

COLLABORATION POTENTIAL

Strong Malaysia-China ties 'will persist'

KUALA LUMPUR: Malaysia will continue to have good relations with China as both countries have the potential to collaborate in various sectors that will mutually benefit each other.

Energy, Technology, Science, Climate Change and Environment Minister Yeo Bee Yin, said this did not mean that Malaysia would rely on China but would instead look at the advantages it could gain from and provide to the collaboration.

"I see China has some advantage and things that we can learn from, including technology while, at the same time, our strategic location has given us a lot of advantages with China.

"Malaysia will continue to be friendly to everyone and most importantly, what role can we play, being a small country," she said after delivering her keynote address at the forum on "South-South Cooperation In The New Asian Era" at Universiti Malaya, here, yesterday.

Yeo said as Malaysia had a limited market, it was important to work together with technology leaders in the artificial intelligence and renewable energy sectors such as China.

"We need to transform our businesses to think ahead about technology because this is what creates wealth, not just labour and capital," said Yeo.

She also urged small and medium enterprises (SMEs) to invest in research and development (R&D) to grow their knowledge and push themselves up the value chain.

"What the ministry is planning to do to catalyse knowledge growth is that we will have an inventory of the scientific equipment that we have and the data that we can share.

"We plan to open source some of the data that we have in the government, as well as the scientific equipment, to outsiders including to the private sector,

mainly the SMEs, for them to use at a minimum price," she said.

Earlier in her keynote address, Yeo expressed hope the collaboration would see more technology commercialisation, academic collaboration and mutual investment between Malaysia and China in a win-win environment.

Bernama



*Energy, Technology, Science,
Climate Change and Environment
Minister Yeo Bee Yin*

Cabaran menteri muda penuhi aspirasi belia

Percaturan Kabinet oleh Perdana Menteri, Tun Dr Mahathir Mohamad sejak dipertanggungjawabkan mengetuai kerajaan pada 10 Mei lalu, menampilkan kejutan tersendiri.

Sebaik sahaja senarai penuh Kabinet dilengkapkan minggu lalu, seorang anak muda yang baru berusia 25 tahun dipilih menjawat jawatan menteri penuh, iaitu Syed Saddiq Abdul Rahman.

Syed Saddiq, juga Ketua Pemuda Parti Pribumi Bersatu Malaysia (PPBM) memecah rekod jawatan menteri penuh termuda pertama di Malaysia. Sebelum ini, penyandang pemimpin paling muda dalam kerajaan disandang oleh bekas Perdana Menteri, Datuk Seri Najib Razak ketika dilantik sebagai Timbalan Menteri Tenaga, Telekomunikasi dan Pos pada 1978.

Ketika itu, Najib berusia 25 tahun. Najib seterusnya menggalas tugas Menteri Belia dan Sukan ketika usia 33 tahun.

Selain Syed Saddiq, kerajaan hari ini turut menampilkan seorang lagi anak muda, **Yeo Bee Yin** daripada DAP. Beliau diberi kepercayaan menggalas tugas Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar. Pentas politik Bee Yin, 35, bermula dengan penyertaan sebagai sukarelawan DAP. Kini beliau ialah Ahli Parlimen Bakri.

Berkelulusan jurusan kejuruteraan kimia dari University Teknologi PETRONAS dan University Cambridge, anak kelahiran Segamat, Johor ini sememangnya memiliki kelayakan akademik yang cukup untuk menggalas tugas sebagai menteri penuh.

Namun, cabaran dihadapi be-

liau sudah pasti terkait kepada beban tugasnya yang dilihat lebih besar berbanding menteri pada era kerajaan terdahulu. Di bawah Kerajaan Pakatan Harapan, portfolio tenaga, teknologi dan sains serta perubahan iklim dan alam sekitar disatukan.

Cabaran getir

Sudah pasti ia mendatangkan cabaran cukup getir untuk Bee Yin, terutama dalam menghadapi beberapa isu besar seperti jerebu rentas sempadan, banjir kilat, tanah runtuh serta aktiviti pembalakan yang tidak terkawal.

Tidak kurang juga, isu penyelidikan dan pembangunan (R&D) di institusi pengajian tinggi (IPT) yang tidak dipasarkan, walaupun kerajaan sudah menghabiskan jutaan ringgit bagi tujuan itu, namun hasilnya tidak dapat dioptimumkan.

Di antara kedua-duanya juga, nama Syed Saddiq paling banyak diperkatakan. Bukan kerana perwatakan sahaja, namun pengalamannya dalam politik yang belum menjangkau lima tahun menjadi 'perjudian' rakyat.

Pastinya, rakyat mengharapkan beliau pada usia pertengahan 20-an ini mampu menggalas tugasnya. Ahli Parlimen Muar ini perlu membuktikan beliau boleh lakukan. Sekurang-kurangnya mesti dilihat setanding bekas Menteri Belia dan Sukan terdahulu, Khairy Jamaluddin Abu Bakar.

Mendepani persekitaran politik semasa, dimensi anak muda mempunyai kepelbagaian. Bukan sahaja aspek pemikiran dan pandangan, malah minat dan gaya hidupnya. Ini menjadi tanggungjawab seorang Menteri Belia dan

Sukan untuk memperhalusnya.

Tidak perlu bagi Syed Saddiq untuk memperkenalkan pelbagai perkara baharu di kementerian, merombak dasar terdahulu atau dilihat terlalu mengkritik dasar lama. Ini bukan apa yang diharapkan daripada beliau.

Pemilikan rumah belia

Masalah membelenggu anak muda kini jauh lebih kritikal. Antaranya, pertama, isu pemilihan rumah oleh belia.

Kajian Institut Penyelidikan dan Pembangunan Belia Malaysia Kementerian Belia dan Sukan pada 2016, ke atas 1,875 responden belia berusia 21 hingga 40 tahun mendapati, majoriti daripadanya belum memiliki kediaman sendiri.

Antara yang mendorong berlaku situasi itu, termasuk faktor kos sara hidup tinggi yang menyumbang 97 peratus daripada dapatan kajian. Faktor lain, harga rumah mampu milik kurang (96.6 peratus); bayaran wang pendahuluan dan pemprosesan yang tinggi (94.7 peratus); bayaran ansuran bulanan yang tinggi (94.6 peratus) serta kadar faedah pinjaman yang terlalu tinggi iaitu 94.2 peratus.

Kedua, isu pengangguran. Statistik Jabatan Perangkaan Malaysia setakat April lalu menunjukkan bahawa kadar pengangguran negara berada pada paras 3.3 peratus, namun jumlah pengangguran dicatatkan setakat April lalu seramai 510,000, iaitu turun 0.4 peratus berbanding April 2017.

Jumlah yang terbabit ini sudah pasti majoritinya ialah belia.

Dari segi pengangguran siswazah pula, pada tahun lalu media memetik bekas Menteri Pendidikan, Datuk Seri Idris Jusoh, menyatakan seramai 54,103 siswazah universiti menganggur dalam tempoh enam bulan selepas mereka menamatkan pengajian.

Jumlah ini besar, malah ia akan terus meningkat dengan pertambahan bilangan siswazah yang menamatkan pengajian setiap tahun.

Ketiga, pendapatan belia. Rekod Jabatan Perangkaan dikeluarkan pada Oktober tahun lalu menunjukkan, secara keseluruhan perbelanjaan penggunaan isi rumah bulanan purata di negara ini menunjukkan peningkatan daripada RM3,578 pada 2014 kepada RM4,033 pada 2016, iaitu pertambahan 6.0 peratus setahun pada nilai nominal.

Di bandar, peningkatan pada kadar 5.8 peratus setahun daripada RM3,921 kepada RM4,402, manakala luar bandar, meningkat pada kadar 5.7 peratus setahun

daripada RM2,431 kepada RM2,725 bagi tempoh sama.

Dari segi komposisi perbelanjaan bulanan, perumahan, air, elektrik, gas dan bahan api lain ialah penyumbang tertinggi kepada keseluruhan perbelanjaan penggunaan iaitu 24 peratus.

Diikuti kumpulan utama makanan dan minuman bukan alkohol (18 peratus); pengangkutan (13.7 peratus); dan restoran serta hotel, 13.4 peratus.

Data ini menunjukkan, jika masih ada belia memperoleh pendapatan isi rumah di bawah RM4,000 sebulan, mereka tergolong dalam kelompok yang sukar untuk menguruskan perbelanjaan sara hidup bulanan.

Atas faktor itulah, belia begitu kritikal terhadap kerajaan, terutama Barisan Nasional (BN) sebelum Pilihan Raya Umum Ke-14 (PRU14) lalu.

Penyelesaian menyeluruh

Tiga masalah ini perlu dipikul Syed Saddiq. Beliau perlu merangka penyelesaian menyeluruh dan bersifat jangka panjang.

Untuk itu, selain dari fokus meningkatkan keupayaan belia dan kebolehpasaran graduan, perkara yang terpenting ialah bagaimana KBS boleh bersama-sama dengan industri untuk mewujudkan peluang pekerjaan berstatus tetap yang signifikan terhadap persekitaran dan keperluan perbelanjaan belia.

Isu pekerjaan dan kos sara hidup begitu menghimpit belia pada masa kini. Malah, ia faktor yang menyebabkan anak muda perlu melakukan dua kerja dalam satu masa, tidak kurang yang tersenarai sebagai mufli.

Penyelesaian terbaik ialah menjana pekerjaan yang boleh memberi nilai tambah kepada belia seperti keupayaannya untuk melabur dan membeli hartanah.

Satu lagi aspek yang terpenting perlu diberi perhatian ialah dapatan daripada siri Jelajah Program Transformasi Nasional 2050 (TN50). Sejak jelajah diperkenalkan, ia berjaya memperoleh 80,000 cadangan daripada belia.

Sebelum dirumuskan kepada tujuh aspirasi utama iaitu nilai murni, urus tadbir, persekitaran, pendidikan, pekerjaan, gaya hidup dan meletakkan Malaysia pada pentas global.

Setiap dapatan daripada Jelajah TN50 perlu terus diperhalusi, seelok-eloknya dilaksanakan secara berperingkat. Bukan kerana ia idea BN, sebaliknya yang terpenting, setiap cadangan dizahirkan berpaksi kepada hati nurani dan kehendak belia masa kini.



Tidak perlu bagi Syed Saddiq untuk memperkenalkan pelbagai perkara baharu di kementeriannya, merombak dasar terdahulu atau dilihat terlalu mengkritik dasar lama. Ini bukan apa yang diharapkan daripada beliau

LAMPIRAN 3
NEW STRAITS TIMES (BUSINESS) : MUKA SURAT B4
TARIKH : 11 JULAI 2018 (RABU)

MTDC ROADSHOW

SMIs urged to start developing products and services for Industry 4.0

KOTA KINABALU: Small and medium industries (SMIs) need to start developing products and services for the Fourth Industrial Revolution (Industry 4.0) in order to stay relevant, said Malaysian Technology Development Corp (MTDC) chief executive officer Datuk Norhalim Yunus yesterday.

He said the adoption of automation and technological advancements could eliminate wastage, lower costs, increase customer base and enhance competitiveness.

"MTDC's role is to identify and provide a platform for SMIs to participate in Industry 4.0.

"MTDC also provides integrat-

ed support services for technopreneurs, which include advisory services such as mentoring, soft-landing, branding, fundraising, international collaboration and networking," he said at the MTDC Road2Growth 2018 roadshow here.

Norhalim also said MTDC's Technopreneur Training Acade-

my would train technopreneurs to be Industry 4.0-ready.

On the roadshow, he said it was to provide a platform for technopreneurs in Sabah to gain information on funding for commercialisation of indigenous technology, innovation and services available from MTDC.

He said selected participants

were given the opportunity to pitch their technology-based projects to a panel of experts.

"This one-on-one session will be available at all Road2Growth programmes as well as the regular weekly pitching sessions at MTDC's office," he said.

The next roadshow will be held in Kuching tomorrow. **Bernama**

'NOT UNCOMMON'

FRENZY OVER 'WAVE OF CLOUDS'

Cloud formation known as Borneo storm line seen over districts in Sabah

MOHD NAZLIE ZAINUL
BEAUFORT
news@nst.com.my

MASSIVE wave-like cloud formation sweeping across several districts in Sabah's west coast yesterday morning caused a frenzy among res-

idents. The cloud formation was noticed between 7am and 7.30am during the overcast weather prior to a downpour.

Pictures of it went viral on social media.

The cloud formation, however, was not an uncommon sight, especially during wet weather, according to the Sabah Meteorolo-

gical Department.

Its director, Azmi Daud, said the wave-like cloud formation was known as Borneo storm line or thunderstorm.

"It forms in waters and coastal areas early in the morning due to winds blowing from the sea, causing the clouds to be rolled up like waves.

"It also occurs when the southwest wind blows towards the mainland."

He said the department believed that the weather would return to normal in the evening.

Teacher Jamal Djupri, 37, said he noticed the clouds at 7.10am when he was at the school field with 25 students.

"This is not the first time I have seen such a (cloud) phenomenon.

"It occurred in 2016 and last year.

"At the time, the weather was cloudy and windy.

"However, the formation lasted only about five minutes," the physical education teacher said.



The Borneo storm line as seen from SMK Beaufort in Beaufort yesterday. PIC COURTESY OF READER

LAMPIRAN 5
KOSMO (NEGARA) : MUKA SURAT 18
TARIKH : 11 JULAI 2018 (RABU)

Gumpalan awan seakan ombak tular di media sosial

KOTA KINABALU - Formasi gumpalan awan seakan ombak dan puting beliung menggemparkan penduduk di sekitar pantai Barat di Sabah semalam.

Pembentukan awan tersebut jelas kelihatan terutama di kawasan sekitar daerah Beaufort di sini berlangsung kira-kira 30 minit sebelum beransur hilang.

Berdasarkan gambar yang tular di laman media sosial Facebook dan aplikasi WhatsApp, kejadian itu berlaku antara pukul 7 pagi disusuli dengan hujan lebat. Difahamkan ia merupakan kejadian yang biasa dilihat penduduk setempat.

Pengarah Jabatan Meteorologi Sabah, Azmi Daud berkata, fenomena awan tersebut tidak



GUMPALAN awan yang membentuk seakan ombak dan puting beliung di Beaufort, Sabah ini menjadi tular di Facebook dan WhatsApp semalam.

membahayakan.

"Fenomena itu dikenali sebagai garis badai Borneo atau

kumpulan ribut petir dan tidak membahayakan. Ia lazimnya berlaku akibat tiupan



FORMASI gumpalan awan seakan ombak dan puting beliung atau lebih dikenali sebagai garis badai Borneo dalam kalangan masyarakat tempatan yang kelihatan di Beaufort, Sandakan.

angin yang membuatkan awan tersebut kelihatan bergulung."

katanya ketika dihubungi semalam.

Gumpalan awan 'ombak besar'

■ Formasi awan luar biasa di beberapa daerah di pantai barat Sabah gemparkan penduduk

Mohd Nazlie Zainul
cnews@msp.com.my

Beaufort

Formasi awan luar biasa kelihatan seperti 'ombak besar' dan 'puting belung' di beberapa daerah di pantai barat Sabah, pagi semalam, menggemparkan penduduk.

Keadaan gumpalan awan berkenaan disedari antara jam 7 hingga 7.30 pagi iaitu ketika cuaca mendung sebelum disusuli hujan lebat.

Penduduk setempat, Jamal Djupri, 37, berkata, dia melihat awan berkenaan sewaktu berada di padang Sekolah Menengah Kebangsaan (SMK) Beaufort ketika mahu memulakan sesi pembelajaran Pendidikan Jasmani dan Kesihatan bersama 25 pelajar sekitar jam 7.10 pagi.

"Fenomena ini bukanlah kali pertama dilihat, malah keadaan sama pernah berlaku pada tahun lalu dan



FENOMENA Garis Badai Borneo dapat dilihat sekitar pekan Beaufort.

2016. Cuaca ketika itu mendung dan sedikit berangin.

"Bagaimanapun, selepas berlaku gumpalan ini kira-kira lima minit, hujan turun dengan lebat seperti tadi," katanya kepada NSTP.

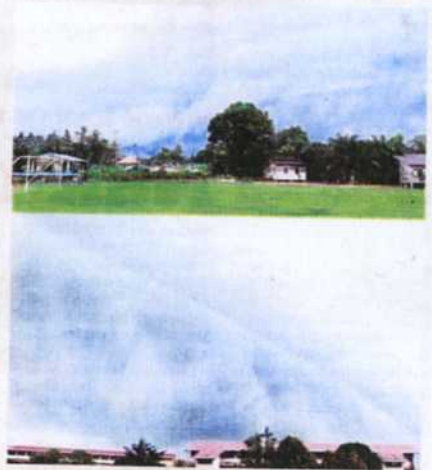
Gambar formasi gumpalan awan luar biasa itu di-

kongsi secara meluas di laman sosial khususnya Facebook, Twitter dan aplikasi WhatsApp.

Pengarah Jabatan Meteorologi Sabah, Azmi Daud berkata, bentuk awan kelihatan seperti ombak, pagi semalam dikenali sebagai

Garis Badai Borneo atau kumpulan ribut petir dan tidak membahayakan.

Katanya, keadaan itu terbentuk di perairan dan pesisiran pantai sekitar barat Sabah pada awal pagi akibat tiupan angin dari arah laut yang menyebabkan awan



FENOMENA Garis Badai Borneo dapat dilihat dari padang SMK Beaufort.

kelihatan bergulung-gulung seperti ombak.

"Ia boleh berlaku akibat tiupan angin barat daya sewaktu ke daratan menje-

lang pagi.

"Kita menjangkakan cuaca akan kembali normal menjelang petang," katanya.

LAMPIRAN 7
BERITA HARIAN : MUKA SURAT 1
TARIKH : 11 JULAI 2018 (RABU)



Fenomena awan berombak di Membakut

Formasi gumpalan awan luar biasa atau dikenali **Garis Badai** berlaku di sekitar daerah Membakut, Sabah, pagi semalam. **Garis Badai** adalah barisan awan ribut petir yang bergerak dari laut ke daratan. Fenomena ketika Monsun Barat Daya, iaitu dari Jun hingga September lazimnya berlaku di pantai barat Sabah dan Selat Melaka. **Garis Badai** terbentuk disebabkan rihan angin menegak, iaitu perbezaan antara kelajuan dan arah angin.

LAMPIRAN 8
KOSMO (INFINITI) : MUKA SURAT 30
TARIKH : 11 JULAI 2018 (RABU)

MARIKH dengan Bumi boleh
sehampir 54.6 juta kilometer iaitu
kira-kira satu pertiga daripada jarak
Bumi ke Matahari.

Marikh bersinar bak bintang jingga di langit

Marikh akan
berada paling
dekat dengan
bumi pada 28
hingga 31 Julai ini
pada jarak 57.59
juta kilometer

PADA malam Jumaat, 27 Julai, orang ramai boleh menyaksikan dua peristiwa yang jarang berlaku di langit.

Pertama, bulan purnama Julai yang akan melalui bayang bumi semasa gerhana bulan dan muncul semula sebagai bulan bercahaya merah.

Kedua, Planet Marikh atau juga dikenali sebagai planet merah akan berada paling dekat dengan bumi dan kelihatan terang di langit.

Fenomena planet Marikh berada paling dekat dengan bumi hanya berlaku sekali atau dua kali setiap 15 atau 17 tahun.

Kali terakhir Marikh berada sebegitu dekat dengan Bumi ialah pada tahun 2003 iaitu 55,758,006 juta kilometer (km) sekali gus, menjadikannya jarak paling dekat dalam tempoh hampir 60,000 tahun.

"Planet Marikh akan dapat dilihat menggunakan mata kasar pada 31 Julai

depan. Ia kelihatan seperti cahaya jingga yang bersinar dan muncul dari arah tenggara selepas matahari terbenam.

"Pada ketika itu, Marikh akan berada di orbit paling dekat dengan Bumi iaitu 57.59 juta km," kata ahli astronomi di Balai Cerap Cincinatti, Dean Regas.

Ujarnya, fenomena tersebut akan berlanjutan selama beberapa minggu dan Marikh akan kelihatan pudar menjelang pertengahan Ogos depan apabila ia bergerak jauh dari Bumi dalam orbit mengelilingi Matahari.

Marikh akan kelihatan hampir di semua sudut Bumi pada Julai ini selepas matahari terbenam tetapi hanya orang yang berada di sebelah utara seperti Alaska, utara Kanada, Greenland dan Iceland tidak dapat melihatnya kerana ia kurang jelas di bahagian horizon selatan.

Pun begitu, kebanyakan orang di Amerika Tengah serta Selatan, Kanada, Eropah, Asia, Afrika, Australia dan Antartika dapat melihat Marikh pada Julai ini.

Sementara itu, Pegawai Sains Planetarium Negara, Kementerian Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar, Mohd. Zamri Shah Mastor berkata, planet Marikh dan Bumi mempunyai orbit masing-masing tetapi terletak secara bersebelahan.

Kelajuan pergerakan setiap planet di

dalam orbit masing-masing adalah juga berbeza. Keadaan ini menyebabkan ada ketikanya kedua-dua planet akan berada berdekatan dan berjauhan.

"Keadaan ini boleh dibayangkan umpama dua orang atlet bersebelahan yang sedang berlari di lorong larian yang membelok.

"Sekiranya atlet di lorong sebelah dalam berlari lebih pantas, ia akan semakin mendekati atlet di lorong sebelah luarnya.

"Kemudian ia akan berada di kedudukan berdekatan serta bersebelahan dengan atlet di lorong luar dan akhirnya meninggalkan atlet di lorong luar tersebut," katanya ketika dihubungi *Kosmo* baru-baru ini.

Begitu juga dengan planet Marikh dan Bumi. Setiap 26 bulan atau setiap dua tahun dan dua bulan, Bumi akan memintas planet Marikh seperti atlet di lorong sebelah dalam memintas atlet di lorong sebelah luarnya.

Semasa memintas planet Marikh, kedua-dua planet akan saling berdekatan seketika sebelum Bumi meninggalkan Marikh.

Orbit kedua-dua planet sebenarnya tidak sentiasa sama kerana faktor gangguan tarikan graviti daripada planet-planet lain di dalam sistem suria. Terutamanya daripada Musytari yang merupakan planet terbesar di dalam sistem suria dan faktor kecondongan orbit



REGAS



MOHD. ZAMRI

PADA 31 Julai ini merupakan jarak planet Marikh paling dekat ini dengan bumi iaitu 57.59 juta kilometer.



SAMBUNGAN...

KOSMO (INFINITI) : MUKA SURAT 31

TARIKH : 11 JULAI 2018 (RABU)

planet masing-masing yang berbeza-beza menyebabkan jarak kedudukan paling hampir antara planet Marikh dengan Bumi pada setiap 26 bulan sentiasa berbeza-beza.

Struktur planet

Tambahan, berdasarkan kiraan oleh Pentadbiran Aeronautik dan Angkasa Lepas Kebangsaan (NASA) jarak paling dekat antara planet Marikh dengan Bumi boleh sehampir 54.6 juta kilometer iaitu kira-kira satu pertiga daripada jarak Bumi ke Matahari.

Walau bagaimanapun, jarak terdekat ini tidak mudah dicapai oleh kedua-dua planet tersebut.

Pada 27 Ogos 2003 pukul 9.51 pagi waktu Greenwich, planet Marikh dan Bumi berada berdekatan pada jarak 55,758,006km. Hasil pemeriksaan pihak NASA, jarak terdekat antara planet Marikh dengan Bumi tersebut sebenarnya tidak pernah dicapai sejak 60,000 tahun lalu iaitu ketika Bumi dikuasai oleh manusia primitif yang digelar sebagai *Neanderthals*.

Menurut NASA, jarak terdekat antara planet Marikh dengan Bumi pada tahun 2003 akan dicapai semula pada 28 Ogos tahun 2287 iaitu 269 tahun dari sekarang.

Mengulas mengenai kesan fenomena tersebut, Mohd. Zamri berkata, Fenomena jarak terdekat antara planet Marikh dan Bumi tidak memberi apa-apa kesan terhadap Bumi dan planet-planet lain.

Bagaimanapun, fenomena tersebut akan menyebabkan planet Marikh kelihatan lebih jelas dari Bumi dan boleh dilihat dengan mata kasar ataupun menggunakan teleskop.

Menggunakan teleskop, pemerhati planet Marikh di langit berkemungkinan dapat melihat struktur permukaan planet Marikh dengan lebih jelas. Ada berkemungkinan juga kita melihat struktur litupan ais berwarna putih di kutub planet tersebut.

Sehubungan itu, Planetarium Negara



KEHADIRAN planet Marikh pada kali ini yang bercahaya terang boleh dilihat dengan teleskop ataupun mata kasar.

akan mengadakan Program Pencerapan Planet Marikh pada Sabtu 28 Julai 2018 bermula pada pukul 9 malam hingga pukul 11.30 malam di Planetarium Negara.

Program Pencerapan Gerhana Bulan Penuh kemudiannya akan menyusul dari pukul 1 pagi sehingga 7 pagi di lokasi yang sama.

Planetarium Negara akan menyediakan beberapa buah teleskop untuk orang awam melihat planet Marikh dengan lebih jelas selain menyaksikan fenomena gerhana bulan penuh.

Sesi taklimat berkaitan gerhana bulan penuh dan pencerapan planet Marikh akan turut diadakan semasa program dijalankan.

Orang awam dijemput untuk menyaksikan kedua-dua fenomena tersebut pada 28 dan 31 Julai merupakan jarak planet Marikh paling dekat ini dengan bumi iaitu 57.59 juta km

Seluruh penduduk Malaysia tidak kira di kawasan atau di negeri mana boleh melihat planet Marikh sepanjang malam iaitu ketika matahari terbenam sehingga menjelang subuh keesokan harinya.

Planet Marikh akan terbit dari arah timur pada awal malam dan akan kelihatan sebagai bintang yang sangat cerah berwarna jingga tetapi tidak berkelip.

Ia akan semakin tinggi dan berada tegak di atas kepala dan kemudiannya akan bergerak ke arah langit sebelah barat pada sepanjang malam sehingga menjelang pagi.

Pemerhatian ke atas planet Marikh sebenarnya amat bergantung kepada keadaan cuaca dan kejernihan langit pada masa pemerhatian.

Sekiranya cuaca hujan atau langit diliputi awan berkemungkinan kita tidak dapat melihat planet Marikh pada waktu tersebut.

INFO Planet Marikh

■ Kali terakhir Marikh berada sebegitu dekat dengan Bumi ialah pada tahun 2003 iaitu 55,758,006 kilometer sekali gus, menjadikannya jarak paling dekat dalam tempoh hampir 60,000 tahun.

■ Pada 28 hingga 31 Julai ini, Marikh akan berada paling dekat dengan bumi pada jarak 57.59 juta km.

■ Jarak terdekat antara planet Marikh dengan Bumi pada 2003 akan dicapai semula pada 28 Ogos tahun 2287 iaitu 269 tahun dari sekarang.

LAMPIRAN 9
KOSMO (INFINITI) : MUKA SURAT 31
TARIKH : 11 JULAI 2018 (RABU)

Angkasa jalin penyelidikan sains angkasa di peringkat global

BIDANG sains angkasa sangat luas, di Malaysia kita banyak memberi fokus kepada cuaca angkasa, mikrograviti dan astronomi.

Sains angkasa merupakan bidang asas kepada semua penyelidikan lanjut yang boleh diaplikasikan dalam kehidupan seharian.

Menurut Pegawai Penyelidik Agensi Angkasa Negara (Angkasa), **Zahira Mohd. Radzi**, orang ramai boleh mendapatkan maklumat dan rujukan berkaitan sains angkasa

melalui Unit Penyelidikan Sains Angkasa di agensi tersebut.

"Angkasa akan memberikan maklumat kepada orang ramai mengenai fenomena astronomi dan perkembangan terkini bidang sains angkasa.

"Selain itu, di Malaysia terdapat beberapa buah universiti yang bergiat aktif menjalankan penyelidikan dalam bidang sains angkasa seperti Pusat Sains Angkasa; Universiti



ZAHIRA

Kebangsaan Malaysia, Universiti Malaya, Universiti Teknologi Mara dan Universiti Sains Malaysia," katanya ketika dihubungi *Kosmo!* baru-baru ini.

Tambahnya, Angkasa berperanan membangun dan melaksanakan program sains angkasa di Malaysia.

Pada masa sama, menyelidik dan mencadangkan keutamaan program penyelidikan dan

pembangunan (R&D) dalam bidang sains angkasa serta mengkoordinasi dan menentukan peranan agensi yang terlibat dengan program sains angkasa.

Agensi ini juga aktif menjalankan kerjasama penyelidikan di peringkat global seperti melancarkan beberapa eksperimen ke Stesen Angkasa Antarabangsa (ISS) untuk penyelidikan mikrograviti dan Program Pencerapan Bulan Peringkat Antarabangsa anjuran International Observer Moon Night (InMON).



ABDUL
RAHIM
MYDIN

PLASTIC POLLUTION

OCEANS ARE TURNING INTO EARTH'S LAST SINK

Every year, between 3 and 13 million tonnes of plastic waste leave our homes to enter the world's ocean, posing a massive danger to marine life

LAST month, the *National Geographic* posed question: Planet or Plastic? The answer, I thought, was obvious. Not so, it turns out.

The magazine, which is famed for its great photographs (and articles, too), has a heart-wrenching picture of a seahorse clutching on to a plastic cotton swab floating in the polluted waters off the Indonesian island of Sumbawa. Those who know something about their seas and seahorses know that these creatures latch to natural debris to ride the swift currents of the ocean depths, but a cotton swab is as far removed from seagrass as you can get. There are other disturbing pictures, too.

Please do not gloat that the cotton swab was not in the waters of our Straits of Malacca or the South China Sea. Alas Strait or the Sape Strait it may have been, but let us not lose sight of the fact that plastic waste is everywhere, strangling sea creatures big and small. If marine creatures die, we die, ocean eventually.

Yes, the Earth, the only habitable planet we have, is being strangled by plastic. All made by men for men. Most of it land up in the ocean. It has been so since the late 18th century when plastics first rolled out of the factory that the industrial revolution made.

And estimates vary, and understandably so. Such things are hard to measure but guesstimates by researchers put the annual waste entering the ocean between three million and 13 million tonnes. And as the *National Geographic* puts it, our poor ocean is turning into Earth's last sink.



Plastic waste at Juhu beach in Mumbai, India. AFP PIC

Just visit the world's beaches and you will see things plastic with letters in all languages: Hindi, Tamil, Chinese, Tagalog, English, German, Korean and Telugu. If you are multilingual, you will see labels from other lands, too.

Littering has gone global. Like the space race, the Europeans and Asians are competing to make the seas a dumping ground for their national trash. According to one calculation, Asia and Europe produce equal amounts of plastics, most of which end up in the sea.

But blaming plastics for all the oceans' ills is pointless. It is like blaming fire for the mischief of the arsonist. Plastic, when it first made its appearance, saved lives in the wild, especially those of the elephants and rhinos. The piano keys that played James Taylor's *Fire and Rain* were in all likelihood made of ivory recovered from butchered elephants and rhinos. Plastics saved them. Now, you can play Elton John's *Goodbye Norma Jean* hitting your plastic piano keys comforted by the knowledge that you are not complicit in the deaths of elephants and rhinos. This will be music to many ears.

But marine wildlife may not be so saved.

According to WWF 2018 Report, *Out of the Plastic Trap*, the Mediterranean Sea is today, one

of the seas with the highest levels of plastic pollution in the world. The reports says: "Plastics account for 95 per cent of the waste in the open sea, on the seabed and on beaches across the Mediterranean. This waste comes mainly from Turkey and Spain, followed by Italy, Egypt and France."

In the damning report, Europe is given the dubious distinction of being the "second largest plastics producer in the world, after China, dumping 150,000-500,000 tonnes of macroplastics and 70,000-130,000 tonnes of microplastics in the sea every year." And most of the plastics find their way into the Mediterranean Sea threatening marine life. Picture this, with a little help from WWF: 500,000 tonnes of macroplastics equals 66,000 trash trucks. Imagine these lorries dumping the tonnage of waste in the sea every year. And that is only the Mediterranean Sea.

Over 90 per cent of the damage caused to marine wildlife by human waste is due to plastics, WWF asserts. "Globally, there are about 700 marine species threatened by plastics, of which 17 per cent are listed as "threatened" or "critically endangered", including the Hawaiian monk seal and the loggerhead turtle." The plastics we invented 150 years ago entrap

them in a vicious cycle of death.

But it is not all bad news. If we did something now, we can still save the planet, and, therefore ourselves. We must commit ourselves to make the world's oceans plastic-free. And that means, we must start on land, with you and I. Then we can grow this plastic-free movement through community, company, country to the world.

For starters, say no to plastic. If you must, opt for biodegradable materials instead of plastics. And stay away from disposable stuff such as cotton swabs. They may land up in some sea where seahorses may mistake them for seagrass. Or worst still they may land up in the guts of some marine life, killing them eventually. Remember, 700 marine species are already facing the death sentence.

Every movement has a single mover. Be the first mover. Begin by taking ownership of the problem and slowly but surely others will join you. And one day you will wake up to see a nation of people sharing your dream of a plastic-free world. And God willing, the Earth, the seas, the trees and animals will still be there for you, your children and grandchildren because you cared to be the first mover.

The writer is a leader writer with the NST

Begin by taking ownership of the problem and slowly but surely others will join you. And one day you will wake up to see a nation of people sharing your dream of a plastic-free world.



DR
MARLEE
DIELEMAN

FAMILY BUSINESSES

INNOVATION AND FAMILY FIRMS

If owners tap into their deep industry knowledge, monitoring skills, and entrepreneurial drive, they are well positioned to do well in industries

FOR businesses, change is a necessity for survival, whether it's through new products, new business models or new ways of doing things.

And so, we ask whether in Asia where family firms are a prominent feature of the business landscape, are such firms better at innovating to survive? Or, because of the way they are run as a family concern, are they more likely to lag behind?

Family firms are generally poorly positioned to innovate because frugality and conservatism tend to be their hallmarks. Owner-managers may prefer to have a tight rein over decisions and expenses rather than be experimental and creative.

My interactions with young family members of such businesses suggest that they feel their firms are so traditionally run that they fear they would never improve their business. They may have great ideas for renewal but there are constraints impeding implementation especially when their parents are still around.

Unlike professional managers where there is job mobility, owner-managers have long tenure. Such long tenures can result in rigidity and prevent any significant overhaul of the business. Asian patriarchs are usually reluctant to retire and, having grown up in a different era, they may be resistant to new technologies or understand and accept consumer trends. These are potential impediments to growth.

Additionally, top management and boards usually consist of owners and trusted insiders with similar experiences and ideas, which often lead to group think, further thwarting any real innovation.

But, could there be another side to the story? I argue that



If family firms are able to innovate more effectively, they can capitalise on it for greater business success.

because of the way they are run, family firms are in fact much better positioned to be truly innovative.

As entrepreneurs, these owners seek new opportunities and are willing to take risks. Family leaders, especially majority shareholders, can also have the power and time needed to implement a consistent long-term strategy, something hired chief executive officers may lack.

Second, the next generation of family members may come into positions of influence at a younger age. This may encourage faster adoption of new ideas.

Particularly in Asia, family owners are usually deeply involved in many if not all decisions, resulting in extraordinary insights into the business and the wider industry. Armed with this knowledge, they are more likely to understand where to best spend their scarce resources to remain current. Such direct involvement also means they can better monitor how resources on innovation are being spent.

This leads to a so-called "ability willingness paradox" affecting innovation in family firms. When owners invest in innovation, they are much better at converting their inputs into tangible results. However, research suggests they are less likely to invest in new initiatives.

Several of the family firms compete fiercely on price without being able to stand out with any appreciable unique market offerings. As the pace of economic growth slows, they face declining margins and turn to an intense

focus on cost controls.

To keep prices low, firms may eschew environmental sustainability, good governance, high quality, or a fun working environment – qualities younger generations of family members prefer to be associated with.

Indeed, many of them have little interest in their parents' line of business. Some successors even say privately they would rather leave the firm altogether.

Breaking the cycle of price competition requires innovation that focuses on producing higher-value offerings and a different mindset. Instead of simply battling for market share, this calls for conscious strategic choices on how to position the firm.

Many family firms are unprepared for this transition. The organisation is too lean to try new things and, while entrepreneurial energy and capital may be spent on new initiatives, they do not add significant value.

Instead, the next generation of family leaders is stuck in what they perceive as a dated business without the ability to reposition the family firm as a trailblazer.

Yet, if family firms are able to innovate more effectively, how can they capitalise on it for greater business success?

One strategy is to take a proactive approach to the infusion of new ideas. Many business owners receive a stream of experts presenting new projects, usually seeking funding. They should appoint these industry innovation experts to the firm's board so that their objectives are aligned with those of the family business.

These experts should be selected for diversity of ideas, not familiarity with the owners.

To counter the loss of control, owners could consider forming an innovation advisory council that regularly reports on how to stay current. The progress of "future ready" investments should feature as a separate item in the strategic planning cycle.

Pushing new ideas is challenging, especially in a traditional Asian business environment characterised by top-down decision-making.

For this reason, another lesson is to appoint both mentors and champions for new initiatives. Innovations need mentorship from owners to ensure the transfer of industry knowledge and guidance. Also, new generation family leaders may champion to experiment with new ideas and models using the family's resources. These could be structured as a separate entity to avoid being marginalised by a "legacy business".

If family firms can tap into their deep industry knowledge, greater monitoring skills, and entrepreneurial drive, they are well positioned to do well in their respective industries.

When they succeed, family businesses are also more likely to attract passionate next generation leaders, increasing the firm's chances of survival across generations.

The writer is associate professor in the Department of Strategy and Policy at National University of Singapore Business School

... new generation family leaders may champion to experiment with new ideas and models using the family's resources.

2030 AGENDA

REDEFINING POLICIES FOR SUSTAINABLE DEVELOPMENT

Political action and reforms should be carried out by govts to fulfil the 2030 Agenda and SDGs, writes
JENS MARTENS

WHEN United Nations' member states adopted the 2030 Agenda, they signalled with the title, "Transforming our World" that it should trigger fundamental changes in politics and society.

But, three years after its adoption, most governments have failed to turn the proclaimed transformational vision of the 2030 Agenda into real policies.

Even worse, the civil society report, "Spotlight on Sustainable Development 2018", shows that policies in a growing number of countries are moving in the opposite direction, seriously undermining the spirit and the goals of the 2030 Agenda.

The problem is not a lack of global financial resources. On the contrary, in recent years we have experienced a massive growth and accumulation of individual and corporate wealth worldwide.

The policy choices that have enabled this unprecedented accumulation of wealth are the same fiscal and regulatory policies that led to the weakening of the public sector and produced extreme market concentration and socio-economic inequality.

The extreme concentration of wealth has not increased the resources that are available for sustainable development. As the World Inequality Report 2018 states, "Over the past decades, countries have become richer, but governments have become

poor" due to a massive shift towards private capital.

But, even where public money is available, all too often public funds are not allocated in line with the 2030 Agenda and the SDGs, but was spent for harmful or dubious purposes, be they environmentally harmful subsidies or excessive military expenditures.

According to the Stockholm International Peace Research Institute (SIPRI), global military expenditure rose again in 2017, after five years of relatively unchanged spending, to US\$ 1,739 trillion (RM6.98 trillion). In contrast, net ODA (Official Development Assistance) by members of the OECD Development Assistance Committee (DAC) was only US\$ 146.6 billion in 2017, thus less than one-tenth of global military spending.

"The world is over-armed while peace is underfunded," states the Global Campaign on Military Spending. Particularly alarming has been the decision of North Atlantic Treaty Organisation (Nato) member countries to increase military spending to at least two per cent of their national gross domestic product.

For European Nato members, this meant a minimum increase of €300 billion (RM1.413 trillion) per year, most likely at the expense of other parts of their national budgets. The two per cent goal represents a kind of "Un-Sustainable Development Goal", and, is in sharp contradiction to the spirit of the 2030 Agenda.

Gaps and contradictions exist not only in fiscal policy and the provision of the financial means of implementation for the SDGs. The most striking examples are climate and energy policies.

Instead of tackling unsustainable production patterns and taking the "polluter pays principle" seriously, action is postponed, placing hope on technical solutions, including research on



It is cheaper to manage waste in an environmentally sound manner than to clean up in future years the 'sins of the past'. REUTERS PIC

geo-engineering, that is, dangerous large-scale technological manipulations of the earth's systems.

UN Secretary-General António Guterres recently called on member states to address the "dark side of innovation". This includes the new challenges of cybersecurity threats, the intrusion into privacy by artificial intelligence, its impact on labour markets, and the use of military-related "cyberoperations" and "cyberattacks".

The "dark side of innovation" could also be the leitmotif characterising the dominant fallacies about feeding the world through intensified industrial agriculture. While the prevailing industrial agriculture system has enabled increased yields, this has come at a great cost to the environment as well as to human health and animal welfare.

But, despite these gloomy perspectives, there is still room for change. Contradicting policies are not an extraordinary phenomenon. They simply reflect contradicting interests and power relations within and between societies, and these are in constant flux and can be changed.

Bold and comprehensive alternatives to business as usual exist in all areas of the 2030 Agenda, and it is up to progressive actors in governments, parliaments, civil society and the private sector to gain the hegemony in the societal discourse to be able to put them into practice. Some of the necessary political action and reforms are:

IMPLEMENTATION of 2030 Agenda and SDGs must be declared a top priority by heads of government. To date, the mainstream approach has been one of tackling its three dimensions in their own zones, complemented by (occasional) coordination between them. There is a need for a whole-of-government approach towards sustainability;

STRENGTHENING public finance at all levels. Widening public policy space requires, among other things, the necessary changes in fiscal policies. Hence, governments have to formulate

SD Budgets in order to implement the SDGs. This includes, for example, taxing the extraction and consumption of non-renewable resources, and adopting forms of progressive taxation that prioritise the rights and welfare of poor and low-income people. Fiscal policy space can be further broadened by the elimination of corporate tax incentives, and the phasing out of harmful subsidies, particularly in the areas of industrial agriculture and fishing, fossil fuel and nuclear energy. Military spending should be reduced, and the resource savings reallocated, inter alia, for civil conflict prevention and peace-building;

IMPROVING regulation for sustainability and human rights. Governments have too often weakened themselves by adopting policies of deregulation or "better regulation" and trusted in corporate voluntarism and self-regulation of "the markets". Hence, there is a need for a legally binding instrument. The Human Rights Council took a milestone decision in establishing an intergovernmental working group to elaborate such an instrument (or treaty). Governments should take this treaty process seriously and engage actively in it. The expected start of the negotiation process in October 2018 offers an historic opportunity for governments to demonstrate that they put human rights over the interests of big business; and,

CLOSING global governance gaps and strengthening the institutional framework for sustainable development. The effectiveness of the required policy reforms depends on the existence of strong, well equipped public institutions at national and international levels. It is essential to reflect the overarching character of the 2030 Agenda and the SDGs in the institutional arrangements of governments and Parliaments. **IPS**

The writer is director of Global Policy Forum, and coordinates the Reflection Group on the 2030 Agenda for Sustainable Development

6 The extreme concentration of wealth has not increased the resources that are available for sustainable development.

LAMPIRAN 13
NEW STRAITS TIMES (HIGHER ED) : MUKA SURAT 2
TARIKH : 11 JULAI 2018 (RABU)

GO GREEN IN THE CITY UNIVERSITY CHALLENGE

The Outliers represent Malaysia at Asia Pacific finals

A TEAM of two Universiti Tenaga Nasional (UNITEN) students — Farah Aini Shazlin and Iyadh Haziq Wan Yusof, both 22 — will represent Malaysia to compete against 12 countries at Schneider Electric's Eighth Annual Go Green in the City University challenge for the Asia Pacific region next month.

The students, who named themselves The Outliers, emerged as champion after competing against five other finalists. They received the grand prize of RM5,000 and a trophy, as well as each a certificate of honour.

This annual competition offers Malaysia's upcoming and talented engineering and business students the opportunity to showcase their ideas for a more efficient and sustainable energy management in our rapidly growing cities.

Under the theme What's Your Bold Idea?, students were required

to illustrate their ideas for innovative energy management solutions in cities for one of the four real-life case challenges within energy management, namely Sustainability & Inclusivity, Digital Economy, Smart Manufacturing & Supply Chain, Cyber Security, or focus on an original idea for efficient energy management in a city environment.

The proposals were judged based on innovation from the business perspective, environmental impact and energy management viewpoint, the feasibility of the idea and knowledge of Schneider Electric's products.

Schneider Electric Malaysia country president Soo Pow Leong said the contest was organised to foster talented young engineers and future business leaders to promote change and to make a difference by striving for technical expertise and utilising a strong moral compass.

This competition saw quality efficient,

sustainable and smart city solutions by passionate and dedicated young future leaders. We hope this competition will encourage more bright young talents in finding green solutions to environmental issues in order to achieve our goal of greener and smarter cities.

"As a global energy management industry leader, Schneider Electric is thrilled to be at the forefront in providing this platform for the younger generation to share their visions and strategies on sourcing for smarter alternatives to global solutions on challenges in the energy industry."

Kumareshan Mardappan from the Energy Commission, Malaysia, who sat on the panel of judges, said this competition is an innovative way to discover ways of establishing smart cities through the eyes of the future generation.

The competition is very much in line with our mission at the Energy

Commission, which is to foster economic development and competitive markets in an environmentally sustainable manner. We hope that other industry players can utilise this initiative as a benchmark to address, improve and spearhead sustainability efforts," added Kumareshan.

The final event in the US promises to be an extremely rewarding experience with four action-packed days in a culturally rich and engaging environment where the students will get to interact with Schneider Electric's top management, build a strong and lasting professional and personal network, learn about the business from experts and develop key skills through various workshops and activities.

Members of the global winning team will receive an opportunity to work with Schneider Electric and visit its offices in two countries, with all expenses paid.

LAMPIRAN 14
NEW STRAITS TIMES (HIGHER ED) : MUKA SURAT 8
TARIKH : 11 JULAI 2018 (RABU)

NEW STRAITS TIMES
HIGHER ED

DISCOURSE

Igniting interest in STEM

ROZANA SANI
rsanienist.com.my

IN the era of globalisation, digitisation and fourth industrial revolution, the need for talents in science, technology, engineering and mathematics (STEM) is becoming more pronounced to move the country forward.

However, the interest in mathematics and science in schools and, consecutively, universities seems to be waning as reflected in the poor enrolment into science stream at secondary schools, and the lack of good candidates for STEM-based programmes at universities.

National STEM Movement chairman Datuk Professor Dr Noraini Idris said this disinterest in science and mathematics stemmed from uninspired teaching of the subjects at schools, which had a continued impact at the higher-education level.

"When I was studying in the 1970s and 1980s, science and mathematics teachers at school were knowledgeable and well-versed in the subjects. In class, they had students enthralled with their stories on the subjects being taught, whether it be maths or science," she said.

"In mathematics, we were thought to reflect and think, and had to give reasons for equations, like whether it is true that one plus one is two. And, if so, we had to give reasons why it is true. We had to prove it in class — both students and teacher."

"And, it didn't matter if we got it wrong, as it is a learning process. During break time, at the canteen, students had the opportunity to play chess with the mathematics teacher. So, the rapport was very strong between teachers and students."

For science, Noraini said teachers would have students carry out experiments in the science labs.

"But science is not just about chemical elements and confined to labs. Teachers would also teach science through agriculture or gardening, where students had fun and were encouraged to ask questions and think," she said.

"Last time, we were not that clever but we built up interest in science and mathematics because our teachers were engaging."

"The textbooks used in class was not used to just copy exercises from. We read the textbooks and applied or link the knowledge to everyday life. That was what made me like science and mathematics till today," said Noraini, who holds a string of qualifications in mathematics, including a PhD (Mathematics Education) from the Ohio State University, in Columbus, Ohio, the United States. She obtained the doctorate in 1998.

"Teachers were strong in the knowledge, as well as pedagogically. I think this is what differentiates today's and yesterday's classroom," Noraini said.

When I was studying in the 1970s and 1980s, science and mathematics teachers at school were knowledgeable and well-versed in the subjects. In class, they had students enthralled with their stories on the subjects being taught...

DATUK PROFESSOR DR NORAINI IDRIS
National STEM Movement
chairman



Noraini Idris (second from left) and University of Malaya's science matriculation students discussing their experience in learning science and mathematics in the programme.

"We have to strengthen our kids' interest in STEM. When they enjoy learning STEM and partake in STEM-based activities, this will trigger curiosity and go towards exploring the use of STEM to provide innovative applications and solutions," she said.

She said only allowing students who obtained As and Bs in science and mathematics into the science stream in upper secondary, which has been the common practice, might not be the way to go.

"When I was young, students were encouraged to take up science. 15 is too young to decide on streaming."

"What is best is for all to enter the science stream, fortified with subjects like social science and economy. That way we can get more talents in STEM," said Noraini.

She said Malaysia could learn from Finland in training and grooming great teachers, as well as an ecosystem that supports insightful and fun learning that encourages interest in science and mathematics.

In a recent study visit to Finland, Noraini saw that to teach science, candidates must not only be strong in the subject, but also in pedagogy, with a clear grasp of in-depth technique of teaching science.

"They take five years to graduate to become teachers. This is inclusive of active research done in schools," she said.

Apart from preparing competent and passionate teachers, the Finnish government facilitated the setting up of start-ups comprising graduates to create teaching modules and toolkits to be used in schools, like 3D printing kits.

There were also companies which created applications to be used in schools that animated and gamified elements of science to get children excited about STEM.

"The whole ecosystem is in place, from school to talents and start-ups, that come up with teaching aid. The framework is impressive," said Noraini.

She said Finland parents were welcomed to school, whether they had a background in STEM or not. They get involved in teaching the kids, where parents share their careers in STEM.

"We at the National STEM Movement have been trying to involve the community and other stakeholders in the STEM Mentor-Mentee Programme to promote greater interest and capacity-building in science and mathematics among students," she said.

Launched in 2016, the programme pools together lecturers, researchers, scientists, engineers and mathematicians from the academia, professional bodies and the industry to offer guidance in promoting better understanding of STEM and provide the expertise to nurture talents in the field, mainly among students from Forms One till Three.

It involves facilitators who are the teaching staff of universities, mentors comprising science students from tertiary institutions and mentees who are school students.

"Apart from universities becoming mentors to schools and teachers and students, parents as mentors, too, will be our push this year. It is already happening in SMK Batang Kali. Some parents who work in the medical line in hospitals and clinics have adopted Form Two and Form Three students to become mentees to doctors in the area. They are given lab coats and stethoscopes to follow the doctors when doing their rounds," Noraini shared.

"We also encourage schools to form STEM learning centres. Some schools choose to develop agriculture centres as the core of this initiative. There are schools that have come up with fertilisers, and are selling them commercially. This is supported by the principals."

"For principals who are not keen on STEM, we hope the Education Ministry will allow teachers, school management, students and parents to collaborate."

"Schools should welcome such efforts. We shouldn't be territorial and should be more flexible. The community volunteers can help out, if well planned. Students can see careers related to STEM with this initiative," she said.

On other activities by the National STEM Movement this year, Noraini said the organisation would hold an Asia-Pacific Roundtable event in November involving universities, industry stakeholders, the ministry and the United Nations Educational, Scientific and Cultural Organisation.

"The event will focus on issues and challenges concerning STEM education and best practices, higher-order thinking skills that seem to not be successful, and Asia-Pacific collaboration going forward."

The movement is also active in training teachers to develop digital games.

"We will continue with the mentor-mentee programme, science carnivals and hold the Malaysia Technology Exhibition in February next year," she said.

Noraini is also currently helping University of Malaya set up its STEM centre, which would see the development of science- and mathematics-based teaching modules, aimed at making learning the subjects more exciting and insightful.

The National STEM Movement was established by passionate academicians from institutions of higher learning who were concerned about the declining performance in science and mathematics among students in secondary schools and universities. Its mission is to nurture greater interest and understanding in science and mathematics among students from primary and secondary schools.

WEDNESDAY, JULY 11, 2018

Hologram alternatif penyembuhan tenaga?

MELALUI dunia teknologi yang semakin berkembang pesat, banyak kajian mula dijalankan oleh pakar terutama dalam bidang kesihatan.

Mungkin baharu di negara ini, penggunaan teknologi hologram mula mendapat tempat dalam persada dunia perubatan dan kesihatan, namun sebelum ini, teknologi itu telah digunakan secara meluas di negara ini dalam pelbagai bidang seperti perdagangan dan hiburan.

Pernahkah anda menonton filem Iron Man? Menerusi filem tersebut, banyak bahagian menggunakan teknologi hologram yang dikatakan merupakan teknologi terkini yang diguna pakai dalam menghasilkan visual yang memberi kesan tiga dimensi (3D).

Ramal yang mengetahui tentang teknologi hologram dalam penghasilan filem, namun keupayaan hologram kini lebih menyeluruh termasuk

dalam konteks kesihatan.

Teknologi tersebut yang semakin berkembang membolehkan sebuah syarikat di Amerika Syarikat mencipta gelang hologram sebagai alternatif didakwa membantu orang ramai untuk kembali hidup sihat dan bertenaga.

Di Amerika Syarikat mahupun Korea, teknologi gelang hologram digunakan bagi mereka yang terlibat dalam bidang sukan kerana mendakwa memberikan tenaga secara semula jadi agar mereka kekal sihat dan cergas.

Ketua Pegawai Eksekutif Sightplus Malaysia, **Datuk Kamil Mokhtar** memberitahu, kecanggihan teknologi gelang tangan hologram dari Amerika Syarikat kini digunakan secara meluas di Korea sejak 2015 bagi meningkatkan daya ketahanan badan ke tahap maksimum.

Katany, hologram merupakan produk daripada teknologi holografi yang merujuk kepada imej atau imej yang dibuat daripada tiga dimensi yang menggunakan kesan gangguan dua pancaran laser yang mana pola gangguannya disimpan. Beliau mendakwa, gelang hologram pertama di Malaysia itu bertindak seperti



akupunktur tanpa jarum untuk mengaktifkan sel-sel darah merah dan putih bagi membantu penjagaan kesihatan pengguna daripada pelbagai penyakit.

SISTEM IMUNASASI

"Sel-sel darah putih akan bertindak mencari beberapa masalah di dalam badan yang memberi kestabilan dalam sistem imunisasi dan ini dipercayai dapat meningkatkan tahap metabolisme dan daya tahan seseorang. "Apabila menggunakan gelang hologram ini, sistem imunisasi boleh menjadi semakin kuat serta pada masa sama, menjadikan badan lebih kuat dan sihat," dakwanya.

Sightplus diasaskan pada 2013 dengan tujuan meningkatkan kesejahteraan masyarakat melalui produk inovatif berdasarkan penyelidikan sains dan teknologi.

Produk gelang hologram itu turut mendapat kerjasama sains kesihatan dan perubatan tradisional

Cina sebagai alternatif membantu menyelesaikan masalah kesihatan abad ke-21 berdasarkan sejarah 3,000 tahun dahulu.

Beliau tertarik untuk menjadi wakil tunggal untuk pasaran tempatan oleh syarikat pengeluar apabila merasa sendiri kelebihan produk itu terhadap kesihatannya.

Beliau yang menghidap penyakit kencing manis tahap empat sejak tujuh tahun lalu mendakwa berjaya mengekalkan bacaan gula dalam darah antara tujuh hingga lapan selepas menggunakan gelang hologram tersebut sejak tiga bulan lalu.

"Justeru selepas melihat dan merasa sendiri keberkesanan, saya berasa yakin untuk memasarkannya di pasaran Malaysia."

"Malah sebelum ini doktor mengesahkan saya perlu dibedah kerana terdapat darah beku di kaki. Alhamdulillah selepas pemeriksaan, doktor memberitahu saya tidak perlu dibedah kerana tiada lagi darah beku. Kini, saya tidak berasa penat, mulut tidak lagi kering dan tidak perlu kerap ke tandas untuk membuang air kecil," jelasnya.

Keajaiban hologram

MELALUI dunia teknologi yang semakin berkembang pesat, banyak kajian mula dilakukan oleh pakar terutama dalam bidang kesihatan.

Mungkin baharu di negara ini, penggunaan teknologi hologram mula mendapat tempat dalam persada dunia perubatan dan kesihatan, namun sebelum ini, teknologi itu telah digunakan secara meluas di Malaysia dalam pelbagai bidang seperti perdagangan dan hiburan.

Kelebihan teknologi itu mula diperkatakan sejak kebelakangan ini sehingga membolehkan industri perubatan dan kesihatan berkembang dengan pantas di serata dunia.

Hologram merupakan teknologi hasil rekaan optik yang diperkenalkan oleh ahli fizik Hungary, Dennis Gabor pada akhir tahun 1940-an dan menerima Hadiah Nobel (Fizik) pada 1971 melalui karya dalam penemuan serta pengembangan pada metod holografi.

Tidak berakhir di situ, beberapa ahli ilmuwan termasuk Yuri Denisyuk dan

Dr. Stephen Benton turut mengembangkan teknologi itu antara tahun 1962 hingga 1968.

Yuri mengembangkan sebuah sistem laser yang dapat merakam objek secara tiga dimensi menggunakan gabungan emulsi dari Perak-Halida sebagai medium perakaman sementara teknik pelangi atau disebut rainbow hologram yang diperkenalkan oleh Stephen banyak digunakan dalam label produk.

Secara umumnya, hologram yang terhasil daripada teknologi holografi terbentuk dari gabungan dua cahaya yang koheren dan dalam bentuk mikroskopis.

Hologram memiliki pelbagai fungsi antaranya untuk menyimpan data.

Selain merakam gambar, hologram mampu menyimpan data pada kadar densiti tinggi ke dalam kristal atau fotopolimer.

Hologram juga dapat dijadikan aset keselamatan sekuriti kerana sekuriti hologram sangar sukar ditiru dan direplikasi memandangkan ia menggunakan teknologi yang tinggi, khas serta mahal.



KAMIL MOKHTAR menunjukkan gelang tangan hologram 3D di pejabatnya di USJ 9, Subang Jaya. Selangor baru-baru ini.

Gambar FAISOL MUSTAFA



LAMPIRAN 16
UTUSAN MALAYSIA (MEGA SAINS) : MUKA SURAT 18
TARIKH : 11 JULAI 2018 (RABU)



Pembangunan robot konsep

LG ELECTRONICS baru-baru ini mengembangkan lagi kerjasamanya apabila keluar dari kepompong Asia dan melabur dalam syarikat Bossa Nova Robotic yang berpangkalan di Amerika Syarikat.

Bossa Nova Robotics merupakan syarikat berasaskan teknologi yang menjadi pembekal utama data produk berasaskan masa nyata untuk industri peruncitan global.

Fungsinya adalah untuk membantu industri peruncitan dalam skala yang besar seperti pasar raya dengan melakukan pengutipan data inventori secara automatik.

Naib Presiden Bahagian Inovasi Terbuka Globalnya, **Kim Sungwook** berkata, dengan pelaburan tersebut, LG telah membelanjakan lebih daripada RM360 juta selama 12 bulan pertama dalam inisiatif pelaburannya bagi mengukuhkan ekonomi syarikat.

"Robotik sebagai komponen penting dalam strategi ThinQ AI kami, (ia) adalah peluang pertumbuhan masa depan yang kritikal untuk LG."

"LG komited untuk mengembangkan keupayaan robotik melalui pelaburan dalam rakan kongsi inovatif serta usaha R&D (penyelidikan dan pembangunan) yang sengit dari dalam," ujarnya.

Pembiayaan Bossa Nova mengikuti pelaburan LG dalam empat syarikat robotik Korea iaitu Acryl, Sg Robotics, Robotis dan Robostar.

Oleh itu, pelaburan ini sekali gus melengkapkan usaha LG sendiri untuk membawa robot perkhidmatan ke pasaran dalam masa terdekat serta menjadi enjin pertumbuhan utama bagi syarikat.



Robotik sebagai komponen penting dalam strategi ThinQ AI kami, (ia) adalah peluang pertumbuhan masa depan yang kritikal untuk LG."

Selain itu, syarikat tersebut juga telah menggunakan sejumlah robot di Korea untuk perkhidmatan percubaan iaitu Panduan Robot dan Pembersihan Robot dihantar untuk membantu pelancong di lapangan terbang terbesar Korea Selatan semasa musim sejuk di PyeongChang.

Awal tahun ini pula pada Pameran Elektronik Pengguna (CES), LG memperkenalkan tiga robot konsep CLOi baru yang khusus dibangunkan untuk kegunaan komersial di lokasi tumpuan ramai seperti hotel dan pasar raya.

Robot CLOi LG sedang dibangunkan selari dengan produk ThinQ, jenama kepintaran buatan (AI) LG untuk pengguna barangan elektronik dan peralatan rumah.



Lindungi kelip-kelip, taman alam

MDKS memberi kerjasama MNS mendapatkan pengisytiharan tapak Ramsar

ARZIANA MOHAMAD AZAMAN

KUALA SELANGOR

Majlis Daerah Kuala Selangor komited untuk meneruskan misi melindungi kawasan habitat kelip-kelip dan tanah lembap yang ada di daerah ini melalui perancangan mampan.

Setiausahaanya, Azman Adnan menjelaskan, perancangan mampan masa depan yang dilaksanakan demi perlindungan kawasan habitat kelip-kelip di Kampung Kuantan dan tanah lembap di Taman Alam Kuala Selangor.

Menurutnya, MDKS juga bekerjasama dengan Persatuan Pencinta Alam Malaysia (MNS) untuk mendapatkan pengisytiharan sebagai tapak RAMSAR untuk Taman Alam Kuala Selangor.



Azman (tengah) bersama Henry (baris kedua, lima kiri) bersama wakil komuniti dan sekolah yang hadir sempena Hari Sambutan Kelip-Kelip Sedunia 2018.

"MDKS juga komited dalam penjagaan kawasan hijau di daerah ini bagi mengekalkan kehidupan yang lestari untuk semua seperti Hutan Simpan Raja Musa, Taman Alam Kuala Selangor dan kelip-kelip.

"Semua pihak memainkan peranan penting bagi melindungi habitat kelip-kelip yang menjadi satu keunikan pelancongan negara," katanya sempena Hari Sambutan Kelip-Kelip Sedunia 2018.

Mengulas lanjut mengenai sambutan itu, Azman berkata,

sambutan seumpama ini dapat menghubungkan komuniti yang terlibat secara langsung dalam kelip-kelip, tanah lembap dan konservasi hidupan liar di bawah satu bumbung.

"Usaha ini juga mencipta satu jaringan yang diharapkan dapat meningkatkan penglibatan masyarakat setempat dan pemahaman kepentingan alam sekitar untuk kehidupan sejagat.

"Kita perlu bekerja keras untuk melindungi habitat kelip-kelip dan bekerjasama dengan komuniti dan

MNS untuk jangka masa yang panjang," katanya pada program yang turut dihadiri Presiden MNS, Henry Goh.

Katanya lagi, kelip-kelip sangat penting sebagai salah satu penunjuk aras kesihatan biodiversiti di kawasan itu selain pokok bakau juga penting sebagai perumah kepada koloni kelip-kelip dan hidupan liar yang lain.

"Istimewanya, kawasan perlindungan kelip-kelip yang pertama di negara ini adalah di Kampung Kuantan dan MDKS mengucapkan

terima kasih kepada semua pihak yang banyak membantu dalam usaha konservasi kawasan ini.

"Penduduk setempat and komuniti di sekitar kawasan Kampung Kuantan juga mendapat manfaat melalui aktiviti memerhati kelip-kelip dan menjana pendapatan kepada penduduk setempat dan negeri," katanya.

Sementara itu, Henry berkata, sambutan ini adalah yang pertama di dunia seiring usaha negara lain yang turut meraikan dan menghargai habitat kelip-kelip di kawasan mereka.

"Kelip-kelip adalah petunjuk kesihatan dan kepelbagaian biologi di sesuatu kawasan. Jika ada kelip-kelip, maka akan ada haiwan lain dan ini adalah baik untuk khazanah negara.

"Jika kita lihat, kelip-kelip yang wujud di Kampung Kuantan memberi peluang kepada komuniti untuk menjalankan kegiatan ekonomi dan menjana pendapatan.

"MNS juga percaya peranan semua pihak penting bagi bersama melindungi kelip-kelip dan tanah lembap yang ada di Kuala Selangor," katanya.

LAMPIRAN 18
KOSMO (DUNIA) : MUKA SURAT 47
TARIKH : 11 JULAI 2018 (RABU)



AFF

KEADAAN meja kaca yang didakwa Tompkins pecah akibat gelombang haba panas melampau di Leicester, Britain.



AGENS

SET meja kaca yang dijual di pasar raya Asda.

Meja kaca meletup akibat haba panas

LEICESTER, Britain – Seorang ibu ketakutan selepas meja kaca yang dibeli dari pasar raya Asda tiba-tiba meletup ketika salah satu hari yang paling panas dalam tahun ini di negara itu akibat gelombang haba.

Paige Tompkins, 23, berkata, dia berang selepas pasar raya tersebut enggan memberinya ganti rugi namun tidak mengaku kejadian itu berlaku banyak kali.

Dalam kejadian itu, meja kaca yang diletakkan di perkarangan rumahnya untuk minum petang tiba-tiba meletup sehingga menyebabkan kacanya pecah bertaburan, namun ibu muda itu bernasib baik kerana anak lelakinya sedang tidur pada waktu tersebut.

Tompkins memberi amaran kepada

orang ramai yang memiliki set meja dari Miami yang dijual oleh Asda berharga £89.99 (RM479) supaya lebih berhati-hati ketika negara itu kini dilanda gelombang haba.

Seorang jurucakap Asda berkata, mereka sedia maklum mengenai insiden itu dan memberitahu pembuatan meja kaca itu mengikut standard Eropah dan Britain.

"Meja itu diperbuat mengikut standard Eropah dan Britain, kejadian seumpama itu sangat jarang berlaku dan memang kaca meja tersebut akan menjadi serpihan kecil sekiranya pecah," katanya walaupun terdapat laporan sama mengenai kejadian serupa pada tahun lalu dan 2015. – Agensi

LAMPIRAN 19
KOSMO (DUNIA) : MUKA SURAT 47
TARIKH : 11 JULAI 2018 (RABU)



IKAN cicak yang memiliki organ jantan dan betina.

AGensi



ANEMONE iaitu sejenis tumbuhan liar yang hidup di dasar laut dalam.

AGensi

Robot rakam hidupan marin aneh di dasar laut

FLORIDA, Amerika Syarikat – Sekumpulan penyelidik berjaya merakam gambar beberapa spesies hidupan marin aneh di dasar laut dalam satu misi penjelajahan baru-baru ini.

Penerokaan di dasar laut dalam oleh robot melalui kapal NOAA Okeanos Explorer menunjukkan kewujudan ikan cicak, sotong ladu serta anemone iaitu sejenis tumbuhan laut liar.

Misi penjelajahan itu bermula pada 22 Mei dan berakhir pada 2 Julai lalu selepas lebih sebulan melakukan pemetaan dan

pemantauan dasar laut di Margin Kontinental Tenggara Amerika Syarikat yang merentangi dari Florida ke Carolina Utara.



Projek dikenali sebagai 17 Windows to the Deep menggunakan robot kenderaan yang dikawal oleh saintis dalam menerokai dasar laut yang penuh misteri pada kedalaman 1,771 meter.

Menurut National Geographic, ikan cicak memiliki organ jantan dan betina yang membolehkan ia mengawan dengan mana-mana kawanan ikan dalam spesies mereka. – Agensi



SOTONG ladu merupakan salah satu hidupan marin aneh yang dirakam saintis di Amerika Syarikat.

AGensi

LAMPIRAN 20
KOSMO (DUNIA) : MUKA SURAT 49
TARIKH : 11 JULAI 2018 (RABU)



GAMBAR oleh Roscosmos menunjukkan roket Soyuz membawa kapal kargo Progress dilancarkan dari Baikonur, Kazakhstan semalam. AP

Kapal kargo Rusia catat masa terpantas sampai ke ISS

MOSCOW - Sebuah kapal angkasa kargo Rusia mengambil masa cuma tiga jam dan 40 minit untuk sampai ke Stesen Angkasa Lepas Antarabangsa (ISS) di orbit Bumi semalam.

Agensi angkasa lepas Rusia, Roscosmos menyatakan, pencapaian itu memecahkan rekod penerbangan ke ISS sebanyak dua jam.

Kapal angkasa kargo Progress itu dilancarkan pada pukul 5.51 pagi (waktu Malaysia) semalam dari Kosmodrom Baikonur di Kazakhstan dan tiba di ISS pagi hari yang sama.

"Masa penerbangan ialah selama tiga jam 40 minit," kata Roscosmos dalam satu kenyataan sambil menambah, ia merupakan rekod baharu dalam sejarah kapal angkasa kargo Progress.

Rekod sebelum ini ialah lima jam dan 39 minit, demikian menurut agensi berita Rusia, RIA Novosti.

Pelancaran semalam adalah untuk membawa lebih dua tan bekalan termasuk bahan api, oksigen, air dan barangan lain kepada angkasawan-angkasawan di ISS. - AFP