehidrasi.

Dalam satu kenyataan pengarang utama kajian Jose Guillermo Cedeño-Laurent, tersebut, mengetahui risiko haba yang berlebihan terhadap populasi yang berbeza adalah penting memandangkan kebanyakan bandar bilangan gelombang panas dijangka meningkat akibat perubahan iklim.

"Memeriksa kesan suhu dalaman juga penting memandangkan orang dewasa di AS menghabiskan 90 peratus masa mereka di dalam rumah," tambahnya.