**KEMENTERIAN TENAGA, SAINS, TEKNOLOGI, ALAM SEKITAR DAN PERUBAHAN IKLIM**

| Bil | Berita | Media | Capaian Berita Penuh |
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| **30 JULAI 2018 (ISNIN)** | | | |
| 1. | **Henti atau teruskan bauksit**<br><br>Kementerian Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar perlu menyatakan pendirian segera mereka berhubung isu moratorium bauksit yang sepatutnya berakhir 30 Jun lalu. Ahli Parlimen Paya Besar, Mohd Shahar Abdullah berkata, ini kerana Kerajaan Pusat belum mengeluarkan sebarang keputusan berhubung perkara itu. | Sinar Harian | Klik pada tajuk berita |
| 2. | **Gesa kerajaan beri penjelasan aktiviti bauksit**<br><br>Kementerian Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar perlu menyatakan pendirian berhubung isu moratorium bauksit yang dilaksanakan sejak 15 Januari 2016. | Harian Metro | Rujuk lampiran 1 |
| 3. | **Rungkai isu kewajaran kawal selia blockchain**<br><br>Bagi merungkai persoalan berkenaan kewajaran untuk mengawal selia mata wang kripto di Malaysia, satu forum Laporan pengawal Seliaan Blockchain dianjurkan Pusat Kajian Pengawalseliaan Universiti Malaya (UMCoRS) dibawah Faulti Undang-Undang. | Harian Metro | Rujuk lampiran 2 |
| **29 JULAI 2018 (AHAD)** | | | |
| 4. | **No decision yet on Trans-Sabah Gas Pipeline – Energy Minister**<br><br>No further decision has been made regarding the operation of the Trans-Sabah Gas Pipeline (TSGP) project after the suspension notice was issued on July 3, said Energy, Technology, | The Edge Market | Klik pada tajuk berita |

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| | Science, Climate Change and Environment Minister Yeo Bee Yin. | | |
| 5. | **'Government must state stand on bauxite moratorium'**<br><br>The Energy, Technology, Science, Climate Change and Environment Ministry needs to state its stand on the issue of the bauxite moratorium which has been in place since Jan 15, 2016. Paya Besar member of parliament Mohd Shahar Abdullah said the present government had yet to make any statement on the issue since the moratorium officially ended on June 30. | New Straits Times | Klik pada tajuk berita |
| 6. | **Averting RM19b power loss**<br><br>Inefficiency in electricity generation, transmission and distribution in Sabah will rob the government RM19 billion in the next 15 years, an amount Energy, Technology, Science, Climate Change and Environment Minister Yeo Bee Yin says could be spent to continue providing free water to 5.6 million Selangor consumers for 190 years. | Daily Express | Klik pada tajuk berita |
| 7. | **Dua keajaiban satu malam**<br><br>Rakyat Malaysia berpeluang menyaksikan dua fenomena astronomi yang jarang berlaku pada malam kelmarin. Pengarah Planetarium Negara, Anita Bahari, berkata dua fenomena itu adalah pencerapan planet Marikh dan gerhana bulan penuh. | Harian Metro | Rujuk lampiran 3 |
| 8. | **Dua fenomena astronomi dalam satu malam**<br><br>Pengarah Planetarium Negara, Anita Bahari, berkata pencerapan planet Marikh disifatkan cukup istimewa kerana antara jam 9 malam hingga 11.30 malam kelmarin, jarak planet itu berada hampir dengan Bumi, iaitu pada lingkungan jarak 50 juta kilometre (km). | Berita Harian | Rujuk lampiran 4 |
| 9. | **Blood moon, Mars wow stargazers**<br><br>National Planetarium director, Anita Bahari said Mars observation was also special because | New Straits Times | Rujuk lampiran 5 |

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| | between 9pm and 11.30pm, the planet was only about 57.8 million kilometres away from Earth. | | |
| 10. | **Heatwaves in Malaysia**<br><br>Malaysians will not have to endure a temperature a temperature any higher than 34c this year, despite severe heatwaves in some parts of Asia and Europe. Tea Athira Yusof speaks to Malaysian Meteorological Department director-general Alui Bahari, who explained how the country would be spared from scorchingly high temperatures this time. | New Straits Times | Rujuk lampiran 6 |
| **28 JULAI 2018 (SABTU)** | | | |
| 11. | **Govt: Complete Sabah pipeline or return the RM3.5bil**<br><br>The Federal Government wants the Trans-Sabah Gas Pipeline (TSGP) project to be completed or it will begin steps to recover the RM3.5bil already paid out. Energy, Technology, Science, Climate Change and Environment Minister Yeo Bee Yin *(pic)* said that although 88% of the total cost of RM4.06bil had been paid for the project, no pipelines have been laid. | The Star | Klik pada tajuk berita |
| 12. | **Higher stake for Sabah in SESB: Yeo looks to solution by year-end**<br><br>Sabahans have been urged to remain patient about the state's power supply problems. Energy, Technology, Science, Climate Change and Environment Minister Yeo Bee Yin hoped a solution would be found by the year-end to the state's proposed takeover of Sabah Electricity Sdn Bhd. | Free Malaysia Today | Klik pada tajuk berita |
| 13. | **No decision yet on Trans-Sabah Gas Pipeline project, says minister**<br><br>No further decision has been made regarding the operation of the Trans-Sabah Gas Pipeline (TSGP) project after the suspension notice was issued on July 3, said Energy, Technology, Science, Climate Change and Environment Minister Yeo Bee Yin. | Malay Mail | Klik pada tajuk berita |

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| 14. | **Sabah power woes to be resolved, says minister**<br><br>ENERGY, Technology, Science, Climate Change and Environment Minister Yeo Bee Yin wants Sabahans to be patient as the ministry works to resolve the electricity woes in the state. | The Malaysian Insight | Klik pada tajuk berita |

**TEMPATAN**

| Bil | Berita | Media | Capaian Berita Penuh |
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| **30 JULAI 2018 (ISNIN)** | | | |
| 15. | **TNB sasar sifar kemalangan**<br><br>Tenaga Nasional Berhad (TNB) melalui pelancaran inisiatif terbaharunya iaitu Tenaga Safety Culture (TSC) menyasarkan tiada lagi kemalangan jiwa membabitkan warga kerjanya sewaktu bertugas di lapangan. | Utusan Malaysia | Rujuk lampiran 7 |
| 16. | **Contohi TNB wujud budaya keselamatan**<br><br>Syarikat-syarikat korporat serta syarikat milik kerajaan (GLC) wajar mencontohi Tenaga Nasional Berhad (TNB) yang melancarkan Tenaga Safety Culture (TNC) bagi menerapkan budaya kerja selamat dan sihat dalam kalangan warga kerjanya. | Utusan Malaysia | Rujuk lampiran 8 |
| 17. | **Sambutan Cabaran Inovasi STEM menggalakkan**<br><br>Menyedari kepentingan bidang sains, teknologi, kejurutreraan dan matematik (STEM) untuk pembangunan generasi muda dan masa depan negara, Lembaga Tabung Haji (Tabung Haji) mengambil inisiatif memperluaskan Program Cabaran Inovasi STEM ke Sabah dan Sarawak tahun ini. | Utusan Malaysia | Rujuk lampiran 9 |

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| 18. | **Petah kupas teori sains cara mudah**<br><br>Terma-terma sains yang rumit disimpulkan dalam bahasa mudah untuk difahami tanpa perlu ditanya berkali-kali. Selayaknya, Dr. Siti Khayriyyah Mohd. Hanafiah, 33, dinobatkan sebagai juara dunia menewaskan 11 finalis dari seluruh dunia pada pertandingan FameLab International 2018 yang berlangsung di Cheltenham, Britain baru-baru ini. | KOSMO | Rujuk lampiran 10 atau klik pada tajuk berita |
| 19. | **Negara miliki saintis berbakat, pakej**<br><br>Kejayaan saintis muda, Dr Siti Khayriyyah Mohd. Hanafiah yang dinobatkan sebagai juara dunia di pertandingan FameLab International 2018 telah mengharumkan nama negara di pentas dunia. | KOSMO | Rujuk lampiran 11 |
| 20. | **Upcycle park finds way into records book**<br><br>The first Upcycle Park of the Seberang Perai Municipal Council has found its way into the Malaysia Book of Records. Housing, local government and town and country planning committee chairman Jagdeep Singh Deo said the recreation park, developed with used and waste materials, was given the recognition for its uniqueness. | Malay Mail | Rujuk lampiran 12 |
| 21. | **Improving ties with China**<br><br>To be sure, all Malaysian governments since independence in 1957 have invited foreign direct investment. For decades, some of us have been concerned with the government's seemingly uncritical view of foreign investments. However, to be fair, prime ministers Abdul Razak Hussein and Mahathir Mohamad were circumspect. | The Sun Daily | Rujuk lampiran 13 atau klik pada tajuk berita |
| 22. | **TNB terima tujuh penaja penaja baharu CEPSI**<br><br>Tenaga Nasional Berhad (TNB) menerima tujuh tajaan daripada pelbagai syarikat sempena penganjuran Persidangan Industri Bekalan Tenaga Elektrik (CEPSI) kali ke-22 pada 17 hingga 22 September di Pusat Konvokesyen Kuala Lumpur. | Utusan Malaysia | Rujuk lampiran 14 |

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| 23. | **M10MP Platform terap daya saing taraf dunia**<br><br>"Buktinya, murid kami yang dibimbing secara intensif menerusi pelaksanaan modul berkenaan berjaya dalam pertandingan sains di Bangkok, Thailand, baru-baru ini walaupun ada antara mereka yang tidak meminati sains. | Utusan Malaysia | Rujuk lampiran 15 |
| 24. | **UiTM teroka angkasa lepas**<br><br>Kejayaan university tempatan dalam penciptaan dan penghasilan inovasi berteknologi tinggi kini boleh dibanggakan. Sebagai contoh, Universiti Teknologi Mara (UiTM) melakar sejarah baharu bukan sahaja buat pusat pengajian tinggi tersebut malah dunia dengan kelahiran UiTMSat-1 iaitu satelit nano pertama bagi universiti di Malaysia melalui kerjasama Joint Global Multi Nation (Birds-2) dengan Bhutan dan Filipina yang diterajui Kyushu Institue of Technology (KyuTech) di Jepun. | Utusan Malaysia | Rujuk lampiran 16 |
| 25. | **Is Malaysia ready for gene therapy?**<br><br>According to the seminal report, "Human Genome Editing", jointly released by the US National Academy Science (NAS) and the National Academy of Medicine (NAM) in early 2017, genome editing its powerful new tool for making precise alterations to an organism's genetic material. | New Straits Times | Rujuk lampiran 17 |
| 26. | **DPM: Malaysia ready to assist**<br><br>Malaysia is ready to provide assistance and support to Indonesia in the wake of the 6.4 magnitude earthquake that struck the popular tourist destination of Lombok yesterday. | New Straits Times | Rujuk lampiran 18 |
| **29 JULAI 2018 (AHAD)** | | | |
| 27. | **UTeM cipta inovasi landskap hijau**<br><br>Universiti Teknikal Malaysia Melaka (UTeM) mencipta inovasi set kelengkapan landskap hijau bagi menjana tenaga yang boleh diperbaharui berasaskan pengumpulan air hujan untuk tujuan manfaat komuniti sekolah. | Berita Harian | Rujuk lampiran 19 |

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| **28 JULAI 2018 (SABTU)** | | | |
| 28. | **Keeping cool during heat waves**<br><br>CITIES can be miserable during heat waves. All that concrete and asphalt soaks up the sun's rays, pushing temperatures up even higher. Tall buildings can block cooling breezes. Exhaust from cars and air conditioners just adds to the swelter. | New Straits Times | Rujuk lampiran 20 atau klik pada tajuk berita |
| 29. | **Langkah jurutera muda**<br><br>Program selama setahun yang ditawarkan melalui UiTMSPACE itu adalah satu pilihan alternatif dalam saluran pendidikan prauniversiti selain matrikulasi, Sijil Tinggi Persekolahan Malaysia (STPM), diploma dan lain-lain program asasi yang diiktiraf Kementerian Pengajian Tinggi Malaysia. | Harian Metro | Rujuk lampiran 21 |
| 30. | **Dingin pagi tidak halang orang ramai lihat gerhana bulan penuh**<br><br>Suasana gelap dan kedinginan awal pagi tidak menghalang orang ramai untuk hadir menyaksikan fenomena gerhana bulan penuh di Masjid Tuanku Mizan Zainal Abidin dan Masjid Putra di sini yang berlaku bermula awal pagi hari ini. | Utusan Malaysia | Rujuk lampiran 22 atau klik pada tajuk berita |

**ANTARABANGSA**

| Bil | Berita | Media | Capaian Berita Penuh |
|---|---|---|---|
| **30 JULAI 2018 (ISNIN)** | | | |
| 31. | **Hong Kong could become biotech listing hub, says BeiGene boss as Chinese drug maker gears up for US$1 billion flotation** | South China Morning Post | Klik pada tajuk berita |

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| | Hong Kong's stock exchange could become a hub for mainland Chinese biotechnology firms thanks to a sweeping reform of listing rules, said the boss of BeiGene, the first such company to take advantage of the new regime for a secondary listing. | | |
| 32. | **How Canada can close the cybersecurity talent gap**<br><br>Today, cybersecurity talent is in unprecedented demand and finding that talent is a key concern for Canadian executives. The Toronto Financial Services Alliance (TFSA) recently undertook a study, in partnership with Deloitte, which sought to understand the demand for cybersecurity talent in Canada and, more importantly, the resulting pipeline of talent our economy will require to meet rising cybersecurity challenges. | The Globe and Mail | Klik pada tajuk berita |
| 33. | **Powerful Lombok quake kills at least 14**<br><br>A powerful 6.4 magnitude earthquake struck the popular tourist land of Lombok in Indonesia yesterday, killing 14 people and sending villagers fleeing from their beds into open fields to avoid collapsing buildings. | Malay Mail | Rujuk lampiran 23 |
| 34. | **Record drought grips Germany's breadbasket**<br><br>Withered sunflowers, scorched wheat fields, stunted cornstalks – the farmlands of northern Germany have borne the brunt of this year's extreme heat and record-low rainfall, triggering an epochal drought. | The Star | Rujuk lampiran 24 |
| 35. | **Cuba to study if climate change is hurting sugar harvests**<br><br>Cuba is studying whether to adjust its sugar-harvest calendar in response to damaging changes in the island's climate, an official newspaper reported. | The Star | Rujuk lampiran 25 |
| 36. | **Myanmar floods kill five, displace thousands**<br><br>Rising flood waters have killed at least five people and forced tens of thousands from their | Malay Mail | Rujuk lampiran 26 |

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| | homes across swathes of Myanmar, a government official said yesterday, as heavy monsoon rains continue to batter the Mekong region. | | |
| 37. | **Using VR to treat fear of height**<br><br>ACROPHOBIA – fear of heights – is one of the most common phobias, with around one in five people reporting having a fear of heights to some degree during their lifetime. | The Sun | Rujuk lampiran 27 |
| 38. | **Energy in the right way**<br><br>In September 2015, at a historic United Nations Summit, world leaders adopted 17 Sustainable Development Goals (SDGs). Over the next 15 years, countries will mobilise efforts to end all forms of poverty, fight inequalities, and address climate change. | New Straits Times | Rujuk lampiran 28 |
| 39. | **Kebakaran hutan: AS lulus bantuan kepada California**<br><br>Amerika Syarikat (AS) meluluskan bantuan untuk California semalam ekoran insiden kebakaran hutan yang mengorbankan enam orang dan meranapkan ratusan bangunan. | Utusan Malaysia | Rujuk lampiran 29 |
| **29 JULAI 2018 (AHAD)** | | | |
| 40. | **Call to boost cybersecurity in the Philippines**<br><br>Released in May by research and consulting firm Frost & Sullivan, the “Understanding the Cybersecurity Threat Landscape in Asia Pacific: Securing the Modern Enterprise in a Digital World” report found the country could endure up to US$3.5 billion in direct, indirect and induced losses from breaches to cybersecurity. | The Borneo Post | Klik pada tajuk berita |
| 41. | **Why California Goes Its Own Way on the Environment**<br><br>The U.S. Environmental Protection Agency will propose revoking the Clean Air Act waiver granted to California that has allowed the state to regulate carbon emissions from vehicle tailpipes | Bloomberg | Klik pada tajuk berita |

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| | and force carmakers to sell a minimum number of electric vehicles in the state. | | |
| 42. | **Fostering maritime innovation**<br><br>Malta Marittima has teamed up with various local entities to work in partnership on a number of EU-funded projects. These partnerships extend from government to private entities and help to broaden and enrich local knowledge, stimulate innovation and resources with other European counterparts. | Times of Malta | Klik pada tajuk berita |
| 43. | **Energy Secretary Rick Perry: 'True energy independence is finally within our grasp'**<br><br>Spurred by technological breakthroughs unleashed by innovation, deregulation and pro-growth policies, we are now producing energy more abundantly and affordably, using it more cleanly and efficiently, and obtaining it from a wider range of sources than anyone ever thought possible. | CNBC | Klik pada tajuk berita |
| | **28 JULAI 2018 (SABTU)** | | |
| 44. | **Women are seeing fewer STEM job ads than men: are marketing algorithms promoting gender bias?**<br><br>According to a recent study conducted by economist Dr. Catherine Tucker from Massachusetts Institute of Technology (MIT) and marketing professor Dr. Anja Lambrecht of London Business School, women see fewer ads related to Science, Technology, Engineering, and Math (STEM) careers than men (1). The early findings were reported on March 9, and the full study is due to be published soon in Management Science, according to Scientific American. | European Scientist | Klik pada tajuk berita |
| 45. | **Your old plastic bottle … reborn as a towel, bag or swimsuit**<br><br>First it was "bags for life", chunky doormats and, more recently, clothing such as fleeces, swimwear and pack-away macs. Now towels made from recycled plastic bottles are to go on sale in the UK for the first time in August – the | The Guardian | Klik pada tajuk berita |

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| | latest initiative in the war against single-use plastics and the result of a technological breakthrough that has produced a fabric deemed soft and fluffy enough to use on human skin. | | |
| 46. | **'Marine wilderness areas rapidly shrinking'**<br><br>Shipping, pollution and overfishing have reduced areas of “wilderness” to just 13% of the world’s oceans, a study showed, warning untouched marine habitats could completely vanish within half a century. | The Star | Rujuk lampiran 30 |
| 47. | **Artificial intelligence, immune to fear or favour, is helping to make China’s foreign policy**<br><br>The researchers said the AI “policymaker” was a strategic decision support system, with experts stressing that it will be humans who will make any final decision. | South China Morning Post | Klik pada tajuk berita |

**LAMPIRAN 1**
**HARIAN METRO: MUKA SURAT 72**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# Gesa kerajaan beri penjelasan aktiviti bauksit

**Kuantan:** Kementerian Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar perlu menyatakan pendirian berhubung isu moratorium bauksit yang dilaksanakan sejak 15 Januari 2016.

Ahli Parlimen Paya Besar Mohd Shahar Abdullah berkata, kerajaan belum mengeluarkan keputusan berhubung perkara itu selepas tempoh moratorium berakhir 30 Jun lalu.

Katanya, dia akan membangkitkan isu itu di Dewan Rakyat supaya kementerian terbabit memberikan penjelasan sekali gus mengakhiri kebimbangan pelbagai pihak berhubung tempoh moratorium itu.

"Sudah pasti perkara ini menyusahkan pemilik tanah yang terbabit dengan aktiviti perlombongan bauksit sebelum ini.

"Kalau arahan jelas bahawa ia (moratorium) diteruskan, maka mereka (pemilik tanah) boleh berbincang dengan pengusaha lombong bauksit.

"Tapak lombong berkenaan kini terbiar dan kalau sudah tidak boleh diteruskan (aktiviti perlombongan bauksit), maka lebih baik jika mereka dapat memulakan proses penanaman semula sawit atau tanaman lain yang dapat memberikan hasil pendapatan kepada mereka," katanya selepas Majlis Dialog Bersama Penduduk Taman Bukit Goh Perdana, dekat sini, semalam.

Hadir sama Pengerusi Persatuan Penduduk Taman Bukit Goh Perdana, Abd Latif Ab Wahab.

Mohd Sharkar berkata, kebanyakan penduduk di kawasan FELDA Bukit Goh yang terbabit aktiviti perlombongan bauksit sebelum ini berharap kerajaan baru dapat memberikan penjelasan berhubung status untuk menanam semula kelapa sawit yang dijadualkan pada 2020.

Katanya, selagi tidak ada keputusan atau pendirian tegas daripada kerajaan sudah pasti peneroka bakal berdepan masalah untuk menanam semula di kawasan yang terbabit dengan aktiviti perlombongan bauksit.

"Sebab itu, kena ada pendirian dan keputusan muktamad oleh kerajaan dalam isu ini... saya sebagai Ahli Parlimen kawasan ini akan terus memperjuangkan nasib mereka dan tidak perlulah kita hendak salahkan (keputusan) dibuat kerajaan sebelum ini, kita bertindak demi kesenangan semua rakyat.

"Kalau isu ini tidak dapat diselesaikan segera, segala perancangan FELDA untuk penduduk (peneroka) di kawasan Bukit Goh juga akan terganggu, tidak dapat dilaksanakan mengikut jadual ditetapkan dan akhirnya akan menyusahkan seramai 677 warga peneroka yang menetap di sini," katanya.

**LAMPIRAN 2**
**HARIAN METRO: MUKA SURAT 34**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# RUNGKAI ISU KEWAJARAN KAWAL SELIA BLOCKCHAIN

PENYELIDIK ketika menyampaikan pandangan ketika forum berlangsung

**Bagi** merungkai persoalan berkenaan kewajaran untuk mengawal selia mata wang kripto di Malaysia, satu forum Laporan Pengawal Seliaan Blockchain dianjurkan Pusat Kajian Pengawalseliaan Universiti Malaya (UMCoRS) di bawah Fakulti Undang-undang.

Blockchain adalah teknologi pencatatan transaksi terintegrasi dengan teknologi moden.

Pada masa sama, forum itu mendapat kerjasama Quanta RegTech Capital (QRC) Group Plc.

Naib Canselor UM Datuk Ir Dr Abdul Rahim Hashim, berkata objektif utama untuk mempersembahkan laporan kajian pengawal seliaan blockchain oleh penyelidik daripada Fakulti Undang-Undang dengan jalinan kerjasama pihak industri yang memberikan pandangan dan input berguna.

"Tujuan laporan ini disediakan adalah untuk merungkai isu kewajaran mengawal selia blockchain dalam memastikan ia mematuhi segala perundangan dalam sistem perbankan negara.

"Empat sesi perbincangan turut diadakan membabitkan topik teras kepada laporan itu, Initial Coin Offerings, Money Service Business, Data Protection and Consumer Rights in Blockchain technologies," katanya.

Sementara itu, Ketua Penyelidik Nur Husna Zakaria, berkata pihaknya mengalu-alukan mana-mana pihak yang ingin memanfaatkan inti pati daripada penyelidikan berkenaan dalam membentuk dasar bagi mengawal selia blockchain di negara ini.

"Semua sektor perlu berganding bahu dan bekerjasama dengan kerajaan bagi membentuk dasar dan regulasi untuk memastikan kepentingan usahawan, pelabur dan masyarakat sentiasa dilindungi," katanya.

Laporan mengenai pengawal seliaan blockchain itu boleh dimuat turun secara percuma daripada Fakulti Perundangan, UMCoRS dan laman web QRC.

**LAMPIRAN 3**
**HARIAN METRO: MUKA SURAT 78**
**TARIKH: 29 JULAI 2018 (AHAD)**

# DUA KEAJAIBAN SATU MALAM

***Rakyat Malaysia berpeluang menyaksikan fenomena pencerapan planet Marikh dan gerhana bulan penuh semalam***

**Ahmad Suhael Adnan**
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**Kuala Lumpur**

Rakyat Malaysia berpeluang menyaksikan dua fenomena astronomi yang jarang berlaku pada malam kelmarin.

Pengarah Planetarium Negara, Anita Bahari, berkata dua fenomena itu adalah pencerapan planet Marikh dan gerhana bulan penuh.

Katanya, pencerapan planet Marikh disifatkan amat istimewa kerana antara jam 9 malam hingga 11.30 malam, jarak planet berada hampir dengan Bumi, pada lingkungan jarak 50 juta kilometer (km).

"Jarak antara Bumi dengan Marikh kali ini kira-kira 57.8 juta km dan kali terakhir jarak kedua-dua planet itu berada dalam lingkungan 50 juta km adalah pada 27 Ogos 2003, iaitu 55.8 juta km.

"Fenomena malam ini sangat istimewa dan satu-satunya peluang buat kita melihat Marikh dalam jarak dekat kerana ia hanya dijangka berlaku semula pada 28 Ogos 2287, iaitu 269 tahun daripada sekarang," katanya ketika ditemui di Planetarium Negara di sini, semalam.

Anita berkata, gerhana bulan pula bermula jam 2.24 pagi hingga 6.19 pagi, dengan fasa gerhana bulan penuh berlaku antara jam 3.30 pagi dan mencapai kemuncaknya pada jam 4.21 pagi.

"Istimewanya fenomena gerhana bulan malam ini, ia yang kedua selepas 'Super Blue Blood Moon' pada 31 Januari lalu, selain tempoh fasa gerhana bulan penuh kali ini adalah paling panjang dalam abad ke-21, iaitu hampir dua jam.

"Ketika fasa gerhana bulan penuh berlaku, warna bulan akan menjadi kemerah-merahan kerana bulan terlindung oleh bayang umbra Bumi," katanya yang turut menjelaskan fenemona itu dapat dilihat di hampir keseluruhan benua Asia serta sebahagian Australia.

Anita berkata, pihaknya memberi peluang kepada orang ramai melihat sendiri dua fenomena itu di Planetarium Negara secara percuma.

"Kami menyediakan empat teleskop kepada pengunjung, selain turut disertai beberapa teleskop daripada Jabatan Mufti Wilayah Persekutuan, kelab falak dan daripada mereka yang berminat dengan astronomi.

"Menariknya, pengunjung yang menyertai pencerapan planet Marikh malam ini, turut berpeluang melihat tiga planet lain dengan amat jelas.

"Mereka teruja kerana dapat melihat Musytari bersama empat bulan dan Zuhal dengan gegelangnya, selain Zuhrah," katanya.

Sementara itu, peniaga, Kamarul Anuar Mohd Kornain, 43, teruja dapat melihat planet Marikh secara langsung buat pertama kali.

Dia yang hadir ke Planetarium Negara bersama tiga anaknya, mengakui berminat dengan bidang astronomi sejak kecil, namun tidak pernah berkesempatan melihat angkasa menerusi teleskop.

"Ini kali pertama saya datang ke Planetarium Negara dan teruja untuk melihat planet Marikh kerana selama ini hanya melihatnya di Internet," katanya.

Sementara itu, felo penyelidik komunikasi frekuensi tinggi Universiti Kebangsaan Malaysia (UKM), Dr Sabirin Abdullah, 41, turut hadir ke Planetarium Negara membawa dua teleskop bagi melihat kedua-dua fenomena itu.

"Dengan teleskop yang dibawa sendiri ini, saya dapat memberi peluang kepada orang ramai untuk menggunakannya.

"Saya mula berminat dengan bidang astronomi sejak tahun lalu dan membeli sendiri teleskop, dan akan menganjurkan pencerapan di UKM jika tidak hadir ke Planetarium Negara.

"Saya agak kecewa kerana tidak dapat melihat fenomena 'Super Blue Blood Moon' Januari lalu kerana cuaca tidak mengizinkan, namun fenomena gerhana hari ini diharap dapat mengubat kekecewaan itu," katanya.

**LAMPIRAN 4**
**BERITA HARIAN (ASTRONOMI): MUKA SURAT 21**
**TARIKH: 29 JULAI 2018 (AHAD)**

***Turutan gerhana bulan*** *bermula pada jam 1.14 pagi hingga 7.28 pagi di Kuala Lumpur, semalam.*

[FOTO ZAMAN HURI ISA/BH]

# Dua fenomena astronomi dalam satu malam

***Orang ramai bersama pelajar Maahad Muhammadi*** *melakukan cerapan sempena fenomena gerhana bulan penuh di Balai Cerap Kota Bharu, semalam.*

[FOTO MOHAMAD SHAHRIL BADRI SAALI/BH]

***Antara pengunjung yang hadir*** *bagi melakukan cerapan sempena fenomena gerhana bulan penuh di Planetarium Negara, Kuala Lumpur, awal pagi semalam.*

## Orang ramai teruja saksikan pencerapan planet Marikh, Blood Moon

**Oleh Ahmad Suhael Adnan, Siti A'isyah Sukaimi dan Amran Yahya**
cnews@nstp.com.my

► Kuala Lumpur

Rakyat Malaysia berpeluang menyaksikan dua fenomena astronomi yang jarang berlaku malam kelmarin, iaitu pencerapan planet Marikh dan gerhana bulan penuh atau *Blood Moon*.

Pengarah Planetarium Negara, Anita Bahari, berkata pencerapan planet Marikh disifatkan cukup istimewa kerana antara jam 9 malam hingga 11.30 malam kelmarin, jarak planet itu berada hampir dengan Bumi, iaitu pada lingkungan jarak 50 juta kilometer (km).

"Jarak bumi dengan Marikh kali ini adalah kira-kira 57.8 juta km dan kali terakhir jarak kedua-dua planet itu berada dalam lingkungan 50 juta km adalah pada 27 Ogos 2003, iaitu 55.8 juta km.

"Fenomena ini amat istimewa dan satu-satunya peluang buat kita melihat Marikh dalam jarak dekat kerana ia dijangka berlaku semula pada 28 Ogos 2287, iaitu 269 tahun dari sekarang," katanya ketika ditemui di Planetarium Negara, semalam.

Anita berkata, gerhana bulan yang bermula awal pagi semalam, iaitu pada jam 2.24 pagi hingga 6.19 pagi, dengan fasa gerhana bulan penuh berlaku antara jam 3.30 pagi dan mencapai kemuncaknya pada jam 4.21 pagi.

### Fasa gerhana paling panjang

"Istimewanya fenomena gerhana bulan ia adalah yang kedua selepas *Super Blue Blood Moon* pada 31 Januari lalu, selain tempoh fasa gerhana bulan penuh kali ini adalah paling panjang dalam abad ke-21, iaitu hampir dua jam.

"Ketika fasa gerhana bulan penuh ini berlaku, warna bulan menjadi kemerah-merahan kerana bulan terlindung oleh bayang umbra Bumi," katanya yang turut menjelaskan fenemona itu dapat dilihat di hampir keseluruhan benua Asia serta sebahagian Australia.

Anita berkata, pihaknya memberi peluang kepada orang ramai melihat kedua-dua fenomena itu di Planetarium Negara secara percuma.

"Kami menyediakan empat teleskop kepada pengunjung, selain turut disertai beberapa teleskop daripada Jabatan Mufti Wilayah Persekutuan, kelab falak dan daripada mereka yang berminat dengan astronomi.

"Menariknya, pengunjung yang menyertai pencerapan planet Marikh, turut berpeluang melihat tiga planet lain dengan amat jelas.

"Mereka cukup teruja kerana dapat melihat Musytari bersama empat bulan dan Zuhal dengan gegelangnya, selain Zuhrah," katanya.

Sementara itu, peniaga, Kamarul Anuar Mohd Kornain, 43, menzahirkan rasa teruja kerana dapat melihat planet Marikh secara langsung buat pertama kali.

Sementara itu, felo penyelidik komunikasi frekuensi tinggi Universiti Kebangsaan Malaysia (UKM), Dr Sabirin Abdullah, 41, turut hadir ke Planetarium Negara membawa dua teleskop bagi melihat kedua-dua fenomena itu.

Di **Kuala Pilah**, fenomena gerhana bulan yang berlaku awal pagi kelmarin dianggap paling indah dalam abad ini kerana ia mampu dilihat tanpa menggunakan alat bantuan.

Ahli kariah Masjid Kariah Desa Anggerik (MKDA), Abd Razak Abdullah, 64, berkata keindahan itu ketara kerana sebelum ini sering terhalang disebabkan faktor cuaca yang tidak baik seperti hujan dan awan tebal.

Sementara itu, solat gerhana dan khutbah khas disampaikan oleh Imam Satu MKDA, Mohd Rosli Ibrahim pada jam 4 pagi.

Dalam khutbahnya, beliau menyeru umat Islam melihat bagaimana kejadian gerhana bulan adalah bukti kehebatan dan kekuasaan Allah sebagai pentadbir alam, segala peredaran cakerawala, bumi, bulan, matahari dan seumpamanya.

Di **Putrajaya**, program berbentuk keagamaan diadakan di Masjid Tuanku Mizan Zainal Abidin (MTMZA) bermula kelmarin hingga awal pagi semalam susulan gerhana bulan penuh yang dapat disaksikan oleh rakyat Malaysia.

### Fenomena kali kedua

Aktiviti bermula dengan solat Maghrib dan tazkirah diikuti forum ringkas berkaitan gerhana selain cerapan planet.

Solat sunat gerhana bulan dihadiri kira-kira 100 orang dipimpin oleh Ustaz Muhd Redza Ahmad, dan diikuti khutbah bertajuk Gerhana Bulan Menginsafi Keagungan Ilahi.

Dalam pada itu, Penolong Pengarah Unit Falak Jabatan Kemajuan Islam Malaysia (JAKIM) Shahril Azwan Hussin berkata, ini adalah fenomena kali kedua pada tahun ini selain disifatkan gerhana bulan penuh paling lama berlaku.

"Fasa gerhana bulan penuh kali ini bermula pada jam 3.30 pagi sehingga mencapai kemuncak pada pukul 4.21 pagi berakhir 5.13 pagi," katanya.

**Info**

### Gerhana bulan penuh

- **Gerhana** bulan penuh berlaku apabila matahari, Bumi dan bulan berada pada kedudukan sebaris, dan bulan dilindungi bayang umbra Bumi.
- **Terdapat** lima fenomena gerhana sepanjang tahun ini, iaitu dua gerhana bulan dan tiga gerhana matahari.
- **Ketiga-tiga** fenomena gerhana matahari tahun ini tidak dapat dilihat di Malaysia.

**LAMPIRAN 5**
**NEW STRAITS TIMES (NATION): MUKA SURAT 28**
**TARIKH: 29 JULAI 2018 (AHAD)**

CELESTIAL SPECTACLE

# BLOOD MOON, MARS WOW STARGAZERS

## Enthusiasts from around the world gather to watch rare phenomena

**KUALA LUMPUR**

MALAYSIANS were treated to a celestial spectacle as two rare astronomical phenomena occurred on Friday night.

Enthusiasts from here and around the world gathered to watch the "blood moon", as well as Mars, which was at its closest to Earth.

National Planetarium director Anita Bahari said Mars observation was also special because between 9pm and 11.30pm, the planet was only about 57.8 million kilometres away from Earth.

"The last time Mars was that close to Earth was on Aug 27, 2003, when it was just 55.8 million kilometres away. This is special because the next time Mars will come that close to Earth is on Aug 28, 2287, and that's 269 years from now."

The blood moon phenomenon took place from 2.24am to 6.19am, with full eclipse at 3.30am.

"This is the second blood moon this year, after the super blue blood moon on Jan 31. What's also special about it is that the two-hour blood moon view was the longest in the century."

The blood moon phenomenon occurs when the moon, in total eclipse, appears reddish as it is illuminated by sunlight filtered and refracted through Earth's atmosphere.

Anita said the planetarium was opened to the public last night.

"We supplied four telescopes to those who came, while the Federal Territories Mufti Department provided more. Others brought their own telescopes."

She said three other planets were clearly visible last night — Jupiter and four of its moons; Saturn and its rings; and, Venus.

Trader Kamarul Anuar Mohd Kornain, 43, who visited the planetarium with his three children, said he was awed by the phenomenon.

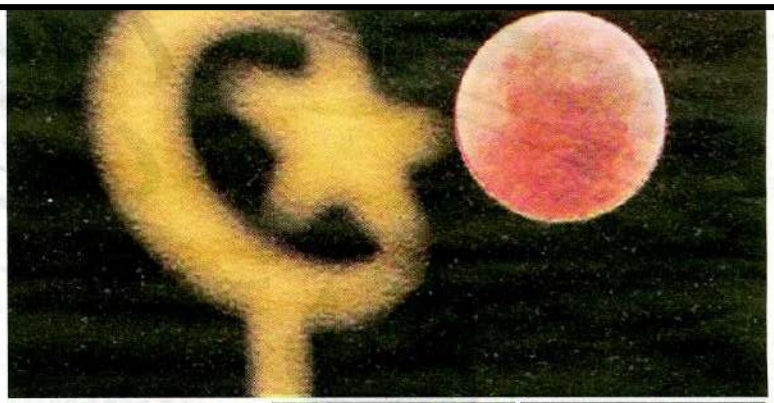
He said he had been interested in astronomy since young, but never had the opportunity to observe such phenomenon through a real telescope.

Universiti Kebangsaan Malaysia high-frequency communications research fellow Dr Sabirin Abdullah went to the planetarium with two telescopes.

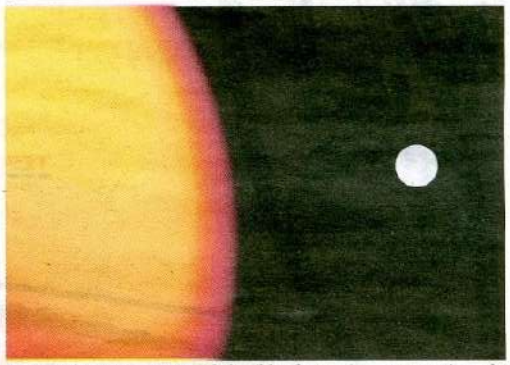
"I brought two so that others could have the chance to look as well. I only started becoming interested in astronomy last year, but I bought my own telescopes.

"I was truly disappointed when I couldn't observe the super blue blood moon in January, but the blood moon will make up for it."

» See also Page 30

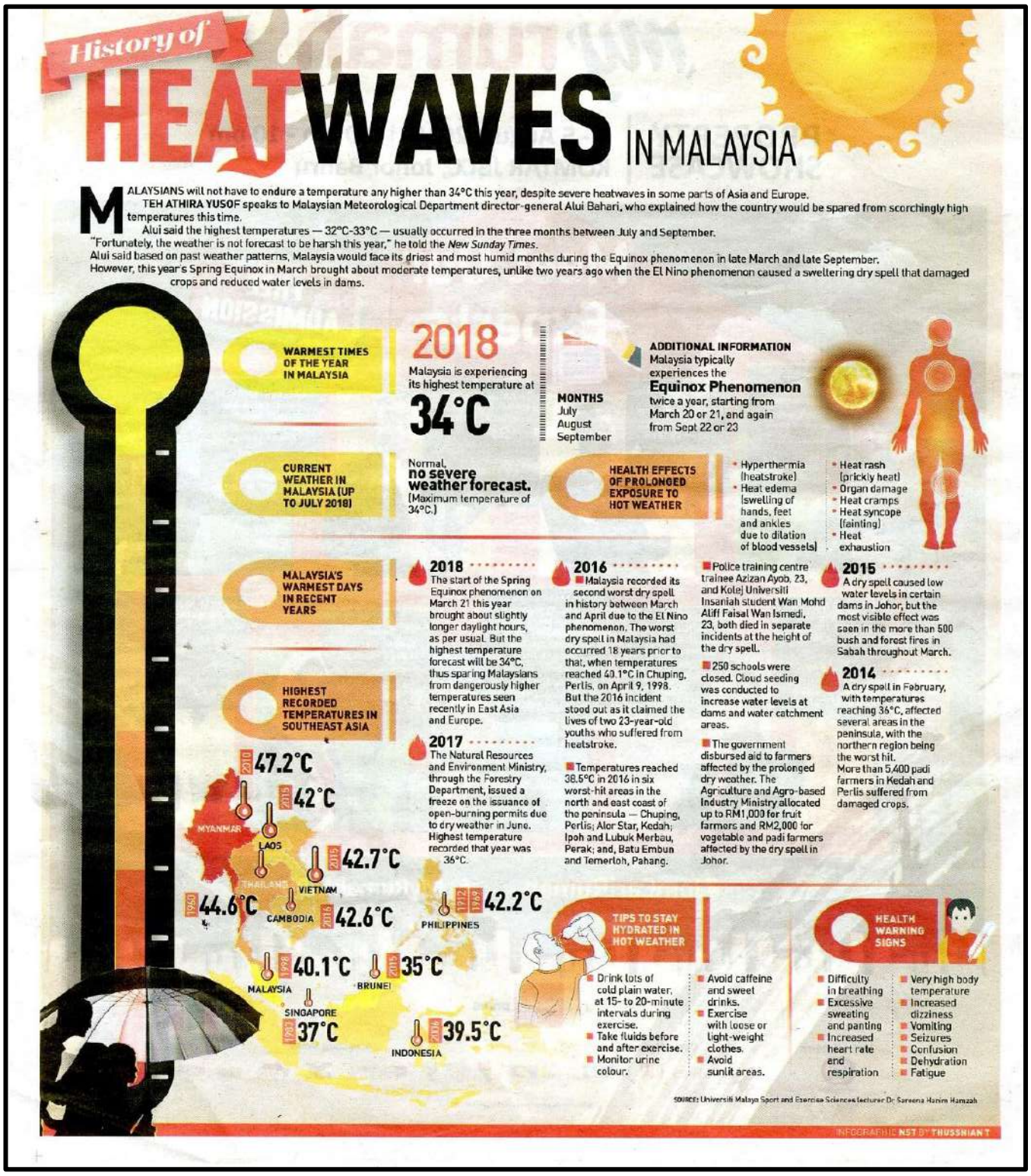


*Masjid Putra Grand Imam Datuk Abd Manaf (third from right) looking at the 'blood moon' and Mars through a telescope in Kuala Lumpur on Friday night.* PIC BY AHMAD IRHAM MOHD NOOR



*(Top to bottom) Images of the 'blood moon' as captured at the Masjid Seberang Marang dome in Kuala Terengganu, Kuala Lumpur and Masjid Negeri Kota Kinabalu yesterday.* PIX BY GHAZALI KORI, ZULFADHLI ZULKIFLI AND MALAI ROSMAH TUAH

**LAMPIRAN 6**
**NEW STRAITS TIMES (NEWS/ INFOGRAPHIC): MUKA SURAT 10**
**TARIKH: 29 JULAI 2018 (AHAD)**



**LAMPIRAN 7**
**UTUSAN MALAYSIA (DALAM NEGERI): MUKA SURAT 7**
**TARIKH: 30 JULAI 2018 (ISNIN)**

**LEE LAM THYE** (depan, lima dari kanan), Azman Mohd. (depan, enam dari kanan) bersama para pegawai dan kakitangan TNB memegang sepanduk Tenaga *Safety Culture* pada majlis pelancaran Tenaga *Safety Culture* sempena program Tenaga *Safety Day* 2018 di Kompleks Sukan TNB Bangsar, Kuala Lumpur, baru-baru ini. - UTUSAN/MOHD. FARIZWAN HASBULLAH

# TNB sasar sifar kemalangan

**Oleh MOHD. AZRAIE MD. YUSOF**
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■ **KUALA LUMPUR 29 JULAI**

TENAGA Nasional Berhad (TNB) melalui pelancaran inisiatif terbaharunya iaitu Tenaga *Safety Culture* (TSC) menyasarkan tiada lagi kemalangan jiwa membabitkan warga kerjanya sewaktu bertugas di lapangan.

Presiden dan Ketua Pegawai Eksekutif TNB, Datuk Seri Ir. Azman Mohd. berkata, warga kerja TNB tidak boleh lagi bersandarkan kepada peraturan keselamatan yang dikeluarkan organisasi itu semata-mata, sebaliknya perlu mengamalkan suatu budaya yang dapat mewujudkan suasana selamat di tempat kerja.

"Sebagai sebuah syarikat yang mempunyai 36,000 warga kerja, TNB sentiasa mengambil berat tentang keperluan keselamatan dan kesihatan pekerja kerana mereka sentiasa berdepan dengan pelbagai risiko ketika melakukan kerja.

"Selain berpandukan peraturan keselamatan sedia ada, kemalangan boleh dielakkan jika semua warga kerja TNB mengamalkan budaya keselamatan.

"Hasrat saya agar sasaran sifar kemalangan jiwa menjadi kenyataan. Kita mahu kemalangan maut yang berlaku sebelum ini sebagai kemalangan terakhir dalam TNB," katanya ketika berucap dalam Majlis Pelancaran TSC di Kompleks Sukan TNB, di sini baru-baru ini.


**LEE LAM THYE** (kiri) dan Azman Mohd. menyempurnakan majlis pelancaran Tenaga *Safety Culture* sempena program Tenaga *Safety Day* 2018.

Majlis itu yang diadakan sempena penganjuran Tenaga *Safety Day* telah disempurnakan oleh Pengerusi Institut Keselamatan dan Kesihatan Pekerjaan Negara (NIOSH), Tan Sri Lee Lam Thye.

Tenaga *Safety Day* merupakan program kesihatan, keselamatan dan alam sekitar (HSE) untuk warga kerja TNB dan anak syarikatnya yang bertujuan mempromosikan HSE serta menyokong objektif TNB bagi memupuk budaya HSE.

Bertemakan *Get Home Safe*, TNB mahu warga kerjanya melakukan tugas seharian dengan selamat agar mereka dapat pulang ke pangkuan keluarga tersayang.

Pelbagai acara diadakan sempena program tersebut iaitu pameran oleh agensi-agensi keselamatan, pemeriksaan kesihatan, persembahan video serta pertandingan keselamatan untuk pelajar-pelajar sekolah serta universiti.

Mengulas lanjut mengenai TSC, Azman berkata, budaya keselamatan itu menekankan empat tingkah laku utama iaitu menilai, patuh, tegur dan prihatin.

Jelas beliau, menilai merupakan amalan yang penting kerana situasi yang dihadapi pekerja mungkin berbeza-beza dan memerlukan mereka untuk menggunakan kebijaksanaan masing-masing untuk memastikan keselamatan terjamin.

Sebagai contoh, sekiranya berdepan situasi luar biasa seperti cuaca tidak baik atau bencana banjir, pekerja haruslah mengambil keputusan dengan mempertimbangkan untuk menggunakan prosedur sedia ada atau mengubahsuai prosedur itu mengikut situasi semasa.

"Kemudian kita ada amalan patuh iaitu mematuhi peraturan yang telah dikuatkuasakan. Sekiranya terdapat sebarang situasi tidak selamat, pekerja perlu hentikan kerja tersebut dan rujuk kepada penyelia atau pegawai bertanggungjawab.

"TSC juga menerapkan amalan tegur. Jika ternampak pekerja lain melakukan tingkah laku atau keadaan tidak selamat, kita haruslah menegur kerana kadang-kadang mungkin mereka terlupa.

"Yang terakhir adalah prihatin. Sikap ini memberikan impak yang positif dan baik sekali gus dapat mewujudkan suasana selamat di tempat kerja di samping mengeratkan lagi hubungan sesama pekerja," ujarnya.

**LAMPIRAN 8**
**UTUSAN MALAYSIA (DALAM NEGERI): MUKA SURAT 7**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# Contohi TNB wujud budaya keselamatan

**KUALA LUMPUR 29 Julai** - Syarikat-syarikat korporat serta syarikat milik kerajaan (GLC) wajar mencontohi Tenaga Nasional Berhad (TNB) yang melancarkan Tenaga *Safety Culture* (TNC) bagi menerapkan budaya kerja selamat dan sihat dalam kalangan warga kerjanya.

Pengerusi Institut Keselamatan dan Kesihatan Pekerjaan Negara (NIOSH), Tan Sri Lee Lam Thye berkata, adalah menjadi tanggungjawab majikan dan pihak pengurusan untuk memastikan pengurusan keselamatan dan kesihatan pekerjaan (KKP) bukan hanya menjadi keutamaan, malah dijadikan sebagai budaya korporat di organisasi masing-masing.

"Syabas kepada TNB atas usahanya melancarkan TSC sempena penganjuran Tenaga *Safety Day*. Ini mesej yang jelas bahawa TNB begitu menitikberatkan KKP serta prihatin kepada warga kerjanya.

"Saya harap bahawa usaha seperti ini boleh membantu masyarakat dan negara mengurangkan kejadian kemalangan di tempat kerja terutama dalam kalangan warga kerja TNB yang diketahui umum sentiasa berdepan risiko tinggi," katanya.

Beliau berkata demikian kepada pemberita selepas menyempurnakan Majlis Pelancaran TSC di Kompleks Sukan TNB, di sini baru-baru ini.

Yang turut hadir, Presiden dan Ketua Pegawai Eksekutif TNB, Datuk Seri Ir. Azman Mohd.; Pengarah Jabatan Keselamatan dan Kesihatan Pekerjaan Negeri Selangor, Mohd. Anuar Embi; Ketua Pengarah Jabatan Alam Sekitar Malaysia, Datuk Dr. Ahmad Kamarulnajuib Che Ibrahim dan Pengarah Kawal Selia Keselamatan Elektrik Suruhanjaya Tenaga, Mohd. Elmi Anas.

Menurut Lam Thye, keseriusan TNB dalam aspek KKP juga jelas dapat dilihat melalui komitmen organisasi itu menghantar warga kerjanya menjalani latihan di NIOSH.

Malah, kata beliau, TNB sendiri menghantar pegawai-pegawainya sebagai tenaga pengajar dalam kursus-kursus yang ditawarkan di NIOSH seperti NIOSH-TNB *Safety Passport* (NSTP).

"Selain itu, NIOSH turut menjalin kerjasama dengan TNB melalui TNB *Integrated Learning Solution* (ILSAS) dalam menjalankan kursus-kursus KKP selain beberapa projek perundingan KKP seperti program *Behaviour Based Safety* (BBS) yang dijalankan secara berfasa.

"NIOSH sentiasa bersedia untuk memberikan kerjasama bagi memantapkan lagi aspek pengurusan KKP di TNB terutama dalam menghadapi cabaran baharu dalam era Revolusi Industri 4.0 (IR4.0)," katanya.

**LEE LAM THYE diiringi Azman Mohd. (dua dari kiri) melawat gerai pameran sempena program Tenaga *Safety Day* 2018 dan pelancaran Tenaga *Safety Culture* di Kompleks Sukan TNB Bangsar, Kuala Lumpur, baru-baru ini.**

**LAMPIRAN 9**
**UTUSAN MALAYSIA (DALAM NEGERI): MUKA SURAT 12**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# Sambutan Cabaran Innovasi STEM menggalakkan

**KUCHING 29 Julai** - Menyedari kepentingan bidang sains, teknologi, kejuruteraan dan matematik (STEM) untuk pembangunan generasi muda dan masa depan negara, Lembaga Tabung Haji (Tabung Haji) mengambil inisiatif memperluaskan Program Cabaran Inovasi STEM ke Sabah dan Sarawak tahun ini.

Sebelum ini, program kolaborasi antara Tabung Haji dan Universiti Kebangsaan Malaysia (UKM) di bawah kendalian Berkat Minda Resources yang diperkenalkan pada tahun lalu itu hanya membabitkan penyertaan peserta dalam kalangan pelajar tingkatan satu hingga tiga di empat zon di Semenanjung Malaysia.

Pengurus Kanan Bahagian Khidmat Pelanggan Tabung Haji, Noorazmima Ismail berkata, pertandingan yang menggalakkan pelajar untuk melahirkan pelbagai idea dan kreativiti dalam melahirkan sumber tenaga baharu itu ternyata mendapat sambutan menggalakkan apabila pertama kali diperkenalkan tahun lalu.

"Kita menyedari ramai pelajar takut untuk menceburi STEM sedangkan peluang dan pasaran kerja dalam bidang itu pada masa depan cukup luas di negara ini.

"Melalui pertandingan ini, kita menggalakkan pelajar melahirkan kreativiti dan belajar konsep menarik tentang STEM agar mereka tertarik untuk mengambil bidang ini apabila memasuki tingkatan empat, seterusnya ke peringkat pengajian tinggi pada masa depan," katanya berucap merasmikan majlis penutupan Pertandingan Cabaran Innovasi STEM 2018 Peringkat Zon Sarawak di Pusat Latihan Islam Sarawak, Telaga Air di sini, hari ini.

Yang turut hadir, Pensyarah UKM merangkap Pengerusi Pembudayaan STEM UKM, Prof. Dr. Mohamad Sattar Rasul; Timbalan Pengarah Tabung Haji Sarawak, Mohammad Salim dan Pengarah Urusan Berkat Minda Resources, Mahmood Mat Ali.

Mengulas lanjut mengenai pertandingan itu, Noorazmima berkata, peserta yang layak mengambil bahagian merupakan ahli Kelab Tabung Haji (TaHA) dan bagi Sarawak, program pertama kali diperkenalkan ini disertai oleh 25 sekolah yang dipilih membabitkan 400 pelajar.

Katanya, tiga sekolah yang dipilih sebagai pemenang di Sarawak iaitu tempat pertama, Sekolah Menengah (SM) Sains Kuching, Sekolah Menengah Kebangsaan Agama (SMKA) Sheikh Hj. Othman Abd. Wahab (kedua) dan Sekolah Menengah Kebangsaan (SMK) Batu Lintang (ketiga) akan mewakili negeri ini untuk bertanding di peringkat kebangsaan yang berlangsung pada 9 hingga 13 November ini.

"Kita akan melihat keputusan dan sambutan pada tahun ini. Jika ada pelajar yang menang pertandingan terus maju dalam STEM dan memilih bidang ini semasa memasuki tingkatan empat, Tabung Haji akan mencadangkan pertandingan ini diadakan secara tahunan," katanya sambil memberitahu bermula tahun ini, program sama turut diperkenalkan kepada murid sekolah rendah tetapi hanya di Semenanjung Malaysia.

Sementara itu, Mohamad Sattar ketika ditemui memberitahu, pihaknya memberi perhatian terhadap program STEM kerana menyedari Malaysia masih kekurangan pakar dalam bidang terbabit iaitu hanya memiliki 25 hingga 35 peratus ketika ini, berbanding sasaran 60 hingga 70 peratus.

Beliau berkata, kekurangan pakar STEM menyebabkan tenaga mahir warga asing seperti jurutera daripada Taiwan, Bangladesh dan India terpaksa dibawa masuk untuk bekerja di negara ini.

**MOHAMAD SATTAR RASUL (tiga dari kanan) para pelajar menyiapkan projek mereka ketika Pertandingan Cabaran Innovasi STEM 2018 Peringkat Zon Sarawak di Kuching, semalam. Turut sama, Mahmood Mat Ali (dua dari kanan). - UTUSAN/MOHAMAD GUSTIE NOORAMBIA**

**LAMPIRAN 10**
**KOSMO (DALAM NEGERI): MUKA SURAT 22**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# Petah kupas teori sains cara mudah

SITI KHAYRIYYAH menerangkan terma sains secara mudah untuk difahami pelajarnya.

**Siti Khayriyyah berjaya membuktikan bahawa saintis Malaysia mampu menyampaikan teori sains pada pertandingan yang menguji kemahiran komunikasinya.**

TIMBALAN Perdana Menteri, Datuk Seri Dr. Wan Azizah Wan Ismail menyampaikan sijil penghargaan kepada Siti Khayriyyah di atas kejayaannya.

KAKINYA tangkas mengatur langkah menuju ke salah sebuah makmal di Pusat Pengajian Sains Kajihayat, Universiti Sains Malaysia (USM), Pulau Pinang.

Ada tugasan yang perlu diselesaikan bersama beberapa orang pelajar di bawah seliaannya.

Menariknya, setiap persoalan yang diajukan dijawab secara bersahaja wanita kecil molek itu. Riak wajahnya tenang dan bibirnya juga tidak pernah lekang mengukir senyuman.

Terma-terma sains yang rumit disimpulkan dalam bahasa mudah untuk difahami tanpa perlu ditanya berkali-kali.

Selayaknya, **Dr. Siti Khayriyyah Mohd. Hanafiah**, 33, dinobatkan sebagai juara dunia menewaskan 11 finalis dari seluruh dunia pada pertandingan FameLab International 2018 yang berlangsung di Cheltenham, Britain baru-baru ini.

Antara negara yang terlibat ialah Romania, Hungary, Switzerland, Bangladesh, Portugal, Jerman, Qatar, Cyprus dan Britain.

Pertandingan berprestij tersebut menguji kemahiran lisan saintis muda dalam menyampaikan teori dan konsep sains secara kreatif kepada khalayak ramai dalam tempoh tiga minit.

Pensyarah dari Pusat Pengajian Sains Kajihayat USM itu mengharumkan nama Malaysia di persada antarabangsa menerusi pembentangan penyelidikannya mengenai penggunaan antibodi antigen untuk diagnosis penyakit tuberkulosis (tibi) atau batuk kering yang bertajuk *To Find a Hidden Killer*.

"Sebenarnya, minat saya terhadap bidang sains bermula sejak di bangku sekolah lagi disebabkan hobi yang gemar menonton pelbagai rancangan televisyen menyeronokkan.

"Saya begitu teruja untuk mengetahui lebih mendalam fenomena alam dan tidak akan melepaskan peluang mempelajari pelbagai perkara baharu mengenai sains," katanya ketika ditemui *Kosmo!* di Pusat Pengajian Sains Kajihayat, USM, Pulau Pinang baru-baru ini.

Cerita anak kelahiran Bangi, Selangor itu, antara rancangan yang menjadi kegemarannya ialah *The Magic School Bas* dan *Di Mana Joe Jambul?* yang banyak menambah pengetahuan am mengenai bidang sains.

Kedua-dua rancangan kartun tersebut bersiaran sekitar 1990-an berkonsepkan permainan yang menarik sehingga membuka minda Siti Khayriyyah untuk meneroka ilmu sains dengan lebih mendalam lagi.

"Setiap episod yang ditayangkan memberi ilmu yang berbeza sehingga saya dengan sendirinya akan mencari maklumat tambahan menerusi pembacaan untuk merungkai persoalan yang bermain dibenak fikiran," ceritanya.

## Identiti bapa

Sejak itu, Siti Khayriyyah amat meminati subjek sains dan sering memperoleh keputusan yang cemerlang.

Lebih membanggakan, bekas pelajar Maktab Rendah Sains Mara, Pengkalan Chepa, Kelantan itu berjaya meraih 11A dalam peperiksaan Sijil Pelajaran Malaysia sekali gus melayakkannya mendapat biasiswa tajaan Majlis Amanah Rakyat (Mara) untuk

**LAMPIRAN 11**
**KOSMO: MUKA SURAT 24**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# Negara miliki saintis berbakat, pakej

KEJAYAAN saintis muda, Dr. Siti Khayriyyah Mohd. Hanafiah yang dinobatkan sebagai juara dunia di pertandingan FameLab International 2018 telah mengharumkan nama negara di pentas dunia.

**Ketua Pegawai Eksekutif (CEO) Kumpulan Industri-Kerajaan Malaysia bagi Teknologi Tinggi (MIGHT), Datuk Dr. Mohd. Yusoff Sulaiman** berkata, kejayaan itu membuktikan bahawa negara tidak ketandusan saintis yang berbakat dan mempunyai pakej serba lengkap.

"Terma-terma sains yang kompleks amat menyukarkan seseorang terutamanya mereka yang bukan daripada latar belakangnya untuk memahami sesuatu topik atau isu sains dengan mudah.

"Namun, FameLab telah membuktikan negara berjaya menghasilkan seorang saintis yang mempunyai pakej serba lengkap dan patut dibanggakan," katanya ketika ditemui di ibu pejabat MIGHT, Cyberjaya, Selangor baru-baru ini.


MOHD. YUSOFF

Menurut Mohd. Yusoff, terdapat beberapa kekuatan yang dimiliki saintis daripada Universiti Sains Malaysia itu yang melayakkannya untuk dinobatkan sebagai juara.

"Dia membawa satu tajuk yang berbeza berbanding peserta lain dan menyampaikannya dalam konteks yang mudah difahami dan gaya yang menarik.

"Karakternya yang tenang dan menjawab setiap persoalan dengan yakin serta penuh input menambahkan lagi kekuatannya sebagai seorang pemenang," katanya.

Mohd. Yusoff optimis sekiranya penyelidikan yang dijalankan Siti Khayriyyah diteruskan maka penawar kepada penyakit tibi dapat ditemui.

**LAMPIRAN 12**
**MALAY MAIL (TOP NEWS): MUKA SURAT 6**
**TARIKH: 30 JULAI 2018 (ISNIN)**

The Upcycle Park in Seberang Perai is made from used and waste materials. — Picture by Putri Amilia

# Upcycle park finds way into records book

**BUKIT MERTAJAM** — The first Upcycle Park of the Seberang Perai Municipal Council has found its way into the Malaysia Book of Records.

Housing, local government and town and country planning committee chairman Jagdeep Singh Deo said the recreation park, developed with used and waste materials, was given the recognition for its uniqueness.

"The cost of the project was RM2,000, compared to RM300,000 usually allocated to set up a recreation park", he said when officiating the 44th MPSP Day here yesterday.

"Just consider the huge savings made from the project. I hope more upcycle parks will be developed for the people."

Jagdeep said the park, the first in the country, was developed in keeping with a call by the state government to make Penang the first green state in Malaysia. It has an impact on raising the quality of life of its 20,500 residents.

On another matter, Jagdeep said the state government was converting the existing street lights to light-emitting diode (LED) lights with the help of Tenaga Nasional Berhad.

He said the initiative began in June with the target of converting 33,000 street lights on the island and 45,000 street lights in Seberang Perai, making Penang the first state to have 100 per cent LED street lights.

Jagdeep said the LED street lights would help save up to 60 per cent on the electricity bill.

"The state government spends RM13 million annually on the electricity bill to maintain street lights, with RM6 million for those on the island and RM7 million for those in Seberang Perai," he said. — Bernama

**LAMPIRAN 13**
**THE SUN (SPEAK UP): MUKA SURAT 8**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# Improving ties with China

**COMMENT**
by Jomo Kwame Sundaram

VARIOUS REPORTS and even remarks by some close to the new government of Malaysia imply that it will be antagonistic to improving economic relations with China. This misrepresents the popular Malaysian rejection of the corrupt kleptocracy that ruled the country in the last decade.

To be sure, all Malaysian governments since independence in 1957 have invited foreign direct investment. For decades, some of us have been concerned with the government's seemingly uncritical view of foreign investments. However, to be fair, prime ministers Abdul Razak Hussein and Mahathir Mohamad were circumspect.

How else can we explain the takeovers of mainly British-owned investments in Malaysian trading agencies, plantations and mines of the 1970s? Or for that matter, the technology transfer, employment generation and domestic procurement requirements imposed in the following decade?

Caricaturing the debate over some investments associated with China risks misleading all concerned. This may have unpredictable, and even adverse consequences for economic relations. Since early 2017, some of us have been portrayed in some quarters as critics of all foreign investments from China.

**ECRL**

I had questioned the economic viability of the East Coast Rail Link (ECRL) project as Malaysia would eventually have to pay well over three times the original cost estimates. Even at the much lower costs, the project would never ever pay for itself.

After discounting the original cargo and passenger projections to more realistic levels, the project would have implied permanent bleeding of operating costs, even after writing off the gargantuan development costs of RM81 billion plus interest.

The contract was awarded following "direct nego" by the previous government to a Chinese company without any competition and little transparency, but generous special privileges, including huge tax exemptions.

To be sure, the ECRL would not have involved foreign investment from China, but rather, huge loans from China's Export-Import Bank, ostensibly for 85% of projected costs. It was expedited to start early this year before GE14. A few months later, with little work done, almost RM20 billion, or half the total loan, had been disbursed in dubious circumstances.

The sagas of the two SSER gas pipelines are similar, with the loans almost all disbursed despite little progress on the ground. The huge safety risks for the multi-product pipeline and the likely ecological damage in Sabah only exacerbate the familiar tale of economic infeasibility.

Unsurprisingly, there has been considerable public opposition to such projects and associated debt liabilities, involving likely fraudulent hands already greatly resented by most Malaysians. Needless to say, the resulting debt burdens will be borne by future generations.

**Xi opposes fraud**

On May 9, Malaysians resoundingly rejected such irresponsible foreign investments and dubious loans that will burden and ruin our economy, and their greedy enablers. However, public opposition to such abuses does not constitute blanket opposition to all investments from China. Unfortunately, the undiscriminating tend to lump all investments from China together.

Recent full employment, assured by ballooning public sector employment, has obscured the lacklustre growth since the 1997-1998 Asian crisis, especially in the last decade following premature deindustrialisation.

The promise of services employment has mainly involved traditional, rather than modern services, despite misleading official hype.

Like the government of China, the new Malaysian government is much more discriminating, and recognises that foreign direct investment and technology transfers from abroad will be crucial to progress. Undoubtedly, there are some dodgy foreign investments in Malaysia involving investors from China, as from elsewhere.

But it is important to recognise that China's authorities are embarrassed by such opportunistic, irresponsible, and even corrupt behaviour. Hence, they have taken action to regulate outward capital flows.

Before that, a serving Chinese ambassador famously criticised such investors from China, and publicly apologised for their bad conduct.

For over half a decade, Chinese President Xi Jinping *(pix)* has led a campaign against graft. China's Central Commission for Discipline Inspection has taken the fight abroad since 2015, and can be expected to cooperate, not least because of the reputational risks for China, especially after recent attempts to diplomatically isolate it by its strategic rivals.

**Making cars**

While many Malaysians are understandably wary of a "Perotiga", we should not throw the baby out with the bathwater. We should consider Mahathir's plea for a renewed commitment to more technologically advanced industrialisation despite earlier failed "heavy industrial" investments.

For example, Geely should be persuaded to work with Proton to make the country their major export hub for right-hand drive mid-size car production for the world. The collaboration may also build on prescient Mahathir-inspired efforts to develop an electric car in the 1990s, well before the now near universal appreciation of the urgent need to address global warming and air pollution.

After all, electric cars will also dispense with the need for traditional engines, which was the last challenge in developing a Malaysian-made car decades ago.

Of course, the world has changed, and it would be crucial to reconsider what would be viable and internationally competitive going forward.

Malaysians appreciate investments which will contribute to the country's progress, eg, useful artificial intelligence applications, new financial technologies, renewable energy, new medicines and electric vehicles. The new government clearly favours productive industrial investments, especially with Mahathir's well-known commitment to accelerating Malaysian technological progress.

**Zopfan**

Of all Asean leaders, Tun Mahathir has been the most committed to the 1955 Bandung principles and the Asean commitment to make Southeast Asia a Zone of Peace, Freedom and Neutrality (Zopfan), recently reiterated as keeping foreign warships out of the region. This must surely give comfort to China, which has long strived to break out of decades-long efforts to encircle it.

Rather than rely on an opportunistically compliant leader ever ready to serve those who pay him most, China is surely better off dealing with a Malaysian leader who desires peace, freedom and neutrality based on mutual respect and benefit, and truly commands the respect of the governments and peoples of the region.

**Comments:** letters@thesundaily.com

**LAMPIRAN 14**
**UTUSAN MALAYSIA (UTUSAN BIZ): MUKA SURAT 16**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# TNB terima tujuh penaja baharu CEPSI

**KUALA LUMPUR 29 Julai** - Tenaga Nasional Berhad (TNB) menerima tujuh tajaan daripada pelbagai syarikat sempena penganjuran Persidangan Industri Bekalan Tenaga Elektrik (CEPSI) kali ke-22 pada 17 hingga 22 September di Pusat Konvensyen Kuala Lumpur.

Ketua Pegawai Korporat TNB dan Setiausaha Agung Persatuan Industri Bekalan Elektrik Asia Timur dan Pasifik Barat (AESIEAP), Datuk Roslan Ab. Rahman berkata, setakat ini CEPSI 2018 telah menerima penajaan daripada 24 buah syarikat korporat.

"TNB berbesar hati dengan kesudian pelbagai pihak dari dalam dan luar negara yang bersama-sama menyokong acara paling berprestij bagi industri elektrik ini," katanya dalam kenyataan di sini hari ini.

Tujuh syarikat yang tampil sebagai penaja terbaharu CEPSI 2018 adalah Edra Power Holding sebagai penaja Diamond, syarikat konglomerat Korea, Daelim dan pengedar terbesar tenaga elektrik di Filipina, Meralco sebagai penaja Platinum.

Syarikat kontraktor pakar dalam infrastruktur dari Malaysia, LLC Berhad pula muncul sebagai penaja Perak.

Sementara itu, syarikat pakar rangkaian menggunakan inisiatif grid pintar, Trilliant, syarikat pembinaan Korea Selatan, Samsung C&T dan pengedar tunggal majoriti kuasa serta generator elektrik di Indonesia, Perusahaan Listrik Negara (PLN) muncul sebagai penaja Gangsa.

Tambah Roslan, syarikat pengeluar kereta antarabangsa BMW turut menyertai CEPSI 2018 sebagai rakan pengangkutan eksklusif kenderaan elektrik (EV).

"BMW akan menyediakan perkhidmatan shuttle dan hospitaliti untuk para tetamu kehormat. Kerjasama seumpama ini merupakan yang pertama bagi acara yang berskala besar dan penting di Malaysia," katanya

CEPSI 2018 dijangka dihadiri lebih 1,500 delegasi yang terdiri daripada pemimpin, eksekutif kanan, pegawai kerajaan dan profesional dari seluruh dunia.

Kali terakhir TNB menganjurkan persidangan itu adalah pada tahun 1996.

**TNB berbesar hati dengan kesudian pelbagai pihak dari dalam dan luar negara yang bersama-sama menyokong acara paling berprestij bagi industri elektrik ini."**

**ROSLAN AB. RAHMAN**
**Ketua Pegawai Korporat TNB dan Setiausaha Agung Industri Bekalan Elektrik Asia Timur dan Pasifik Barat (AESIEAP)**

**LAMPIRAN 15**
**UTUSAN MALAYSIA (MY SEKOLAH): MUKA SURAT 22**
**TARIKH: 30 JULAI 2018 (ISNIN)**

MOHD. RIDUAN ALI (depan, kanan) bersama-sama Pengarah IPG Kampus Ilmu Khas, Dr. Mohd. Suhaimi Mohamed Ali dan guru-guru Wilayah Persekutuan Kuala Lumpur dan Selangor selepas tamat Kursus Pembangunan Profesionalisme Guru Modul 10 Minit Perhimpunan di IPG Kampus Ilmu Khas, Kuala Lumpur, baru-baru ini.

# M10MP Platform terap daya saing taraf dunia

MENERUSI pelaksanaan Modul 10 Minit Perhimpunan (M10MP) secara berterusan, Sekolah Kebangsaan (SK) Bandar Baru Bangi berjaya melahirkan murid yang memenangi pertandingan sains di peringkat antarabangsa.

Guru SK Bandar Baru Bangi, Mohd. Riduan Ali berkata, modul itu yang dilaksanakan dalam skala penonton yang ramai ketika perhimpunan mingguan dapat meningkatkan keyakinan murid untuk membuat pembentangan dan berkomunikasi dengan berkesan.

"Buktinya, murid kami yang dibimbing secara intensif menerusi pelaksanaan modul berkenaan berjaya dalam pertandingan sains di Bangkok, Thailand, baru-baru ini walaupun ada antara mereka yang tidak meminati sains.

"Minat itu timbul selepas mereka melaksanakan modul berkenaan dan yang lebih membanggakan mereka membuat pembentangan dalam bahasa Inggeris," katanya.

Beliau berkata demikian ketika ditemui dalam Kursus Pembangunan Profesionalisme Guru M10MP, Guru-guru Wilayah Persekutuan Kuala Lumpur dan Selangor di Institut Pendidikan Guru (IPG) Kampus Ilmu Khas, Kuala Lumpur, baru-baru ini.

Kursus selama dua hari itu disertai oleh guru-guru yang memohon melalui laman rasmi Sistem Pengurusan Latihan, Kementerian Pendidikan Malaysia, *https://splkpm.moe.gov.my/mn_pengumuman/*.

Siri kedua kursus akan diadakan pada September ini.

Dalam kursus itu, pelbagai aktiviti Modul 10 Minit Perhimpunan dilaksanakan secara amali agar guru-guru dapat memahami dan mengaplikasikannya di sekolah masing-masing.

Menurut Raduan, guru hanya membimbing manakala kumpulan murid yang bertanggungjawab melaksanakannya sebagai aktiviti berpusatkan murid dan pembelajaran berasaskan projek.

"Aspek komunikasi, kepemimpinan, atribut diri dan dwibahasa adalah antara yang dapat dilihat dan diukur melalui aktiviti yang dibuat oleh murid pada saban minggu.

"Malah, bilangan murid yang berbakat ini juga semakin meningkat kerana murid berlainan mengetuai aktiviti modul tersebut pada setiap minggu," jelasnya.

M10MP ini diterbitkan setiap minggu dalam ruangan *mySekolah* sebagai panduan untuk guru dan murid mencetus aktiviti berimpak tinggi mengikut kesesuaian tahap dan bilangan murid.

**LAMPIRAN 16**
**UTUSAN MALAYSIA (MEGA SAINS): MUKA SURAT 20**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# UITM TEROKA ANGKASA LEPAS

IR.DR Mohamad Huzaimy Jusoh (dua dari kanan) menerangkan sesuatu mengenai kuib prototaip UiTMSat-1 kepada Dr Hassan Said (kanan) semasa Majlis Pelancaran Satelit Pertama UiTM, UiTMSat-1 di Shah Alam, Selangor baru-baru ini.

KEJAYAAN universiti tempatan dalam penciptaan dan penghasilan inovasi berteknologi tinggi kini boleh dibanggakan.

Sebagai contoh, Universiti Teknologi Mara (UiTM) melakar sejarah baharu bukan sahaja buat pusat penggajian tinggi tersebut malah dunia dengan kelahiran UiTMSat-1 iaitu satelit nano pertama bagi universiti di Malaysia melalui kerjasama *Joint Global Multi Nation* (Birds-2) dengan Bhutan dan Filipina yang diterajui Kyushu Institute of Technology (KyuTech) di Jepun.

Selain Malaysia, Bhutan dan Filipina turut menghasilkan satelit nano mereka sendiri iaitu Bhutan-1 dan Maya-1.

Ketua projek yang juga Pengarah Pusat Satelit Komunikasi, Fakulti Kejuruteraan Elektrik UiTM, **Prof. Madya Ir. Ts. Dr. Mohamad Huzaimy Jusoh** berkata, perancangan projek penyelidikan dan pembangunan UiTMSat-1 bermula sejak Januari 2016 dan secara rasminya bermula pada November tahun yang sama apabila menyertai projek kerjasama pintar Birds-2 bersama dengan Jepun, Filipina dan Bhutan untuk pembinaan satelit nano.

"Idea bermula hasil daripada kerjasama yang bermula sejak 2010 bersama penyelidik di Jepun dan juga beberapa universiti di Malaysia bersama dengan Agensi Angkasa Negara.

**Oleh AQILAH MIOR KAMARULBAID**
*aqilah.mks@gmail.com*

"Projek ini turut mendapat sokongan penuh daripada pihak pengurusan UiTM yang melihat wujudnya keperluan untuk sebuah universiti di Malaysia untuk membina dan melancarkan sebuah satelit sebagai asas untuk menempa nama pada peringkat antarabangsa dalam bidang berteknologi tinggi," katanya yang ditemui pada majlis pelancaran satelit nano UiTMSat-1, baru-baru ini.

UITMSAT-1

Hadir sama Naib Canselor UiTM, Prof. Emeritus Datuk Dr. Hassan Said dan Dekan Fakulti Kejuruteraan Elektrik UiTM, Prof. Ir. Dr. Mohd. Nasir Taib.

Tambah Mohamad Huzaimy, projek UiTMSat-1 yang dijalankan sepenuhnya di KyuTech dibina sepenuhnya oleh pelajar bawah seliaan rapi oleh pensyarah dan penyelidik dari Jepun, Malaysia dan Filipina dengan menerapkan konsep *Lean Satellite* iaitu usaha dan penilaian berterusan ke arah mengoptimumkan sumber sedia ada dalam mencapai hasil yang memuaskan pada masa yang pantas.

PASUKAN pelajar dari Malaysia, Bhutan dan Filipina yang berjaya menghasilkan satelit nano negara masing-masing di Kyushu Institute of Technology (KyuTech) di Jepun.

UiTMSat-1 bersama dengan dua satelit nano yang lain perlu dilancarkan ke Stesen Angkasa Antarabangsa (ISS) sebelum mula mengorbit bumi pada Ogos ini pada ketinggian orbit sekitar 400 kilometer (km) dari bumi.

Satelit nano itu difahamkan akan mengorbit bumi dengan kelajuan sekitar 28,000 km/j, yang mengambil masa 90 minit untuk melengkapkan satu putaran bumi.

"Satelit nano ini akan menjalankan misi-misi yang telah ditentukan seperti pengujian Sistem Penentududukan Global (GPS) yang baharu, merakam gambar negara yang terlibat, mengambil bacaan elektromagnetik angkasa dan menghantar serta menerima data dari stesen satelit bumi yang berada di negara terlibat termasuk di stesen satelit bumi di UiTM menggunakan frekuensi radio amatur," jelasnya.

Beliau turut memberitahu, kos utama yang melibatkan peralatan, pengujian dan pelancaran dibiayai universiti menerusi Dana Kecemerlangan Akademik UiTM dengan subsidi oleh kerajaan Jepun dan Pejabat Hal Ehwal Angkasa Lepas, Pertubuhan Bangsa-Bangsa Bersatu (PBB) (UNOOSA) bawah program Birds-2.

"Biasiswa dari Kementerian Pendidikan Tinggi (KPT) sebelum ini kepada dua pelajar pascasiswazah Malaysia (dari UiTM) yang merupakan antara 10 pelajar yang menjadi ahli kerjasama Birds-2 ini.

"Turut dibiayai geran penyelidikan dari negara-negara terlibat adalah kos bahan sekitar RM150,000; kos pengujian dan pelancaran sekitar RM400,000 dan kos-kos lain sebanyak RM100,000," ujarnya.

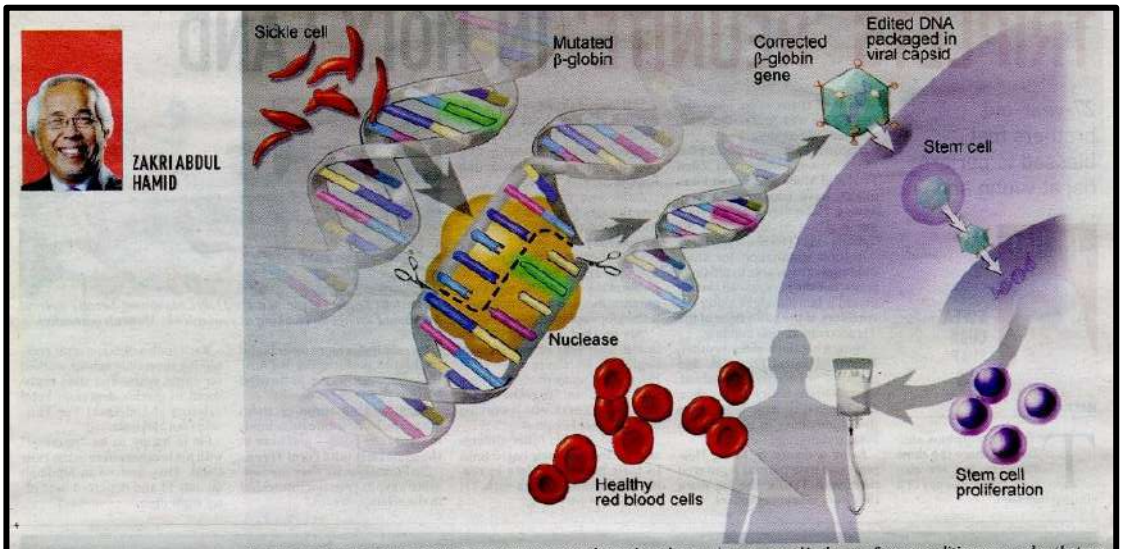
Kerjasama Birds-2 turut membawa kepada penubuhan Pusat Satelit Komunikasi (UiTMSat) di Fakulti Kejuruteraan Elektrik, UiTM Shah Alam bagi menjalankan penyelidikan berkaitan satelit dan teknologi angkasa.

Sehubungan itu, sebuah stesen bumi dibangunkan di UiTM sebagai platform atau hab penyelidikan satelit komunikasi dan bidang sumpamanya, juga dalam bahagian latihan dan konsultasi bersama kerjasama-kerjasama industri.

"Projek Birds-2 ini menjanjikan pelbagai peluang dari aspek teknologi, pendidikan dan komersial," ujarnya.

Gambar ANWAR FAIZ AHMAD TAJUDIN

**LAMPIRAN 17**
**NEW STRAITS TIMES (OPINION): MUKA SURAT 14**
**TARIKH: 30 JULAI 2018 (ISNIN)**




*Gene therapy and genome editing. In recent years, transformative advances have emerged in the use of genome editing approaches that can repair faulty genes.*

ZAKRI ABDUL HAMID

SCIENTIFIC PROGRESS

# IS MALAYSIA READY FOR GENE THERAPY?

It is making progress in the field, but there are many questions that must be considered, including balancing the potential benefits with unintended risks

*For many years, researchers tried to develop efficient and reliable ways to make targeted and precise changes to the genome of living cells. Their efforts have paid off with the discovery of CRISPR technology — Clustered Regularly Interspaced Short Palindromic Repeats found in bacteria, which they use to defend themselves against viruses.*

ACCORDING to the seminal report, "Human Genome Editing", jointly released by the US National Academy of Science (NAS) and the National Academy of Medicine (NAM) in early 2017, genome editing is a powerful new tool for making precise alterations to an organism's genetic material.

Recent scientific advances have made it more efficient, precise, and flexible than ever before. These advances have spurred an explosion of interest from around the globe on the possible ways in which genome editing can improve human health. The speed at which these technologies are being developed and applied has led many policymakers and stakeholders to express concern about whether appropriate systems are in place to govern these technologies and how and when the public should be engaged in these decisions.

Last week, the Malaysian Industry Government Group for High Technology (MIGHT) played host to a public lecture by Dr Ismail Serageldin, a world renowned scientist, who shared his reflections on the impact of the new genetics on public health. "Are we ready for gene therapy?" he asked. Gene therapy is essentially the use of deoxyribonucleic acid (DNA) to cure disease, where DNA is the chemical substance of heredity that makes up the genes in humans and almost all other organisms.

Gene therapy involves a treatment through which copies of a normal gene (also called a therapeutic gene) are inserted into a person's somatic cells to fight the disease caused by faulty gene present since birth. The normal copies will be expressed, thus overriding the faulty ones to fight the disease.

First encouraging results came in about two decades ago, when children with "bubble boy disease", caused by a lack of functional immune system were cured using gene therapy. Without treatment, they would be forced to live in sterile environments forever to avoid infections.

Up to 2016, over 2,200 gene therapy clinical trials were reported.

They have demonstrated that the treatment could be used for common genetic defects such as congenital blindness, cystic fibrosis, anaemia, sickle-cell disease, B-thalassemia and Duchenne Muscular Dystrophy. Although gene therapy holds promise for the future, it is still considered as experimental. Many technical problems need to be resolved for it to become a standard medical practice.

>> Continued *next page*

>> *From Page 11*

For many years, researchers tried to develop efficient and reliable ways to make targeted and precise changes to the genome of living cells. Their efforts have paid off with the discovery of CRISPR technology — Clustered Regularly Interspaced Short Palindromic Repeats found in bacteria, which they use to defend themselves against viruses. When infected by viruses, the bacteria will employ the CRISPR system to specifically identify and destroy the invading DNA.

Although research on CRISPR was undertaken since 1993, it only became clear in 2007 how the bacteria used it to essentially vaccinate themselves against viral infections.

The system comprises two components, namely a guide RNA and a CRISPR associated endonuclease protein, Cas9. Guide RNA functions as a "GPS" that guides it to the specific target site on DNA sequence while Cas9 functions as molecular scissors to cut the DNA. CRISPR heralds a new era for molecular biologists, and is igniting a revolution in genome editing. CRISPR/Cas9system has now become synonymous with gene editing, and is rapidly becoming a standard laboratory tool for researchers to delete, insert, or modify DNA sequence at a specific site in practically any genome.

In April 2015, Chinese scientists reported the use of CRISPR/Cas9 to correct B-globin gene mutation in human embryos, the mutation which causes the disease B-thalassemia. Although these embryos were never placed in a womb, the report opened a floodgate of controversies. Genome editing has reared its ugly head, and could soon lead humans to change their own evolutionary destiny.

These developments triggered the 2017 NAS/NAM report in which Serageldin was one of the eminent committee members. It outlines several criteria that should be met before allowing germline editing clinical trials to go forward.

Genome editing has already entered clinical trials for non-heritable applications, but should be allowed only for treating or preventing diseases or disabilities at this time.


*Gene therapy has been shown to be successful in the treatment to cure congenital blindness, anaemia and B thalassemia, among others.*

There are many important questions about the human application of genome editing to be considered including: balancing potential benefits with unintended risks; governing the use of genome editing; incorporating societal values into clinical applications and policy decisions, and respecting the inevitable differences across nations and cultures that will shape how and whether to use these new technologies.

Professor Zilfalil Abd of Universiti Sains Malaysia said Malaysia is making progress in the field of human genetics and some researchers are already experimenting in CRISPR technology, but more must be done to catch up with other developed countries.

It is incumbent upon us in the scientific community to follow closely the developments in this cutting-edge medical technology and to impress upon our political leaders to continue investing in research and development.

The writer is the founding president of the Genetics Society of Malaysia and Vice-Chairman of MIGHT

**LAMPIRAN 18**
**NEW STRAITS TIMES (NEWS/ NATION): MUKA SURAT 4**
**TARIKH: 30 JULAI 2018 (ISNIN)**

LOMBOK QUAKE

# DPM: MALAYSIA READY TO ASSIST

National Disaster Management Agency can send search and rescue team

THARANYA ARUMUGAM
**SHAH ALAM**
news@nst.com.my

MALAYSIA is ready to provide assistance and support to Indonesia in the wake of the 6.4-magnitude earthquake that struck the popular tourist destination of Lombok yesterday.

Deputy Prime Minister Datuk Seri Dr Wan Azizah Wan Ismail said Malaysia was ready to deploy its National Disaster Management Agency (Nadma) team to assist Indonesia with the search-and-rescue mission and recovery work.

"I want to report that from our side, Nadma has offered to help victims of the earthquake. We are waiting for Indonesia to request for assistance," she said after spending time with PKR members and residents of Sungai Kandis here yesterday.

On the number of personnel to be deployed, Dr Wan Azizah said: "We have no numbers yet because there is no request from Lombok. We will offer our help. But we will wait for their request."

She said Nadma recently deployed 22 personnel to Laos following the collapse of a dam.

"They were there to help victims and we also sent food."

Dr Wan Azizah offered her condolences to victims of the earthquake and their families.

The earthquake claimed the lives of at least 13 people and damaged many buildings. She said one of them was a Malaysian, who is a PKR member.

"One of them is a Malaysian citizen from Desa Pandan. Her name is Siti Nur Iesmawida Ismail (30 years old). Her remains will be brought home. Condolences to her family. I hope they will have the strength (in these tough times)."

Asked if Wisma Putra had made arrangements to bring back the victim from Lombok, Dr Wan Azizah said: "I have not contacted the foreign minister, but we will make the necessary arrangement."

The earthquake struck at 6.47am yesterday with the epicentre of the shallow quake hitting 50km northeast of Lombok's main city Mataram, the United States Geological Survey said.

*Search-and-rescue personnel examining a damaged road after a 6.4-magnitude earthquake struck Lombok yesterday. (Inset) A woman attending to an injured person outside a hospital in Sembalun Selong village, Lombok.* AGENCY PIX

## PRAYERTIMES

| | SUBUH | SYURUK | ZUHUR | ASAR | MAGHRIB | ISYAK |
|---|---|---|---|---|---|---|
| Melaka | 5:51 | 7:11 | 1:20 | 4:42 | 7:26 | 8:38 |
| Penang | 5:54 | 7:13 | 1:27 | 4:48 | 7:37 | 8:50 |
| K.Lumpur | 5:51 | 7:11 | 1:22 | 4:44 | 7:30 | 8:43 |
| Johor Baru | 5:46 | 7:06 | 1:14 | 4:36 | 7:19 | 8:31 |
| Kuantan | 5:46 | 7:05 | 1:17 | 4:39 | 7:23 | 8:36 |
| Ipoh | 5:53 | 7:10 | 1:25 | 4:46 | 7:34 | 8:47 |

*The damage caused by an earthquake in Lombok yesterday.*

**LAMPIRAN 19**
**BERITA HARIAN (INOVASI): MUKA SURAT 19**
**TARIKH: 29 JULAI 2018 (AHAD)**

***UTeM berjaya menghasilkan*** *set kelengkapan landskap hijau bagi menjana tenaga yang boleh diperbaharui berasaskan pengumpulan air hujan bagi tujuan manfaat komuniti sekolah.*

# UTeM cipta inovasi landskap hijau

Set mampu jana tenaga boleh diperbaharui berasas air hujan

**Oleh Nurul Fhatihah Zakinan**
fhatihah@nstp.com.my

**Durian Tunggal**

Universiti Teknikal Malaysia Melaka (UTeM) mencipta inovasi set kelengkapan landskap hijau bagi menjana tenaga yang boleh diperbaharui berasaskan pengumpulan air hujan untuk tujuan manfaat komuniti sekolah.

Projek menerusi kerjasama Sekolah Menengah Kebangsaan Iskandar Shah, Jasin (SMKIS) di sini itu dijalankan di bawah program jalinan Sekolah Kluster Kecemerlangan Universiti Awam (SKK-UA).

Penyelaras Program Jalinan SKK-UA Fakulti Kejuruteraan Mekanikal (FKM) UTeM, Dr Rafidah Hasan, berkata idea mewujudkan projek inovasi berkenaan adalah ilham ketua projek fakulti, Prof Madya Dr Abdul Talib Din bersama penyelaras projek sekolah, Nazlin Ruziah Md Said.

## Jana tenaga

Dr Rafidah berkata, set kelengkapan projek terbabit antaranya merangkumi aplikasi kejuruteraan yang dihasilkan dengan kerjasama syarikat ATD Innogreen Technology Sdn Bhd iaitu kolam takungan kelembapan, kincir air, tangki simpanan air dan panel solar.

"Apabila hujan lebat dan kolam takungan dipenuhi air, sumber air dari ketinggian 5.6 meter dari atas bukit boleh menggerakkan kincir air berkenaan.

"Apabila hujan melebihi tempoh satu jam pula, ia menghasilkan penjanaan tenaga sebanyak 50 watt untuk kegunaan paparan LED berhampiran," katanya dalam satu kenyataan semalam.

## Beri impak positif

Beliau berkata, kumpulan projek itu turut mengambil inisiatif membuat pemasangan panel solar bagi penjanaan tenaga suria yang menghasilkan 10 watt untuk kegunaan jam digital yang terletak di dataran sekolah.

Sementara itu, pengetua sekolah, Zolkaply Yunus berkata, jalinan SMKIS-UTeM membabitkan tenaga profesional akademik memberi impak positif terhadap perkembangan inovasi di sekolah itu.

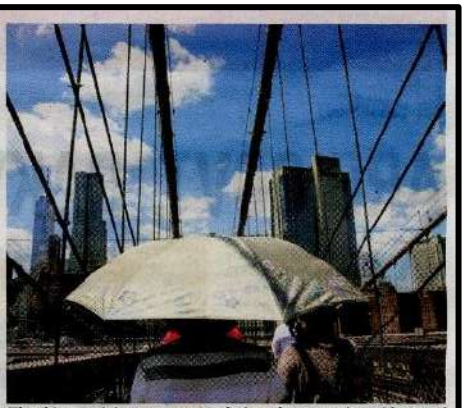
"Kerjasama ini adalah titik tolak ke arah hubungan jangka masa panjang yang boleh membawa banyak manfaat kepada pelbagai pihak khasnya warga SMKIS dan FKM serta komuniti setempat," katanya.

**LAMPIRAN 20**
**NEW STRAITS TIMES (OPINION): MUKA SURAT 17**
**TARIKH: 28 JULAI 2018 (SABTU)**

SMART SOLUTIONS

# KEEPING COOL DURING HEAT WAVES

Some urban planners have been seeking out creative strategies to combat the heat island effect to provide relief and prevent more people from dying during brutal hot spells, writes **Brad Plumer**



*The ultimate nightmare scenario during a heat wave is a widespread blackout that leaves millions of people without electricity for their fans or air-conditioners. That combination was a major health risk in Puerto Rico after Hurricane Maria.* NYT PIC

CITIES can be miserable during heat waves. All that concrete and asphalt soaks up the sun's rays, pushing temperatures up even higher. Tall buildings can block cooling breezes. Exhaust from cars and air conditioners just adds to the swelter.

This is known as the urban heat island effect: A large city's built-up environment can make it two to five degrees Fahrenheit warmer than the surrounding countryside during the day and up to 22 degrees warmer at night. That extra heat is becoming a serious public health problem, and global warming is only expected to make things worse.

In recent years, some urban planners have been seeking out creative strategies to combat the heat island effect to provide relief and prevent more people from dying during brutal hot spells. "Cities need to realise that they have the power to change their own weather," said Brian Stone, Jr., a professor at Georgia Tech's School of City and Regional Planning.

Here is a look at a few of the more promising ideas that cities around the world have been pursuing to try to beat the heat.

**BRING** back the trees: This summer in Dallas, where a persistent heat dome has sent temperatures soaring past 105 degrees, volunteers have fanned out around the low-income neighbourhood of Oak Hills, working with residents to plant 1,000 new trees around schools and homes.

Trees do not just provide much-needed shade for a sweaty city. The water evaporating from their leaves can cool a neighbourhood by a few degrees during the hottest periods. Tree leaves also absorb and filter local air pollution – a crucial benefit, since heat waves can worsen urban smog, sending people to the hospital with asthma and other illnesses.

One downside is that trees can be costly to maintain, a concern for budget-strapped cities. So, in Dallas, the groups spearheading the planting effort – the Trust for Public Land, the Texas Trees Foundation and the Nature Conservancy – are using health, environmental and socio-economic data to figure out where planting new trees would provide the most benefit.

Other cities have their own ideas for promoting urban vegetation: Seattle now encourages developers to add rooftop gardens or even walls covered by vegetation to new building projects. London recently conducted an audit of its central business districts and identified over 929,000sq m of space that could be converted to rain gardens, green roofs and green walls.

**LET** the win blow: In the industrial city of Stuttgart, Germany, refreshing breezes are both scarce and valuable. The city sits in a river valley basin, surrounded by steep hills that can trap both heat and polluted air over the region. It is a potentially lethal combination during the hotter months.

In response, Stuttgart has created a number of ventilation corridors throughout the city: wide, tree-flanked arterial roads that help clean air flow down from the hills at night to cool the city. Officials have also restricted new buildings from going up on certain hillsides in order to keep the air moving.

Some experts are sceptical that this strategy will work for every city because a lot depends on local weather patterns and geography. But, China is becoming interested. Beijing and Xian are looking to create their own ventilation corridors, studying local wind patterns and strategically placing parks or lakes instead of buildings along key pathways so that the cooler breezes can flow freely.

**PAINT** roofs white: One big reason that cities are so much hotter than rural areas is that they are covered by dark roofs, roads and parking lots that absorb and retain heat. In recent years, many urban planners have sought to replace those dark surfaces with lighter, more reflective materials.

Through its CoolRoofs Initiative, New York City has already painted more than 5 million square feet of its roofs with a reflective coating. Los Angeles is replacing some of its dark asphalt roads with brighter materials.

In theory, a big push by cities to add more green space and reflective building materials could save lives: One recent study, led by Stone of Georgia Tech, estimated that these two techniques could potentially offset much of the projected increase in heat-related deaths from global warming in Philadelphia, Atlanta and Phoenix by 2050.

But, the effectiveness of cool roofs can vary from city to city. One 2014 study, led by Matei Georgescu of Arizona State University, found that the strategy, if widely adopted, could cut temperatures by several degrees in cities like Washington or New York. But in Florida, reflective materials would have a smaller impact and could potentially reduce local rainfall.

**GET** people to cooling centres: When dangerous heat waves arrive, access to air conditioning can be a matter of life or death. That is why more and more cities are setting up public cooling centres to offer relief for those who might lack cool air at home, like low-income residents or the homeless.

But, public health experts say that setting up cooling centres is only half the battle: the other half is getting people to them. One recent survey of Detroit, Philadelphia, Phoenix and New York found that public cooling centres were often poorly publicised or difficult to access by public transportation. Some residents were reluctant to leave their homes during heat waves or mistakenly thought that cooling centres were just for homeless people.

**PREPARE** for blackouts: The ultimate nightmare scenario during a heat wave is a widespread blackout that leaves millions of people without electricity for their fans or air conditioners. That combination was a major health risk in Puerto Rico after Hurricane Maria.

When temperatures soar, the electric grid comes under serious strain. Power lines also start sagging in the heat and can short out if they touch the ground or nearby foliage.

Parts of Southern California lost power this month after temperatures reached 110 degrees, and scientists warn that global warming could increase these risks in the future.

Some possible solutions? Smarter grids and new forecasting tools could help electric utilities prepare for heat waves, using electronic controls to pre-cool buildings before temperatures peak in the afternoon and then turning down nonessential appliances when energy demand surges, said Santiago Carlos Grijalva, a professor of electrical engineering at Georgia Tech. **NYT**

*"Trees do not just provide much-needed shade for a sweaty city. The water evaporating from their leaves can cool a neighbourhood by a few degrees during the hottest periods."*

**LAMPIRAN 21**
**HARIAN METRO (ADVERTORIAL): MUKA SURAT 80**
**TARIKH: 28 JULAI 2018 (AHAD)**

# LANGKAH JURUTERA MUDA

## UTMSPACE tawar Program Asasi setahun sebelum ke peringkat ijazah

PROFESOR Dr Azraai Kassim memberi ucapan alu-aluan kepada 130 pelajar baru mendaftar untuk sesi pengambilan kedua tahun ini.

Sebagai salah sebuah institusi pengajian tinggi awam terunggul di Malaysia, Universiti Teknologi Malaysia (UTM) berusaha membantu memastikan lebih ramai pelajar berpeluang menyambung pengajian di menara gading melalui Program Asasi UTM.

Program selama setahun yang ditawarkan melalui UTMSPACE itu adalah satu pilihan alternatif dalam saluran pendidikan prauniversiti selain matrikulasi, Sijil Tinggi Persekolahan Malaysia (STPM), diploma dan lain-lain program asasi yang diiktiraf Kementerian Pengajian Tinggi Malaysia.

Ia mempersiapkan penuntut dengan laluan pendidikan lanjutan ke program peringkat ijazah Sarjana Muda dan UTM International Degree Programme (UTM-IDP).

Seramai 130 pelajar lepasan Sijil Pelajaran Malaysia (SPM) mendaftar untuk sesi pengambilan kedua pada 5 Julai lalu selepas pengambilan pertama pada Mei lalu.

Majlis pendaftaran itu diserikan dengan ucapan alu-aluan Pengarah Urusan merangkap Ketua Eksekutif UTMSPACE, Profesor Dr Azraai Kassim.

Selepas menjalani minggu orientasi serta dibawa melawat ke tempat penting dan menarik di UTM bagi mendapatkan pendedahan persekitaran dan kejiranan dalam kampus, mereka kini teruja untuk memulakan sesi pengajian.

Siti Aisyah Jaini berkata, dia sangat teliti memilih institusi pengajian tinggi dan memutuskan untuk ke UTM sebagai pusat pengajian yang mampu memenuhi cita-citanya.

"UTM adalah universiti yang amat dikenali, apatah lagi ia universiti kejuruteraan terulung di Malaysia. Tempoh pengajian bagi program Asasi UTM ini selama tiga semester (52 minggu) secara sepenuh masa di kampus induk UTM di Johor," katanya.

Bagi Yong Wei Lun, program ini satu-satunya laluan singkat untuk ke peringkat sarjana muda di UTM kerana pelbagai tawaran program menarik.

"Program kejuruteraan di UTM juga diiktiraf badan kejuruteraan dan badan penilaian yang lain," katanya.

Seorang lagi penuntut baru, R Eshvaar enggan melepaskan peluang diperoleh sebaik menerima surat tawaran pengajian di UTM.

Katanya, dia meminati bidang seni bina selepas mendapat pendedahan meluas sejak di bangku sekolah.

Terdapat tiga sesi pengambilan penuntut asasi UTM setiap tahun iaitu pada Mei, Julai dan Disember.

Untuk mendaftar ke Program Asasi UTM, hanya perlu mendaftar secara dalam talian (online) ke http://register.foundation.utmspace.edu.my/ atau layari https://www4.utmspace.edu.my/foundation/ untuk mendapatkan maklumat lanjut berkaitan Program Asasi UTM.

Untuk pertanyaan lanjut hubungi talian 07-5610100 atau WhatsApp ke talian 019-7776690 ataupun hantarkan e-mel ke foundation@utmspace.edu.my.



"Saya meminati bidang seni bina selepas mendapat pendedahan meluas sejak di bangku sekolah"
*Eshvaar*



SEBAHAGIAN 130 penuntut mendaftar bagi pengambilan Julai 2018.

**LAMPIRAN 22**
**UTUSAN MALAYSIA (MINGGUAN MALAYSIA): MUKA SURAT 11**
**TARIKH: 28 JULAI 2018 (AHAD)**

# Dingin pagi tak halang lihat gerhana bulan

**Oleh SHARAIMEI SHAIK AHMEDULLAH**
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■ **PUTRAJAYA 28 JULAI**

SUASANA gelap dan kedinginan awal pagi tidak menghalang orang ramai untuk hadir menyaksikan fenomena gerhana bulan penuh di Masjid Tuanku Mizan Zainal Abidin (MTMZA) dan Masjid Putra di sini yang berlaku bermula awal pagi hari ini.

Malah, faktor cuaca yang baik dan cuti hujung minggu turut mendorong lebih 100 orang hadir menyaksikan fenomena tersebut.

Penolong Pengarah Unit Falak Jabatan Kemajuan Islam Malaysia (Jakim), Shahril Azwan Hussin berkata, fenomena tersebut yang kali kedua berlaku pada tahun ini merupakan gerhana bulan penuh paling lama berlaku pada abad ke-21 iaitu dari 2001 hingga 2100.

"Fasa gerhana bulan penuh kali ini bermula pukul 3.30 pagi sehingga mencapai kemuncak pada pukul 4.21 pagi berakhir 5.13 pagi.

"Gerhana bulan penuh berlaku apabila matahari, bumi dan bulan berada pada kedudukan sebaris dan keseluruhan bulan merentasi bayang umbra. Keadaan ini menyebabkan bulan kelihatan lebih kecil berbanding fenomena Super Blue Blood Moon yang berlaku Januari lalu," katanya kepada *Mingguan Malaysia* di sini.

**FENOMENA gerhana bulan penuh paling lama abad ke-21 di pekarangan Masjid Putra, Putrajaya, awal pagi semalam.**

Dalam pada itu, Shahril Azwan berkata, sebanyak sembilan teleskop berkomputer milik Jakim, Pejabat Mufti Wilayah Persekutuan, Universiti Malaya serta Jabatan Ukur dan Pemetaan Malaysia (Jupem) disediakan di kedua-dua masjid tersebut bagi memberi peluang kepada orang ramai melihat fenomena itu.

Beliau berkata, selain aktiviti cerapan kedua-dua masjid tersebut turut menganjurkan solat sunat gerhana bulan.

Sementara itu, dalam khutbah solat sunat tersebut yang disampaikan Imam MTMZA, Muhd. Redza Ahmad, khatib menyeru supaya umat Islam untuk terus taat dan patuh pada perintah Allah.

Katanya, fenomena gerhana bulan merupakan antara kekuasaan Allah yang ditunjukkan kepada umat manusia untuk berfikir dan menginsafi kekuasaan-Nya.

"Kejadian yang berlaku ini untuk mengetuk pintu hati kita agar bersyukur dan mengingati Allah sepanjang masa.

"Betapa malangnya umat manusia apabila menyembah matahari dan bulan selain Allah kerana terpesona pada kehebatannya tetapi mereka lupa pada kewujudan Allah yang mencipta dan mengatur pergerakan tersebut dengan sempurna serta tanpa berlaku pelanggaran," katanya.

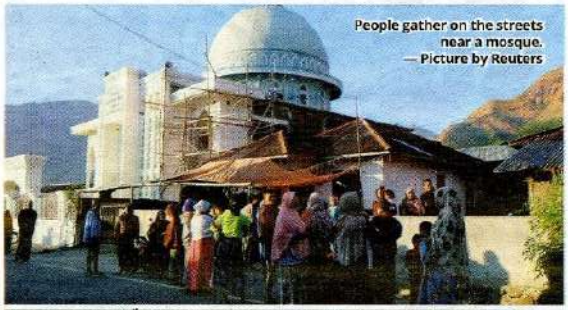
**IMAM Besar Masjid Putra, Datuk Abd. Manaf Mat menyaksikan fenomena gerhana bulan penuh dengan menggunakan teleskop di pekarangan Masjid Putra, Putrajaya, awal pagi semalam. – MINGGUAN/RASHID MAHFOF**

**LAMPIRAN 23**
**MALAY MAIL (WORLD): MUKA SURAT 12**
**TARIKH: 30 JULAI 2018 (ISNIN)**



A villager walks through the ruins of a collapsed house at Sembalun Selong village in Lombok Timur. — Picture by Reuters

# Powerful Lombok quake kills at least 14



People gather on the streets near a mosque. — Picture by Reuters

Members of an Indonesian medical team transport a survivor in an ambulance. — Picture by AFP

**SEMBALUN** (Indonesia) — A powerful 6.4 magnitude earthquake struck the popular tourist island of Lombok in Indonesia yesterday, killing 14 people and sending villagers fleeing from their beds into open fields to avoid collapsing buildings.

The quake, which rocked the island early in the morning when many people were still asleep, injured 162 people and damaged thousands of houses.

Electricity was cut off in the worst-hit area, Sembalun, a sparsely populated area of rice paddies and the slopes of Mount Rinjani on the northern side of the island.

A 30-year-old Malaysian woman visiting Mount Rinjani, a popular trekking destination, was among those killed, said Sutopo Purwo Nugroho, the disaster mitigation agency spokesman.

He said the area was temporarily closed to climbers because there were reports of landslides. Hundreds of climbers are being evacuated from the Rinjani national park and 115 have been safely escorted out, Nugroho said.

"The most pressing needs now are medical personnel, stretchers, health equipment, kids wares and food," Nugroho said.

An emergency tent was set up on a street in Sembalun to treat the injured because the local hospital was damaged, and those in critical condition were taken to other hospitals.

"It happened so suddenly at around six in the morning. Suddenly everything simply collapsed," said Siti Sumarni, a Sembalun resident. "My child was inside the house, thankfully he survived."

Standing outside a green tent set up on a dusty field, she said nothing was left of her house.

Video footage showed ambulances lining the streets of Lombok and many houses damaged with only parts of brick walls standing.

"We jumped out of our beds to avoid anything falling on our heads," said Jean-Paul Volckaert who runs a hotel near Senggigi on the western side of Lombok.

"I've been walking around but so far there is no damage. We were very surprised as the water in the pools was swaying like a wild sea. There were waves in the pools but only for 20 to 30 seconds," he said by telephone.

A magnitude 6.4 earthquake is considered strong and is capable of causing severe damage.

The Lombok quake struck at 6.47am and was only 7km deep, a shallow depth that would have amplified its effect.

It was centred 50km northeast of the city of Mataram, according to the US Geological Survey, but it was also felt strongly to the west on the neighbouring island of Bali, Indonesia's top tourist destination.

Over 100 subsequent tremors were recorded, with the largest aftershock recorded at 5.7 magnitude, Indonesia's Meteorological, Climatological and Geophysics Agency said.

The earthquake was on land and did not trigger any waves or tsunami.

Earthquakes are common in Indonesia, which is located on the seismically active "Ring of Fire" that surrounds the shores of the Pacific Ocean. — Reuters

**LAMPIRAN 24**
**THE STAR (WORLD): MUKA SURAT 18**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# Record drought grips Germany's breadbasket

**NIEDERNDODELEBEN:** Withered sunflowers, scorched wheat fields, stunted cornstalks – the farmlands of northern Germany have borne the brunt of this year's extreme heat and record-low rainfall, triggering an epochal drought.

As the blazing sun beats down, combine harvesters working the normally fertile breadbasket of Saxony-Anhalt kick up giant clouds of dust as they roll over the cracked earth.

The grain crop alone has shrunk by up to eight million tonnes or around 18% this year, stripping €1.4bil (RM6.6bil) from revenues.

"The government needs to declare a state of emergency so that farmers in areas hit hardest by the drought can be helped directly with cash aid," Rukwied said.

While the sunshine has fostered larger and sweeter fruit than usual, sugar beets, rapeseed, potato and corn crops have been decimated in the drought, prompting farmers to cut their losses and harvest two to three weeks earlier than usual. — AFP

**LAMPIRAN 24 (SAMBUNGAN)**
**THE STAR (WORLD): MUKA SURAT 19**
**TARIKH: 30 JULAI 2018 (ISNIN)**

**Fighting the flames:** (Top) A firetruck driving along Highway 299 as the Carr fire continues to burn near Whiskeytown, California, while a (left) firefighter checks his gear in front of an advancing wildfire as it approaches a residence. — AFP/AP

**LAMPIRAN 25**
**THE STAR (WORLD): MUKA SURAT 19**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# Cuba to study if climate change is hurting sugar harvests

**HAVANA:** Cuba is studying whether to adjust its sugar-harvest calendar in response to damaging changes in the island's climate, an official newspaper reported.

The Caribbean island, once the world's leading sugar producer, is suffering through a years-long decline in production even as its socialist leaders struggle to modernise a sluggish economy.

Cuban president Miguel Diaz-Canel ordered state sugar monopoly Azcuba to undertake the climate study in coordination with the Ministry of Science, Technology and the Environment, and to carry out any necessary remedial measures, the newspaper *Granma* said.

"The seasons are changing and we have to be able to adapt," Diaz-Canel was quoted as saying.

He said the traditional sugar-growing season, lasting from November to April, might have to be adjusted.

The 2017-18 harvest produced "something more than a million tonnes of sugar", an amount lower than expected and far below historic highs, drawing political concern at the highest levels.

Azcuba's new president, Julio Garcia Perez, said the changing climate was among the "fundamental causes" of lower production, with historically heavy rainfall affecting the quality of sugar cane.

But he also cited causes including "the low productivity of harvesting and transportation equipment... and management deficiencies".

Cuba has seen its industry decline for decades, due to reduced purchases from Russia and Eastern Europe, low global prices, lack of investment and a reduction in farmed land. — AFP

**LAMPIRAN 26**
**MALAY MAIL (WORLD): MUKA SURAT 14**
**TARIKH: 30 JULAI 2018 (ISNIN)**

**Residents hold onto a child as they walk through flood waters in the Bago region, 68km from Yangon, yesterday. — Picture by AFP**

# Myanmar floods kill five, displace thousands

BAGO (Myanmar) — Rising flood waters have killed at least five people and forced tens of thousands from their homes across swathes of Myanmar, a government official said yesterday, as heavy monsoon rains continue to batter the Mekong region.

Dramatic images showed vast areas of farmland completely submerged in muddy waters stretching to the horizon, with only the rooftops of some houses visible.

Some stranded people were plucked from the churning inundations by rescuers in boats, while others waded through waist-deep water to escape, carrying children on their shoulders while trying to keep precious belongings out of the water.

"There are more than 54,000 displaced people affected by the flooding around the country," a Ministry of Social Welfare official said.

The official confirmed five people had been killed but said this figure was expected to rise.

Evacuation orders had been issued in several areas, while some 163 camps have been set up for displaced people in southern, eastern and central parts country.

The floods in Myanmar come as a particularly heavy monsoon continues to pummel the region, bringing downpours that contributed to the collapse of a dam last week in Laos, which left scores dead or missing.

Myanmar is hit by severe flooding every year and climate scientists in 2015 ranked it top of a global list of nations hardest hit by extreme weather. — AFP

**LAMPIRAN 27**
**THE SUN (FEATURE): MUKA SURAT 19**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# Using VR to treat fear of heights

**ACROPHOBIA** – fear of heights – is one of the most common phobias, with around one in five people reporting having a fear of heights to some degree during their lifetime.

Despite this, many sufferers, even those profoundly affected by their phobia, do not receive any treatment or therapy.

But now, a new study has found that treatment in virtual reality (VR) can effectively help tackle this mental health disorder – and perhaps several others in the future.

The study, published in *The Lancet Psychiatry*, gave 44 out of 100 participants virtual reality treatment, which consisted of six 30-minute sessions over the course of two weeks.

Meanwhile, participants in a control group were given "usual care, which was typically no treatment".

The participants who were given the VR treatment were guided through several tasks in VR with a virtual coach, such as having to walk across a platform over a large drop, or throwing balls over an edge of a drop.

All participants were asked to fill out questionnaires about their fear of heights before the treatment, after the treatment and again after four weeks.

While the participants in the control group reported hardly any change in their phobia, the VR treatment group all stated that their fear of heights had reduced, some significantly, with 34 participants no longer being rated as having a fear of heights.

The study also raises other, more general questions about the future of psychological treatments.

Dr Mark Hayward of the University of Sussex suggests that technological advancements such as VR may greatly improve

treatment and care for patients with psychosis, and that it could also help increase access to care, especially for patients who do not want to talk to a therapist. – dpa

**LAMPIRAN 28**
**NEW STRAITS TIMES: MUKA SURAT 20**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# COMMITTED TO USING

# Energy In The Right Way

## WORKING FOR A FUTURE OF SUSTAINABLE DEVELOPMENT

In September of 2015, at a historic United Nations Summit, world leaders adopted 17 Sustainable Development Goals (SDGs). Over the next 15 years, countries will mobilise efforts to end all forms of poverty, fight inequalities, and address climate change.

This international effort is critically important for the future of our planet. For example, unless climate change is addressed, the global average surface temperature is expected to increase by up to 4.8°C by the year 2100. If this is allowed to happen, hurricanes and other storms would become stronger, floods and droughts would become more common, and communicable infectious diseases such as malaria will spread

It's not only countries that are working to achieve the SDGs. The United Nations has partnered with organisations ranging from the Cannes Festival of Creativity to the makers of the "Angry Birds" movie, with the intention of spreading the word about sustainable development and achieving specific solutions for the individual goals. An increasing number of key stakeholders are expressing a preference for partnering with businesses that actively support the SDGs.

This is one reason why a number of large corporations have voluntarily committed to helping achieve the SDGs. Ajinomoto Co., Inc. ("Ajinomoto Co.") is proud to be one of them. There are several reasons that we have become deeply involved in this endeavour. First of all, we are an international organisation with a large footprint, operating in 30 countries, and we are in the business of converting natural resources into food products on a large scale. Therefore, we feel we are in a position to make a tangible, positive difference for the world. And secondly, we simply feel it's the right thing to do.

One area that we focus on very specifically is renewable energy, which is essential for the sustainability of our planet and resources. Using renewable energy helps to achieve a number of the SDGs, especially affordable and clean energy.

## IMPLEMENTING A CIRCULAR ECONOMY ON A GLOBAL SCALE

A traditional linear economy creates a lot of waste. Basically, the process is that a thing is made, the thing is used, and then the thing is disposed.

In contrast, a circular economy keeps resources in use for as long as possible, extracting the maximum value possible, and then recovering and regenerating resources from the products once their useful life is finished in order to create new products and materials.

Ajinomoto Co. is committed to implementing a circular economy on a global scale, in the many countries in which we work and do business. We do this by specifically focusing on reduction of waste and disposal, recycling, sharing, and conserving the environment.

**LAMPIRAN 29**
**UTUSAN MALAYSIA (LUAR NEGARA): MUKA SURAT 13**
**TARIKH: 30 JULAI 2018 (ISNIN)**

# Kebakaran hutan: AS lulus bantuan kepada California

**WASHINGTON 29 Julai** - Amerika Syarikat, (AS) meluluskan bantuan untuk California semalam ekoran insiden kebakaran hutan yang mengorbankan enam orang dan meranapkan ratusan bangunan.

Kebakaran berkenaan turut menyebabkan ribuan penduduk terpaksa meninggalkan kediaman mereka dan Taman Negara Yosemite juga diarahkan ditutup.

Presiden AS, Donald Trump mengarahkan kerajaan persekutuan untuk membantu usaha pihak berkuasa tempatan California menangani keadaan buruk yang tercetus ekoran kebakaran tersebut.

Menurut kenyataan dikeluarkan oleh White House, Agensi Pengurusan Kecemasan Persekutuan diberi kuasa untuk mengenal pasti, menggerakkan dan menyediakan peralatan dan sumber diperlukan mengikut budi bicara untuk mengurangkan impak kebakaran.

Jabatan Perlindungan Perhutanan dan Kebakaran California, Cal Fire berkata, kebakaran hutan Carr Fire di California Utara yang berlaku sejak 23 Julai lalu, telah memusnahkan lebih 32,749 hektar tanah setakat ini.

"Angin, suhu tinggi dan tumbuh-tumbuhan kering berpotensi menyebabkan kebakaran. Api telah merebak ke seluruh arah," ujar Cal Fire.

Dalam pada itu, pejabat Gabenor California, Jerry Brown menerusi satu kenyataan yang dikeluarkan, memohon bantuan kerajaan bagi 'menyelamatkan nyawa dan melindungi harta benda'.

Beliau meminta bantuan seperti pesawat tentera, tempat perlindungan dan air untuk 30,000 penduduk yang kehilangan tempat tinggal di Shasta County, tengah California.

Brown mengisytiharkan darurat di Shasta County dan mengarahkan anggota Pengawal Kebangsaan untuk membantu 3,400 anggota bomba yang kini berusaha memadamkan kebakaran Carr Fire. - AFP

**ANGGOTA bomba Cal Fire bertungkus-lumus memadamkan kebakaran hutan Carr Fire di Redding, California, Amerika Syarikat, kelmarin. - AFP**

**LAMPIRAN 30**
**THE STAR: MUKA SURAT 24**
**TARIKH: 28 JULAI 2018 (SABTU)**

**Under threat:** Shipping, pollution and overfishing have reduced areas of 'wilderness' to just 13% of the world's oceans, a study showed. — AFP

# 'Marine wilderness areas rapidly shrinking'

## Scientists: It could be totally gone within half a century

**SYDNEY:** Shipping, pollution and overfishing have reduced areas of "wilderness" to just 13% of the world's oceans, a study showed, warning untouched marine habitats could completely vanish within half a century.

International researchers analysing the impact of human activity, from fertiliser runoff to increased sea transport, on underwater ecosystems have mapped the dwindling zones considered pristine.

The bulk of remaining ocean wilderness, classed as "mostly free of human disturbance", was found in the Arctic and Antarctic, and around remote Pacific islands.

"Improvements in shipping technology mean that even the most remote wilderness areas may come under threat in the future, including once ice-covered places that are now accessible because of climate change," said lead researcher Kendall Jones, from the University of Queensland.

Just 5% of the wilderness areas are in protected zones, leaving the rest vulnerable, according to the study published in the journal *Current Biology*.

It called for greater international coordination to regulate the world's oceans, clamp down on overfishing, limit destructive ocean-mining and reduce sediment runoff.

"Marine wilderness areas are home to unparalleled levels of life, holding massive abundances of species and high genetic diversity, giving them resilience to threats like climate change," said James Watson of the Wildlife Conservation Society.

"These areas are declining catastrophically, and protecting them must become a focus of multilateral environmental agreements.

"If not, they will likely disappear within 50 years."

Last year, the United Nations began negotiating its first conservation treaty for the high seas, which would be a legally binding act governing the sustainable use of oceans outside national maritime boundaries. — AFP