

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

Bil	Berita	Media	Capaian Berita Penuh
20 OGOS 2018 (ISNIN)			
1.	<u>Bentong rendah karbon 2020</u> Menurutnya, MPB telah bekerjasama dengan Kementerian Tenaga, Teknologi Hijau dan Air (KeTTHA) bersama agensi pelaksana GreenTech Malaysia untuk membangunkan rangka kerja Bandar Rendah Karbon yang dikenali sebagai Low Carbon Cities Framework (LCCF) yang menjadi garis panduan khas terutamanya dalam bangunkan sistem bandar yang terancang.	Sinar Harian	Rujuk lampiran 1 atau klik pada tajuk berita
2.	<u>Radioactive device missing</u> Police and the Atomic Energy Licensing Board (AELB) share the same concerns of it falling into the hands of terrorists or militants, or those who treat it as metal to be dismantled and sold for a quick buck.	New Straits Times	Rujuk lampiran 2 atau klik pada tajuk berita
3.	<u>Modal insan untuk ekonomi hijau</u> GreenTech Malaysia juga dilantik sebagai Industry Lead Body (ILB) bagi kemahiran berkaitan Teknologi Hijau. Salah satu dari peranan yang dipertanggungjawab adalah untuk memastikan National Occupational Skills Standard (NOSS) Teknologi Hijau tersedia bagi industri untuk pelaksanaan sistem Pensijilan Kemahiran Kebangsaan (SKM).	Sinar Harian	Rujuk lampiran 3
4.	<u>Dikhuatiri disalah guna buat bom</u> Pencarian peralatan yang berupaya aktif selama 73 hari serta memancarkan radiasi Beta dan	Berita Harian	Rujuk lampiran 4

	Gamma itu, giat dilaksanakan oleh polis serta Lembaga Pelesenan Tenaga Atom (AELB).		
5.	<u>Misi jejak iridium 192</u> Kehilangan alat Radiografi Industri mengandungi bahan radioaktif Iridium 192 menjadi misteri dan dikategorikan sebagai berprofil tinggi apabila dikaitkan dengan kesan buruknya jika disalah guna. Ia mampu menghasilkan sinar gama yang mempunyai tenaga sangat tinggi dan boleh merosakkan sel tubuh manusia yang terdedah dengannya.	Harian Metro	Rujuk lampiran 5
19 OGOS 2018 (AHAD)			
6.	<u>Govt considering nationwide ban on non-degradable plastic bags</u> The Energy, Technology, Science, Climate and Environment Ministry is drafting the relevant policy and is expected to make an announcement regarding the "zero-plastic bags" plan in October, Nanyang Siang Pau reported today.	The Sun Daily	Klik pada tajuk berita
18 OGOS 2018 (SABTU)			
7.	<u>Jerebu dijangka pulih Oktober</u> Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar, Yeo Bee Yin berkata, kebakaran terbuka di Sumatera dan Kalimantan, Indonesia telah mengakibatkan pencemaran jerebu merentasi sempadan berlaku terutama di utara Semenanjung Malaysia dan Sarawak.	Utusan Malaysia	Rujuk lampiran 6
8.	<u>'Many don't know ministers' names'</u> In the first question, respondents were asked to name the ministers of the Rural Development Ministry, Entrepreneurial Development Ministry,		

	Energy, Science, Technology, Environment and Climate Change Ministry, Prime Minister's Department (Law), International Trade and Industry Ministry, Tourism, Arts and Culture Ministry, Transportation Ministry, Water, Land and Natural Resources Ministry, Works Ministry and Health Ministry.	New Straits Times	Rujuk lampiran 7
9.	<u>Ramai rakyat kabur siapa menteri cabinet</u> Soalan pertama ialah siapa Menteri di Kementerian Pembangunan Luar Bandar; Menteri Pembangunan Usahawan; Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, Yeo Bee Yin (97) ; Menteri di Jabatan Perdana Menteri (Undang-undang);	Berita Harian	Rujuk lampiran 8
10.	<u>40 peratus tak kenal kelompok menteri</u> Menteri Pembangunan Luar Bandar, Rina Harun (165); Menteri Pembangunan Usahawan, Mohd Redzuan Md Yusof (113); Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, Yeo Bee Yin (97); Menteri Perdagangan Antarabangsa dan Industri, Ignatius Dorell Leiking (107).	Harian Metro	Rujuk lampiran 9
11.	<u>MetMalaysia: Most places nationwide are still hazy</u> Almost all cities and towns are still hazy, said Malaysian Meteorological Department (MetMalaysia) director-general Alui Bahari. Up until Thursday, there were two hotspots recorded in Sabah and three in Sarawak. Hotspots in Kalimantan, Indonesia, numbered 170 and two in Sumatra, he said.	The Star	Rujuk lampiran 10 atau klik pada tajuk berita

TEMPATAN

Bil	Berita	Media	Capaian Berita Penuh
20 OGOS 2018 (ISNIN)			
12.	<u>TNBES eyes 9m customers by 2022</u> TNB Energy Services Sdn Bhd (TNBES), a wholly-owned subsidiary of Tenaga Nasional Bhd, is eyeing at least 30 per cent of its current customer base, or nine million users, to be equipped with smart home system in the next four years.	New Straits Times	Rujuk lampiran 11
13.	<u>Douse haze from the source</u> Malaysia should ask Indonesia to do more to put out fires in Kalimantan and Sumatra which are contributed to the haze that has reached high levels in Sarawak, says a climate expert.	The Star	Rujuk lampiran 12
14.	<u>SEB investing in pilot hydrogen production plant, refuelling station</u> Sarawak Energy Bhd (SEB) is investing RM15mil in a pilot hydrogen production plant and refuelling station project here. Scheduled for completion in first-quarter 2019, the project is to evaluate the viability of hydrogen and fuel cells to power Sarawak's transportation sector in the future.	The Star	Rujuk lampiran 13 atau klik pada tajuk berita
15.	<u>ExxonMobil, UKM latih guru pakar STEM</u> Program latihan itu bertujuan melahirkan jurulatih pakar yang berupaya menjadikan STEM lebih mesra murid dan seterusnya memotivasikan mereka untuk melanjutkan pengajian dan kerjaya dalam bidang STEM.	Utusan Malaysia	Rujuk lampiran 14
16.	<u>Getting everyone on the same page</u> MANY issues pertaining to shortcomings in water resource management have been highlighted in recent years. These include controversial issues from water supply disruption due to pollution and widespread environmental damage due to uncontrolled bauxite mining. These issues bring into question the water security status of the country.	New Straits Times	Rujuk lampiran 15 atau klik pada tajuk berita

17.	<u>Over 1,500 delegates, 150 exhibitors expected at energy event</u> More than 1,500 delegates are expected at the Conference of the Electric Power Supply Industry (CEPSI) 2018, hosted by Tenaga Nasional Bhd (TNB).	New Straits Times	Rujuk lampiran 16
19 OGOS 2018 (AHAD)			
18.	<u>Adapting is key to survival</u> "I fear that there's been far too much hype for Industry 4.0," said forum panellist Azran Osman Rani, the chief executive officer and co-founder of Naluri Hidup Sdn Bhd. Azran said that too much focus has been placed on technologies for the sake of technologies without really understanding the underlying problems.	The Star	Klik pada tajuk berita
19.	<u>CEPSI 2018: Bermanfaat kepada penggiat bekalan tenaga</u> Persidangan Industri Bekalan Tenaga Elektrik 2018 (CEPSI 2018) yang dihoskan Tenaga Nasional Bhd (TNB) di Kuala Lumpur bulan depan bakal memberi manfaat kepada penggiat industri bekalan tenaga yang ingin tahu amalan terbaik untuk menghadapi cabaran industri.	Berita Harian	Klik pada tajuk berita
20.	<u>Tiga kawasan masih catat jerebu tahap sederhana</u> Tiga kawasan dinegeri ini masih mencatatkan jerebu pada tahap sederhana dengan bacaan indeks pencemaran udara (IPU) sekitar 61 hingga 73, semalam.	Harian Metro	Rujuk lampiran 17
21.	<u>ILP Miri catat IPU sangat tidak sihat</u> Kawasan Institut Latihan Perindustrian (ILP) Miri, Sarawak mencatatkan Indeks Pencemaran Udara (IPU) sangat tidak sihat setakat pukul 5 petang ini.	Utusan Malaysia	Rujuk lampiran 18
18 OGOS 2018 (SABTU)			
22.	<u>TVET boost for local workforce</u> Underground land development in Malaysia has been progressing well since the commencement	New Straits Times	Rujuk lampiran 19

	of the nation's biggest urban rail network, the Klang Valley Mass Rapid Transit (KVMRT) project.		
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ANTARABANGSA

Bil	Berita	Media	Capaian Berita Penuh
20 OGOS 2018 (ISNIN)			
23.	<u>Nanotechnology could help hydrogen become a truly affordable, clean, green energy source</u> Creating an affordable, renewable and sustainable source of energy from hydrogen could be unlocked with the innovative use of screen-printed nanotechnology.	Eureka	Klik pada tajuk berita
24.	<u>Gempa bumi baharu gegar Lombok</u> Gempa bumi kuat bermagnitud 6.3 menggegarkan Lombok semalam, mengakibatkan orang ramai meluru ke kawasan terbuka, hanya dua minggu selepas gegaran kuat meragut lebih 460 nyawa di pulau berkenaan.	Kosmo	Rujuk lampiran 20 atau klik pada tajuk berita
25.	<u>NASA and Elon Musk at odds on whether Mars can be habitable</u> Terraforming is the hypothetical process of changing a planet's conditions in order to make it habitable for Earth's plants and animals, including humans.	The Star	Rujuk lampiran 21
26.	<u>Strong winds stoke Australia's east coast bushfires</u> Firefighters were battling more than 70 bushfires on Australia's tinder dry east coast for the fourth day running.	The Star	Rujuk lampiran 22

19 OGOS 2018 (SABTU)

27.	<u>Climate Change's Long-Term Fix Has a Short-Term Cost</u> Global warming is getting a little scary, as its consequences emerge more quickly than most scientists had expected, in soaring global temperatures, unprecedented wildfires and many other effects.	Bloomberg	Klik pada tajuk berita
28.	<u>Climate Change Has Doubled the Frequency of Ocean Heatwaves</u> Ocean heatwaves will become more frequent and extreme as the climate warms, scientists report on August 15 in Nature. These episodes of intense heat could disrupt marine food webs and reshape biodiversity in the world's oceans.	Scientific American	Klik pada tajuk berita

18 OGOS 2018 (SABTU)

29.	<u>Desperate pleas for help</u> Troop reinforcements stepped up desperate rescue attempts in India's flood stricken Kerala state yesterday after more than 100 bodies were found in a day and a half, taking the crisis death toll to at least 324.	The Star	Rujuk lampiran 23
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Bentong rendah karbon 2020

BENTONG - Majlis Perbandaran Bentong (MPB) berhasrat menjadikan daerah ini sebagai bandar rendah karbon menjelang 2020.

Yang Dipertuanya, Datuk Muhammad Shahid Ismail berkata, pihaknya komited dalam usaha mengurangkan pengeluaran gas rumah hijau dan mengambil langkah proaktif dengan mewujudkan inisiatif bandar rendah karbon dengan mengambil kira pelbagai aspek pembangunan yang menyumbang kepada pengeluaran karbon yang rendah.

Menurutnya, MPB bekerjasama dengan **Kementerian Tenaga, Teknologi Hijau dan Air (KeTTHA)** bersama agensi pelaksana **GreenTech Malaysia** untuk membangunkan rangka kerja Bandar Rendah Karbon yang dikenali sebagai Low Carbon Cities Framework (LCCF) yang menjadi garis panduan khas

terutama dalam membangunkan sistem bandar terancang.

"Kita sudah memulakan projek tersebut dengan membuat kajian untuk memilih pokok yang mempunyai keupayaan menyerap banyak karbon dan saya menjangkakan kita akan juga mula tanam pada tahun ini.

"Perbandaran bebas karbon di antara agenda yang perlu diberi perhatian bukan sahaja di peringkat nasional malah di peringkat komuniti kerana konsep yang kita adakan dilihat pemangkin untuk optimumkan kesan penurunan karbon," katanya kepada Sinar Harian, semalam.

Shahid berkata, kesan pembangunan yang sedang berlaku di daerah ini telah menarik lebih ramai pelabur luar membeli tanah di Bentong.

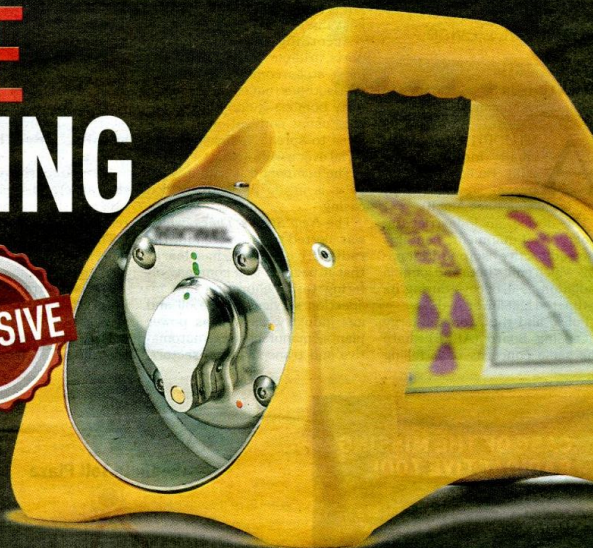
"Tanah berkenaan bakal dibangunkan menjadi kawasan ekonomi serta pelancongan," katanya.

RADIOACTIVE DEVICE MISSING

THE 23kg apparatus, containing material which emits radiation, allegedly fell off a company vehicle a little over a week ago. The authorities are worried about two possible scenarios; that the device is 'harvested' by terrorists to make a dirty bomb, or it is opened by an unsuspecting member of the public, exposing the person to grave danger.

EXCLUSIVE

» REPORTS BY TASNIM LOKMAN ON PAGES 2 & 3



IRIDIUM-192

'DEVICE CAN'T FALL INTO WRONG HANDS'

No leads in search for missing Radioactive Dispersal Device

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AUTHORITIES are frantically looking for a 23kg Radioactive Dispersal Device (RDD) that is missing since Aug 10.

The device, an Industrial Radiography Equipment, contains the radioactive isotope Iridium-192, which emits beta and gamma radiation as it decays during its estimated half life of 73 days.

Police and the Atomic Energy Licensing Board (AELB) share the same concerns of it falling

into the hands of terrorists or militants, or those who treat it as metal to be dismantled and sold for a quick buck.

It is learnt that RDD has a market value of RM75,000. According to published reports, Iridium-192 is one of the most-stolen commercial radioactive isotopes that can be used in a dirty bomb – a non-nuclear device using conventional explosives to spread radioactive material over a wide area.

The compound is safe as long as it is inside its lead-shielded casing.

The *New Straits Times*, which was alerted to the search for the radioactive device, has learnt that it belongs to a company offering test, calibration and inspection services to the oil and gas industry, as well as power plants, manufacturing, automotive and transportation sectors,

among others.

According to sources, two technicians of the company, who are in their mid 30s, had loaded the device into the back of the company's pick-up truck for a task in Seremban.

They completed the task and left Seremban for their office in Shah Alam at 2am.

When they arrived an hour later, they discovered the device missing from their Nissan Navara.

The duo told investigators that the tailgate of their vehicle was already lowered when they reached their office.

They had said the device could have fallen out during their drive back to their office.

The two retraced their journey in an attempt to recover the device.

They told investigators that they did not stop during the jour-

ney to their office.

One of them alerted AELB and the highway operator, Plus Malaysia Bhd, which helped scour the stretch between the Senawang and Seafeld toll plazas.

The NST learnt that the Criminal Investigation Department (CID) did not find any sign that the tailgate had been pried open.

Investigators found that the tailgate's locking mechanism was in good condition, saying that it was not possible for it to "unlock" by itself.

The Shah Alam district police headquarters' CID did not believe the duo's story and had them remanded.

However, they were released on Friday after no criminal elements were traced to them, including their possible involvement in terrorism or militancy.

This conclusion was based on

interviews investigators conducted with them, as well as forensic investigations on their handphones.

The NST learnt that the major concern of AELB was that the missing device contained radioactive material that could compromise security and safety.

It fears that the person who finds the device and has no knowledge of its content, may dismantle it to be sold as scrap metal, thus causing mass exposure to radioactive materials.

A source in AELB told the NST that there were no leads on the missing item up to yesterday.

"We appeal to those in possession of it to contact the police or AELB. Do not open it."

"It cannot fall into the wrong hands as the consequences can be deadly," the source said.

» See also Page 3

CASE OF THE MISSING RADIOACTIVE TOOL

- **Aug 10, 2am:** Two technicians of a company that owns the industrial radiography equipment load it into the back of the company's Nissan Navara pick-up truck.
- They drive from Seremban to Shah Alam for about one hour.
- They reach their office at 3am and discover that the tailgate of the truck is already lowered.
- They retrace their journey all the way to the Senawang Toll Plaza.
- The duo lodge a report with the Atomic Energy Licensing Board and Plus, which joins the search.
- **Aug 11:** One of the two men lodges a police report.
- Investigators don't buy their story considering the circumstances, and remand them.
- **Aug 17:** The two men are released as investigators cannot link them to any criminal elements.
- The RM75,000 equipment weighing 23kg is still missing.



Expert: Radioactive device can destroy human cells

KUALA LUMPUR: A scientist explains what exactly is an Industrial Radiography Equipment and why such a Radioactive Dispersal Device (RDD) could lead to dire consequences if it falls into the wrong hands.

Madani NDT Training Centre managing director Dr Abd Nassir Ibrahim said the equipment was used heavily in various engineering projects, including in the construction and maintenance of power plants, chemical and petrochemical plants, and automobiles factories.

The metallurgy expert said the equipment was used for testing engineering components to detect the presence of dangerous and invisible defects that might exist.

"As an example, a weld in a boiler may contain cracks that are hidden and cannot be seen by human eyes.

"The presence of such defects if not detected may result in an explosion when the boiler is put into operation.

"Radiography is proven to be a method that has the capability to detect such a crack."

Nassir said cracks in a weld — boiler, pressure vessel, piping and other components — had a tendency to grow and cause explosions that could lead to loss of life, as well as causing fire and serious destruction to industrial plants in which those components operate.

He cited an explosion back in 2014 in Lawas, Sabah. The explosion was a result of a failure to detect a weld pipe due to a landslide.

The incident led to the displacement of nearly 1,000 people in the area.

Nassir said by virtue of the deadly consequence of such accidents, the use of radiography testing had been made mandatory in the manufacturing and construction of critical engineering components and structures throughout the world, including in Malaysia.

However, he said, despite the many advantages the radiography method offers, it employed extremely radioactive material as a source of energy that was required to penetrate the tested objects.

He said the material emitted high-energy ionising radiation — the gamma ray.



Radiography is proven to be a method that has the capability to detect such a crack.

DR ABD NASSIR IBRAHIM
Madani NDT Training
Centre managing director

"High-energy gamma rays traverse through and are modified by the internal structure of material. If the tested material contains cracks or other serious defects, the gamma rays will be modified accordingly through a process known as a differential absorption.

"After passing through the material, the remaining radiation exits from the material and is recorded in a radiography film. The film is processed and at the end of this process an image of cracks will appear on the film."

Nassir said gamma rays emitted by a radioactive material used for industrial radiography had "extremely high-energies" and present a great potential for causing destruction to human cells exposed to it.

This fact that such exposure could lead to serious consequences, such as radiation burns, development of cancer and cataract, is why the application is strictly regulated by the Atomic Energy Licensing Board (AELB).

"Rules and regulations stipulated by AELB require radiography workers to attend a course, followed by an examination and only if the person passes can he be considered for certification and recognition after acquiring sufficient practical experience for a specified period of time," said Nassir, who is also Malaysian Society for Non-destructive Testing president.

Modal insan untuk ekonomi hijau



Rangkaian pekerjaan baharu yang mesra alam sedang diperkembangkan dan usaha mencari kemahiran baharu juga akan dijalankan memandangkan aktiviti perniagaan kini diminta untuk mengubah cara mereka melihat kelestarian itu sendiri, sekali gus mengambil tindakan yang sewajarnya terhadap perubahan yang semakin meningkat dalam populasi dan keadaan iklim negara ini.

Perubahan itu didorong oleh perkembangan global kelas pertengahan yang semakin pesat, ditambah pula dengan iklim yang semakin tidak menentu. Ini telah menyebabkan kenaikan pada harga makanan dan juga tenaga. Keadaan ini memberi impak beban kepada sumber asli seperti air tawar dan telah menjadikan rantaian bekalan global terdedah kepada risiko.

Bagi memenuhi permintaan ini,

inisiatif peralihan kepada teknologi dan ekonomi hijau perlu dimaksimumkan untuk membangun kemahiran, pengetahuan dan kompetensi dalam proses dan teknologi cekap sumber, serta mengintegrasikannya ke perniagaan dan komuniti.

* Inilah gesaan laporan Green Jobs: Towards Decent Work in a Sustainable, Low-carbon World (UNEP at al., 2008), kajian komprehensif yang pertama mengenai kemunculan ekonomi hijau dan kesannya kepada pekerjaan.

Dasar Teknologi Hijau Kebangsaan (NGTP, 2009) mengenal pasti lima Teras Strategik sejajar dengan Rancangan Malaysia Ke-11 (RMK11) dengan tujuan untuk: Memperkukuh rangka kerja institusi; menyediakan persekitaran yang kondusif untuk pembangunan teknologi hijau; memperkasakan pembangunan modal insan dalam teknologi hijau; memperkukuhkan penyelidikan dan inovasi teknologi hijau; dan promosi serta kesedaran awam.

Pelan Induk Teknologi Hijau (GTMP) menggariskan pelan tindakan pembangunan teknologi

hijau untuk mewujudkan ekonomi rendah karbon dan sumber yang cekap, memberi tumpuan kepada enam sektor utama iaitu Tenaga, Pembuatan, Pengangkutan, Bangunan, Sisa dan Air. Dalam merealisasikan pelan tindakan untuk setiap sektor, salah satu inisiatif utama yang diambil adalah melalui pembangunan modal insan yang dilakukan dengan kerjasama industri.

Perhatian meluas terhadap pendidikan dan Latihan Teknikal dan Vokasional (TVET) baru-baru ini menjadi pemangkin membangunkan rancangan TVET komprehensif untuk membantu tenaga kerja dalam menghadapi Revolusi Perindustrian Ke-4, termasuk dalam teknologi dan ekonomi hijau.

Antara langkah yang diambil oleh kerajaan ialah dengan memasukkan agenda TVET sebagai teras ketiga dalam RMK11 untuk meningkatkan pembangunan sumber manusia dan menjadikan transformasi TVET sebagai bidang fokus yang dikenal pasti.

GreenTech Malaysia yang sebelum ini, terletak di bawah bidang

kuasa Kementerian Tenaga, Teknologi Hijau dan Air (KeTTHA), telah diamanahkan untuk menjadi pemangkin penggunaan teknologi hijau sebagai enjin strategik bagi pertumbuhan sosioekonomi di Malaysia. Matlamat GreenTech Malaysia adalah untuk meletakkan Malaysia sebagai hab global untuk teknologi hijau menjelang 2020, seterusnya membangunkan negara menjadi masyarakat hijau menjelang 2030.

GreenTech Malaysia juga menjalankan pelbagai kursus untuk mempromosikan teknologi hijau. Di antara kursus yang dijalankan adalah Energy Manager Training Course (EMTC) - kursus persijilan yang disahkan oleh Asean Centre for Energy (ACE).

Certified Professional in Measurement and Verification (CPMV) Training - kursus persijilan M&V yang bertujuan mengesahkan end-user dan syarikat perkhidmatan tenaga yang menjalankan aktiviti pengukuran dan pengesahan untuk program penjimatan tenaga.

Manakala Energy Auditor Train-

ing Course (EATC) - meliputi pengetahuan dan kemahiran asas yang diperlukan untuk melakukan pemeriksaan, tinjauan dan analisis aliran tenaga untuk penjimatan tenaga dan menyediakan struktur kepada amalan pengauditan tenaga dan menaikkan piawaian profesional bagi mereka yang terlibat dalam pengauditan tenaga.

Selain daripada ini, program kesedaran seperti Have We Done Enough to Save Energy Bills? dan Program Latihan Asas Pengurusan Tenaga dan Air juga dilaksanakan.

GreenTech Malaysia juga dilantik sebagai Industry Lead Body (ILB) bagi kemahiran berkaitan Teknologi Hijau. Salah satu dari peranan yang dipertanggungjawabkan adalah untuk memastikan National Occupational Skills Standard (NOSS) Teknologi Hijau tersedia bagi industri untuk pelaksanaan sistem Pensijilan Kemahiran Kebangsaan (SKM).

* Penulis ialah Ketua Pegawai Eksekutif Kumpulan GreenTech Malaysia, drmaza@greentechmalaysia.my

LAMPIRAN 4
BERITA HARIAN (KESELAMATAN): MUKA SURAT 16
TARIKH: 20 OGOS 2018 (ISNIN)

1 Dua juruteknik syarikat pemilik RDD memuatkan alat berkenaan ke ruang kargo pacuan empat roda jenis Nissan Navara



4 Mereka cuba mencari semula alat itu mengikut laluan digunakan bermula dari Tol Senawang namun tidak menemuinya



7 Dua juruteknik itu dibebaskan apabila pegawai penyiasat tidak menemui bukti mereka terabit kehilangan alat berkenaan

2 Mereka memulakan perjalanan selama satu jam dari Seremban ke Shah Alam

5 Kedua-duanya membuat laporan kepada Lembaga Pelesenan Tenaga Atom (AELB) dan pihak pengurusan Lebuhraya PLUS yang turut mencari alat terbabit

8 Alat berkenaan yang bernilai RM75,000 dan seberat 23 kilogram masih hilang sehingga kini



3 Mereka tiba di pejabat di Shah Alam pada jam 3 pagi dan mendapati penutup ruang kargo pacuan empat roda dinaiki berada dalam keadaan terbuka dan alat berkenaan hilang



6 Salah seorang juruteknik membuat laporan polis mengenai kehilangan alat itu. Polis yang menyiasat menahan reman kedua-dua juruteknik berkenaan



KEHILANGAN ALAT RADIOGRAFI PERINDUSTRIAN (RDD)



Dikhuatiri disalah guna buat bom

→ Pihak lerai komponen boleh terdedah bahan radioaktif sekali gus sebabkan kecederaan, kematian

Oleh Tasnim Lokman dan Mohd Azam Shah Yaacob
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■ Kuala Lumpur

Sebuah Alat Radiografi Perindustrian (RDD) mengandungi isotop radioaktif iaitu Iridium 192 yang dibimbangi disalah guna, termasuk oleh penganas bagi membuat bom, dilaporkan hilang.

Pencarian peralatan yang berupaya aktif selama 73 hari serta memancarkan radiasi Beta dan Gamma itu, giat dilaksanakan oleh polis serta Lembaga Pele-

senen Tenaga Atom (AELB).

Kebimbangan utama kedua-dua pihak ialah jika ia jatuh ke tangan pihak tidak sepatutnya seperti penganas atau orang awam yang mungkin melihatnya sebagai besi terpakai bagi dijual mendapatkan wang.

Peralatan yang dianggar bernilai RM75,000 di pasaran dan mengandungi Iridium 192 itu adalah isotop radioaktif komersial paling kerap dicuri serta berpotensi disalah guna untuk membuat bom.

Diletak ruang belakang 4WD

Difahamkan, RDD itu hilang sejak 10 Ogos lalu selepas dipindahkan pada jam 2 pagi dari Seremban ke Shah Alam oleh dua kakitangan syarikat yang mengendalikan perkhidmatan ujian, penggantian (calibration) dan pemeriksaan membabitkan industri gas dan minyak, termasuk kilang jana kuasa, pembuatan, automotif serta pengangkutan.

Sumber berkata, kehilangan peralatan yang diletakkan di ruang belakang kenderaan pacuan empat roda (4WD) itu disedari kakitangan berkenaan selepas tiba di Shah Alam sejam kemudian.

Difahamkan, pekerja berkenaan

EKSKLUSIF

Kami merayu sesiapa yang memiliki bahan itu supaya menghubungi polis atau AELB segera dan jangan cuba membukanya. Kesannya amat buruk jika ia peralatan berkenaan jatuh ke tangan pihak tidak sepatutnya"

Sumber AELB

an memaklumkan kepada pegawai penyiasat bahawa mereka menyedari penutup ruang kargo 4WD dinaiki terbuka dan percaya alat berkenaan terjatuh dalam perjalanan.

Kakitangan terbabit memberitahu pegawai penyiasat, mereka cuba mencari semula peralatan itu mengikut laluan perjalanan digunakan dari Seremban ke Shah Alam, namun tidak berhasil.

Tiada kesan diumpil

Difahamkan, pegawai Jabatan Siasatan Jenayah (JSJ) yang mengendalikan kes terbabit mendapati tiada kesan menunjukkan ruang membawa barang itu diumpil.

Penyiasat turut mendapati sistem kunci ruang terbabit berada dalam keadaan baik dan hampir mustahil untuk ia terbuka sendiri.

JSJ Ibu Pejabat Polis Daerah (IPD) Shah Alam tidak mempercayai keterangan mereka dan menahan kedua-duanya, dengan mengambil kira risiko keselamatan yang timbul berikutan kehilangan kawalan ke atas peralatan terbabit.

Bagaimanapun, kedua-dua lelaki itu dibebaskan Jumaat lalu,

selepas polis gagal mengesan sebarang kaitan kejadian dengan mereka, termasuk kemungkinan terbabit dalam kegiatan keganasan atau militan.

Kesimpulan itu dibuat susulan soal siasat pasukan penyiasat dan pemeriksaan forensik terhadap telefon bimbit milik kedua-duanya.

NSTP turut difahamkan, kebimbangan utama pihak AELB dalam kehilangan misteri itu ialah ia mengandungi bahan radioaktif yang boleh menyebabkan ancaman keselamatan serius.

Mereka khuatir jika ada mana-mana pihak meleraikan komponen RDD untuk dijadikan besi buruk yang boleh menyebabkan pendedahan secara meluas terhadap bahan radioaktif yang boleh menyebabkan kecederaan parah atau kematian.

Sumber AELB berkata, belum ada perkembangan baharu berhubung kehilangan itu setakat semalam.

"Kami merayu sesiapa yang memiliki bahan itu supaya menghubungi polis atau AELB segera dan jangan cuba membukanya."

"Kesannya amat buruk jika ia peralatan berkenaan jatuh ke tangan pihak tidak sepatutnya," katanya.



► Kehilangan Alat Radiografi Industri mengandungi bahan radioaktif Iridium 192 menjadi misteri dan dikategorikan sebagai berprofil tinggi apabila dikaitkan dengan kesan buruknya jika disalah guna. Ia mampu menghasilkan sinar gama yang mempunyai tenaga sangat tinggi dan boleh merosakkan sel tubuh manusia yang terdedah dengannya, lapor **Tasnim Lokmaan** dan **Mohd Azam Shah Yaacob**.

Tasnim Lokmaan
dan Mohd Azam Shah Yaacob
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Hilang tengah jalan

Kuala Lumpur

Sebuah alat Radiografi Industri (RDD) mengandungi isotop radioaktif Iridium 192 dilaporkan hilang dan dikhawatiri disalah guna termasuk oleh kumpulan pengganas untuk menghasilkan bom.

Pencarian peralatan seberat 23 kilogram dan berwujud aktif selama 73 hari serta memancarkan radiasi Beta dan Gamma itu kini giat dilaksanakan polis serta Lembaga Pelesenan Tenaga Atom (AELB) Malaysia.

Pihak berkuasa bimbang jika peralatan itu jatuh ke tangan pihak tidak sepatutnya seperti pengganas atau orang awam yang mungkin melihatnya sebagai besi terpakai bagi dijual untuk mendapatkan wang.

Peralatan dianggarkan bernilai RM75,000 di pasaran dan mengandungi Iridium 192 itu adalah isotop radioaktif komersial paling kerap dicari guna berpotensi disalah guna untuk membuat bom.

Difahamkan, RDD itu hilang sejak 10 Ogos lalu selepas dipindahkan pada jam 2 pagi dari Seremban, Negeri Sembilan ke Shah Alam, Selangor oleh dua kakitangan syarikat yang mengendalikan perkhidmatan ujian, calibrasi dan pemeriksaan membabitkan industri gas dan minyak, termasuk ki-

■ RDD mengandungi radioaktif dibimbangi jatuh ke pihak tidak sepatutnya



lang jana kuasa, pembuatan, automotif serta pengangkutan.

Sumber berkata, kehilangan peralatan yang diletakkan di ruang belakang pacuan empat roda itu disedari kakitangan berkenaan selepas tiba di Shah Alam, sejam kemudian.

Difahamkan, pekerja berkenaan memaklumkan kepada pegawai penyiasat yang mereka menyedari penutup ruang kargo pacuan empat

roda dinaiki terbuka dan percaya alat berkenaan terjatuh ketika dalam perjalanan.

Kakitangan terbabit memberitahu pegawai penyiasat, mereka cuba mencari semula peralatan itu mengikut laluan perjalanan digunakan dari Seremban ke Shah Alam, na-

mun tidak berhasil. Difahamkan, pegawai Jabatan Siasatan Jenayah (JSJ) yang mengendalikan kes itu mendapati tiada kesan menunjuk-

kan ruang membawa barang berkenaan diumpul. Penyiasat turut mendapati sistem kunci ruang terbabit berada dalam keadaan baik

dan hampir mustahil untuk ia terbuka sendiri.

Bahagian Siasatan Jenayah Ibu Pejabat Polis Daerah (IPD) Shah Alam tidak mempercayai keterangan mereka dan menahan kedua-duanya dengan mengambil kira risiko keselamatan yang timbul berikutan kehilangan kawalan ke atas peralatan berkenaan.

Bagaimanapun, kedua-dua lelaki berkenaan dibebaskan Jumaat lalu, se-

**KEHILANGAN
ALAT RADIOGRAFI
PERINDUSTRIAN
(RDD)**

lepas polis gagal mengesan sebarang kaitan kejadian dengan mereka, termasuk kemungkinan terbabit dalam kegiatan keganasan atau militan.

Kesimpulan itu dibuat susulan soal siasat pasukan penyiasat dan pemeriksaan forensik terhadap telefon bimbit milik kedua-duanya.

Difahamkan, kebimbangan utama pihak AELB dalam kehilangan misteri itu kerana ia mengandungi bahan radioaktif yang boleh menyebabkan ancaman keselamatan serius.

Mereka khuatir jika ada mana-mana pihak meleraikan komponen RDD untuk dijadikan besi buruk yang boleh menyebabkan pendudukan secara meluas terhadap bahan radioaktif yang boleh menyebabkan kecederaan parah atau kematian.

Sumber AELB berkata, belum ada perkembangan baru berhubung kehilangan itu sehingga semalam.

"Kami merayu sesiapa yang memiliki bahan itu supaya menghubungi polis atau AELB segera dan jangan cuba membukanya.

"Kesannya amat buruk jika peralatan berkenaan jatuh ke tangan pihak tidak sepatutnya," katanya.

FAKTA
Peralatan dianggarkan bernilai RM75,000 di pasaran

Kebakaran di Sumatera, Kalimantan merentasi sempadan

Jerebu dijangka pulih Oktober

Oleh **BADRUL HAFIZAN MAT ISA**
dan **MUHAMMAD ARIFUDDIN**
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■ KUALA LUMPUR 17 OGOS

KEADAAN jerebu yang melanda negara ketika ini dijangka beransur pulih bermula hujung bulan depan selepas berakhirnya pergerakan angin monsun barat daya.

Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar, Yeo Bee Yin berkata, kebakaran terbuka di Sumatera dan Kalimantan, Indonesia telah mengakibatkan pencemaran jerebu merentasi sempadan berlaku terutama di utara Semenanjung Malaysia dan Sarawak.

"Jerebu yang berlaku ketika ini adalah ekoran tiupan angin monsun barat daya yang sedang berlaku dan dijangka sekurang-kurangnya sehingga hujung bulan ini.

"Kejadian ini akan dikurangkan selepas monsun ini iaitu penghujung bulan depan apabila berlaku-



Jerebu yang berlaku ketika ini adalah ekoran tiupan angin monsun barat daya yang sedang berlaku dan dijangka sekurang-kurangnya sehingga hujung bulan September ini."

YEO BEE YIN

**Menteri Tenaga, Teknologi, Sains,
Perubahan Iklim dan Alam Sekitar**

nya peralihan monsun," katanya menerusi rakaman video di akaun Facebook miliknya semalam.

Bee Yin berkata, kerajaan menerusi pelbagai agensi dan jabatan mengambil langkah bersiap sedia bagi mengelakkan berlakunya kebakaran terbuka di dalam negara sambil berharap kerajaan Indonesia dapat mengambil langkah sama dalam memastikan kebakaran terbuka tidak terus berlaku di negara tersebut.

Sementara itu, setakat pukul 5 petang hari ini, kawasan Johan Setia, Klang dan Banting, Selangor

mencatatkan Indeks Pencemaran Udara (IPU) tidak sihat iaitu pada tahap bacaan 119 dan 106' dipengaruhi kebakaran tanah gambut di Kampung Johan Setia, Jalan Kebun, Klang, kelmarin.

Menerusi laman sesawang, Sistem Pengurusan Indeks Pencemaran Udara (APIMS), beberapa kawasan lain seperti di Mukah, Sarawak; Kangar, Perlis; Alor Setar, Kedah dan Seberang Jaya, Pulau Pinang yang mencatatkan IPU tidak sihat semalam mula beransur pulih dan mencatatkan bacaan IPU baik dan sederhana.

Sementara itu, menurutnya, ekoran rancangan pembenihan awan terpaksa dibatalkan langkah telah diambil dengan membekalkan air bagi memadamkan kebakaran yang berlaku di Johan Setia.

"Ekoran rancangan pembenihan awan mungkin tidak dapat dibuat kerana cuaca kering, langkah diambil dengan menghantar air dari luar ke kawasan terlibat dan mengepam air ke dalam kolam yang telah dikorek.

"Kami meminjam 10 tangki air pihak Air Selangor dan enam lagi pihak berkuasa tempatan bagi berulang alik membawa air ke tempat kejadian bagi memastikan jumlah air sentiasa mencukupi untuk memadamkan kebakaran tersebut.

"Namun begitu, ekoran kawasan kebakaran luas terdapat masalah yang mana lori tangki air tersebut tidak mampu memasuki kawasan lebih jauh, jadi langkah diambil dengan mengorek tiga kolam dan seterusnya air dipam ke dalam kolam terbabit sebagai bekalan air untuk memadamkan kebakaran," katanya.

AFTER 100 DAYS OF ADMINISTRATION

'MANY DON'T KNOW MINISTERS' NAMES'

NSTP survey finds barely 40pc know about the new cabinet line-up

KUALA LUMPUR

MANY Malaysians still do not know who their cabinet ministers are, especially those who are the least known, despite it has been 100 days since Pakatan Harapan (PH) took over the administration of the country.

A New Straits Time Press survey involving 500 respondents,

with an average of 40 respondents from each state, finds that barely 40 per cent know who their cabinet ministers are.

These include seasoned politicians like Prime Minister Tun Dr Mahathir Mohamad, Deputy Prime Minister Datuk Seri Dr Wan Azizah Wan Ismail, Home Minister Tan Sri Muhyiddin Yassin, Finance Minister Lim Guan Eng, Defence Minister Mohamad Sabu and Economic Affairs Minister Datuk Seri Azmin Ali.

In the survey, each respondent was asked three questions – the names of 10 ministers from specific ministries, the names of five ministries of ministers and the names of menteri besar and chief ministers in PH-held states.

In the first question, respon-

dents were asked to name the ministers of the Rural Development Ministry, Entrepreneurial Development Ministry, Energy, Science, Technology, Environment and Climate Change Ministry, Prime Minister's Department (Law), International Trade and Industry Ministry, Tourism, Arts and Culture Ministry, Transport Ministry, Water, Land and Natural Resources Ministry, Works Ministry and the Health Ministry.

Out of the 500 respondents, only 99 knew Minister in the Prime Minister's Department (Law) Datuk Liew Vui Keong, Rural Development Minister Rina Harun (165), Entrepreneurial Development Minister Mohd Redzuan Md Yusof (113), Energy,

Science, Technology, Environment and Climate Change Minister Yeo Bee Yin (97) and International Trade and Industry Minister Ignatius Dorell Leiking (107).

This was followed by Tourism, Arts and Culture Minister Mohamaddin Ketapi (81), Transport Minister Anthony Loke (192), Water, Land and Natural Resources Minister Dr Xavier Jayakumar (125), Works Minister Baru Bian (134) and Health Minister Dr Dzulkefly Ahmad (190).

In the the second question, the respondents were asked to name the ministries of more popular ministers, namely Datuk Salahuddin Ayub, Datuk Saifuddin Abdullah, Teresa Kok, Dr Maszlee Malik and Gobind Singh Deo.

A total of 145 people answered

correctly Salahuddin as the agriculture and agro-based industry minister, Saifuddin as foreign minister (124), Theresa Kok as primary industries minister (102), Maszlee as education minister (307) and Gobind as communications and multimedia minister (205).

The third question required respondents to name the menteri besar or chief minister of Negri Sembilan, Perak, Johor, Malacca and Penang.

Only 80 people knew that Johor MB is Datuk Osman Sapian, Selangor MB is Amirudin Shari (78), Negri Sembilan MB is Aminuddin Harun (66), Perak MB is Ahmad Faizal Azumu (97), Malacca MB is Adly Zahari (79) and Penang CM is Chow Kon Yeow (67).

LAMPIRAN 8
BERITA HARIAN (ISU): MUKA SURAT 7
TARIKH: 18 OGOS 2018 (SABTU)

→ ISU

100 HARI PENTADBIRAN PAKATAN HARAPAN

Ramai rakyat kabur siapa menteri Kabinet

→ Kaji selidik dapati kurang 40 peratus responden kenali pemimpin

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► Kuala Lumpur

Masih ramai rakyat Malaysia tidak mengenali Jemaah Menteri, terutama yang kurang terkenal pada peringkat nasional ketika genap 100 hari Pakatan Harapan (PH) menadbir negara, semalam.

Kaji selidik wartawan NSTP membabitkan 500 responden di seluruh negara dengan purata 40 responden setiap negeri, mendapati tidak sampai 40 peratus mengenali kelompok menteri berkenaan, selain nama besar seperti Perdana Menteri, Tun Dr Mahathir Mohamad; Timbalan Perdana Menteri, Datuk Seri Dr Wan Azizah Wan Ismail; Menteri Dalam Negeri, Tan Sri Muhyiddin Yassin; Menteri Kewangan, Lim Guan Eng; Menteri Pertahanan, Mohamad Sabu dan Menteri Hal Ehwal Ekonomi, Da-

tuk Seri Mohamed Azmin Ali.

Setiap responden ditanya tiga set soalan sama, iaitu nama 10 menteri di Kementerian Pembangunan Luar Bandar; Menteri Pembangunan Usahawan; Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim; Menteri di Jabatan Perdana Menteri (Undang-Undang); Menteri Perdagangan Antarabangsa dan Industri; Menteri Pelancongan, Seni dan Budaya; Menteri Pengangkutan; Menteri Air, Tanah dan Sumber Asli; Menteri Kerja Raya dan Menteri Kesihatan, Dr Dzulkefly Ahmad (190).

500 responden seluruh negara

Soalan pertama ialah siapa Menteri di Kementerian Pembangunan Luar Bandar; Menteri Pembangunan Usahawan; Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim; Menteri di Jabatan Perdana Menteri (Undang-Undang); Menteri Perdagangan Antarabangsa dan Industri; Menteri Pelancongan, Seni dan Budaya; Menteri Pengangkutan; Menteri Air, Tanah dan Sumber Asli, Menteri Kerja Raya dan Menteri Kesihatan.

Daripada 500 responden, hanya 99 orang mengenali Menteri di Jabatan Perdana Menteri (Undang-Undang), Datuk Liew Vui Keong; Menteri Pembangunan Luar Bandar, Rina Harun (165); Menteri Pembangunan Usahawan, Mohd Redzuan Md Yusof (113); Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, Yeo Bee Yin (97) serta Menteri Perdagangan Antarabangsa dan Industri, Ignatius Dorell Leiking (107).

Ini diikuti Menteri Pelancongan,

Seni dan Budaya, Mohamadaddin Ketapi (81); Menteri Pengangkutan, Anthony Loke (192); Menteri Air, Tanah dan Sumber Asli, Dr Xavier Jayakumar (125); Menteri Kerja Raya, Baru Bian (134) dan Menteri Kesihatan, Dr Dzulkefly Ahmad (190).

Bagi soalan kedua, responden diminta menjawab nama kementerian untuk menteri yang lebih popular pada peringkat nasional, iaitu Datuk Salahuddin Ayub, Datuk Saifuddin Abdullah, Teresa Kok, Dr Maszlee Malik dan Gobind Singh Deo.

Seramai 145 orang berjaya menjawab Salahuddin sebagai Menteri Pertanian dan Industri Asas Tani; Menteri Luar, Saifuddin (124); Menteri Industri Utama, Teresa Kok (102); Menteri Pendidikan, Dr Maszlee (307) dan Menteri Komunikasi dan Multimedia, Gobind (205).

Soalan ketiga mengenai siapa Menteri Besar Selangor, Negeri Sembilan, Perak, Johor, selain Ketua Menteri Melaka dan Pulau Pinang.

Hanya 80 orang mengenali Menteri Besar Johor, Datuk Osman Sapian; Menteri Besar Selangor, Amirudin Shari (78); Menteri Besar Negeri Sembilan, Aminuddin Harun (66); Menteri Besar Perak, Ahmad Faizal Azumu (97); Ketua Menteri Melaka, Adly Zahari (79) dan Ketua Menteri Pulau Pinang, Chow Kon Yeow (67).



Rina Harun
Menteri Pembangunan Luar Bandar



Mohd Redzuan Md Yusof
Menteri Pembangunan Usahawan



Yeo Bee Yin
Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim

- 4 **Datuk Liew Vui Keong** Menteri di Jabatan Perdana Menteri (Undang-Undang) (99)
- 5 **Ignatius Dorell Leiking** Menteri Perdagangan Antarabangsa dan Industri (107)
- 6 **Mohamadaddin Ketapi** Menteri Pelancongan, Seni dan Budaya (81)
- 7 **Anthony Loke** Menteri Pengangkutan (192)
- 8 **Dr Xavier Jayakumar** Menteri Air, Tanah dan Sumber Asli (125)
- 9 **Baru Bian** Menteri Kerja Raya (134)
- 10 **Dr Dzulkefly Ahmad** Menteri Kesihatan (190)

Nota: Daripada 500 responden



Datuk Salahuddin Ayub
Menteri Pertanian dan Industri Asas Tani



Teresa Kok
Menteri Industri Utama



Datuk Saifuddin Abdullah
Menteri Luar

- 4 **Dr Maszlee Malik** Menteri Pendidikan (307)
- 5 **Gobind Singh Deo** Menteri Komunikasi dan Multimedia (205)

Nota: Daripada 500 responden



Amirudin Shari
Menteri Besar Selangor



Aminuddin Harun
Menteri Besar Negeri Sembilan



Ahmad Faizal Azumu
Menteri Besar Perak

- 4 **Datuk Osman Sapian** Menteri Besar Johor (80)
- 5 **Adly Zahari** Ketua Menteri Melaka (79)
- 6 **Chow Kon Yeow** Ketua Menteri Pulau Pinang (67)

Nota: Daripada 500 responden

LAMPIRAN 9
HARIAN METRO (SETEMPAT): MUKA SURAT 8 & 9
TARIKH: 18 OGOS 2018 (SABTU)

Kuala Lumpur: Masih ramai rakyat Malaysia tidak mengenali Jemaah Menteri terutama yang kurang terkenal di peringkat nasional selepas 100 hari Pakatan Harapan (PH) mentadbir negara, semalam.

Kaji selidik wartawan Harian Metro membabitkan kira-kira 500 responden di seluruh negara dengan purata 40 responden setiap negeri, mendapati tidak sampai 40 peratus mengenali kelompok menteri berkenaan berbanding nama besar seperti Perdana Menteri, Tun Dr Mahathir Mohamad; Timbalan Perdana Menteri, Datuk Seri Wan Azizah Wan Ismail; Menteri Dalam Negeri, Tan Sri Muhyiddin Yassin; Menteri Kewangan, Lim Guan Eng; Menteri Pertahanan, Mohamad Sabu dan Menteri Hal Ehwal Ekonomi, Datuk Seri Mohamed Azmin Ali.

Setiap responden ditanya tiga set soalan sama iaitu nama 10 menteri di kementerian tertentu, lima nama kementerian bagi menteri tertentu dan nama menteri besar serta ketua menteri di negeri yang

ditadbir PH.

Soalan pertama ialah siapa menteri di Kementerian Pembangunan Luar Bandar; Kementerian Pembangunan Usahawan; Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim; Jabatan Perdana Menteri (Undang-undang); Kementerian Perdagangan Antarabangsa dan Industri; Kementerian Pelancongan, Seni dan Budaya; Kementerian Pengangkutan; Kementerian Air, Tanah dan Sumber Asli, Kementerian Kerja Raya dan Kementerian Kesihatan.

Daripada 500 responden, hanya 99 orang mengenali Menteri di Jabatan Perdana Menteri (Undang-undang), Datuk Liew Vui Keong; Menteri Pembangunan Luar Bandar, Rina Harun (165); Menteri Pembangunan Usahawan, Mohd Redzuan Md Yusof (113); Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, Yeo Bee Yin (97); Menteri Perdagangan

40 peratus tak kenal kelompok menteri

500

>> *Bilangan
responden dalam
kaji selidik
Harian Metro*

Antarabangsa dan Industri, Ignatius Dorell Leiking (107).

Ini diikuti Menteri Pelancongan, Seni dan Budaya, Mohamaddin Ketapi (81); Menteri Pengangkutan, Anthony Loke (192); Menteri Air, Tanah dan Sumber Asli, Dr Xavier Jayakumar (125); Menteri Kerja Raya, Baru Bian (134) dan Menteri Kesihatan, Dr Dzulkefly Ahmad (190).

Bagi soalan kedua, responden diminta menjawab nama kementerian untuk menteri yang lebih popular di

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Seramai 145 orang berjaya menjawab Salahuddin sebagai Menteri Pertanian dan Industri Asas Tani; Menteri Luar, Saifuddin (124); Menteri Industri Utama, Teresa (102); Menteri Pendidikan, Dr Maszlee (307) dan Menteri Komunikasi dan Multimedia, Gobind (205).

Soalan ketiga pula mengenai siapa nama Menteri Besar Selangor, Negeri Sembilan, Perak, Johor, selain Ketua Menteri Melaka dan Pulau Pinang.

Hanya 80 orang mengenali Menteri Besar Johor, Datuk Osman Sapian; Menteri Besar Selangor, Amirudin Shari (78); Menteri Besar Negeri Sembilan, Aminuddin Harun (66); Menteri Besar Perak, Ahmad Faizal Azumu (97); Ketua Menteri Melaka, Adly Zahari (79) dan Ketua Menteri Pulau Pinang, Chow Kon Yeow (67).

MetMalaysia: Most places nationwide are still hazy

PETALING JAYA: Almost all cities and towns are still hazy, said Malaysian Meteorological Department (MetMalaysia) director-general Alui Bahari.

Up until Thursday, there were two hotspots recorded in Sabah and three in Sarawak.

Hotspots in Kalimantan, Indonesia, numbered 170 and two in Sumatra, he said.

"The haze in the country is at a moderate level and it was not as bad as the one during El Nino back in 2015," said Alui.

At 5pm yesterday, there are three

locations in Kedah, Perlis and Sabah which recorded Air Pollutant Index (API) readings of below 50.

Another 61 areas had API readings of below 100, including Seremban (80), Alor Gajah (74) and Alor Setar (55).

Johan Setia in Klang, Selangor, recorded the highest API with 119, which is in the unhealthy category.

A reading of 0-50 is considered good, 51-100 moderate, 101-200 unhealthy, 201-300 very unhealthy, and above 300 is considered hazardous.



Not so clear: The Prime Minister's office in Putrajaya is shrouded in haze.

SMART HOME SYSTEM

TNBES EYES 9M CUSTOMERS BY 2022

Success depends on broadband connectivity and other ecosystem to support initiative, says MD

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TNB Energy Services Sdn Bhd (TNBES), a wholly-owned subsidiary of Tenaga Nasional Bhd, is eyeing at least 30 per cent of its current customer base, or nine million users, to be equipped with smart home system in the next four years.

TNBES managing director Dr Ir Ahmad Jaafar Abd Hamid said the modest target depended on broadband connectivity and other ecosystem or infrastructure needed to support smart living.

He said the smart home system market was booming in Asia, led by China and Japan. It is popular in highly-connected societies, such as in Singapore, South Korea and Taiwan.

"In Malaysia, proliferation of broadband and Internet will create a favourable condition for

TNB to capitalise on. Moreover, we stand to leverage TNB's Smart Meter programme to embed smart-home-ready capability in homes.

TNBES introduced a home energy monitoring system (HEMS) called Maevi earlier this month, to be installed with the usage of smart devices in homes.

"To date, we have received orders from individual home owners and property developers for their homes to be equipped with smart devices and Maevi.

"We target between 8,000 and 12,000 homes by August next year to help improve energy efficiency and reduce energy costs," he said.

The Maevi online tool will enable consumers to monitor and manage energy bills through re-

mote operation of home appliances and access to personalised recommendations on reducing energy consumption.

"Maevi can be used by consumers via iOS and Android-powered mobile devices to set energy-efficiency targets and receive notifications in the event they exceed set energy-efficiency goals," said chief marketing and sales officer Dr Mohd Aswad Ramli.

Speaking on the sidelines of the Smart Living and Innovation Caucus 2018 energy conference, here, recently, Aswad said the HEMS would complement TNBES' home energy in efforts to stabilise grid network through the expansion of demand-side management portfolio.

"Initially, we planned to focus on homes with bills amounting to RM700 and above a month, but



TNB Energy Services Sdn Bhd managing director says the smart home market was booming in Asia.

upon the launch, many owners came forward regardless of their bill amount as it provided ease of use and more control over their electricity usage.

"For an entry-level package, it costs less than RM2,000 to be installed and with energy savings

expected at 10 per cent or more.

Aswad said TNBES was having promotions for all three smart home packages until August next year, and so far, the company had received bookings from both individual home owners and property developers.



Douse haze from the source

Get Indonesia to do more to put out fires, expert urges Govt

By RAZAK AHMAD
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PETALING JAYA: Malaysia should ask Indonesia to do more to put out fires in Kalimantan and Sumatra which are contributing to the haze that has reached high levels in Sarawak, says a climate expert.

Universiti Malaya climate expert Prof Datuk Dr Azizan Abu Samah said there was strong evidence that fires in Kalimantan and Sumatra were the major contributor of haze in this country.

"We have an Asean level transboundary haze agreement which Indonesia is part of. So, we should engage Indonesia as it is the main source of our haze," said Prof Azizan amid worsening air quality, especially in Sarawak.

In Miri, the Air Pollutant Index (API) broke past the 200 point and hit 228 as at 1pm on Saturday.

As at 3pm yesterday, Miri's air quality remained unhealthy with an API of 129.

Air quality is classified as good when the API is 50 and below, and moderate when the API reading is between 51 and 100.

An API of between 101 and 200 means the air quality is considered unhealthy.

A reading of 201-300 means that the air quality is very unhealthy and an API of more than 300 is hazardous.

Air quality in other parts of the state was moderate but several had API readings nearing 100, including Kuching (95), Mukah (89) and Sarikei (86).

Temperatures in several parts of Malaysia have been rising due to the current southwest monsoon, which started in the third week of May. The hot and dry weather during this time contributes to the spread of forest fires and open burning, which causes the haze.

On Aug 13, the Asean Specialised Meteorological Centre (ASMC) activated a Level 2 haze alert for the Southern Asean region.

Level 2 means that there are over 150 hotspots in two consecutive days with dense smoke plumes, with dry weather persisting and prevailing winds blowing towards Asean countries.

Dry weather, said the ASMC, had led to deterioration of the situation in Sumatra and Kalimantan.

"In West Kalimantan, moderate to dense smoke haze from persistent hotspots has been observed and the prevailing winds could blow the haze toward western Sarawak," the ASMC said.

An interactive map - accessible at null-school.net, which provides a visualisation of global weather conditions - shows a high concentration of particulate matter with a diameter of less than 2.5 micrometres (PM2.5) over the hotspots in Kalimantan and Sumatra.

The map's PM2.5 readings are sourced from, among others, the Copernicus Atmosphere Monitoring Service and European Centre for Medium-Range Weather Forecasts.

Prof Azizan said PM2.5 was more dangerous compared to the bigger PM10 particulate matter that some air quality measurements were based on.

"This is because PM2.5 particulate is smaller in size and is easily absorbed into the respiratory system causing harm," he said.

Since Aug 16, the Department of Environment had improved its API measurements by measuring PM2.5 particulate compared to PM10 previously.

Observation deck of KL Tower still open to public

KUALA LUMPUR: The observation deck of Menara Kuala Lumpur is still open to the public despite the haze.

Menara Kuala Lumpur Sdn Bhd chief executive officer Datuk Rozlan Mohamed says he has not received instructions to close the open deck.

"Instructions to close the KL Tower observation deck had been issued before following poor weather conditions and being unsafe for visitors," he told reporters after the prize presentation ceremony in conjunction with the KL Tower International Towerthon Challenge 2018 here.

Rozlan said Menara Kuala Lumpur was giving a 50% discount for Malaysians in conjunction with the Aidil Adha holiday.

On the KL Tower International Towerthon Challenge 2018, Rozlan said he was very pleased with the response.

The 17th edition of the annual event was dominated by participants from Kenya, with the Men's Open category won by Mburu John Muiruri after recording 13 minutes, 00.5 seconds while the Women's category was won by Rosemary Mumo Katua who recorded 14:46.9s. — Bernama

Fighting back: Water bombing being carried out (far right) by the Miri Fire and Rescue Department to contain the raging forest fire in Kuala Baram.



Water bombing intensified in Kuala Baram

MIRI: More than 70 rounds of aerial water bombing have been conducted here to contain a raging forest fire in Kuala Baram district.

The fire has caused the Air Pollutant Index to hover at the 113 unhealthy level mark as of yesterday morning.

Miri Fire chief Supt Law Poh Kiong in his latest update said the Bomba Air Unit would conduct more water bombings to try to contain the blaze.

"We carried out 70 rounds of aerial water bombings on Saturday. This morning we did more rounds," he said.

Fire-fighters are also on the ground battling the fires raging on peat soil.

While the aerial water bombing was being carried out, there was slight drizzle that helped clear the haze.

Kuala Baram is also one of the affected areas.

The state authorities are also worried about haze coming from west Kalimantan, where there are already more than 120 hotspots raging.

Fires in areas measuring one sq km in size and above are termed hotspots as they can be detected by satellites.



SEB investing in pilot hydrogen production plant, refuelling station

By JACK WONG
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KUCHING: Sarawak Energy Bhd (SEB) is investing RM15mil in a pilot hydrogen production plant and refuelling station project here.

Scheduled for completion in first-quarter 2019, the project is to evaluate the viability of hydrogen and fuel cells to power Sarawak's transportation sector in the future.

It is also in line with the state government's green energy initiative.

The hydrogen refuelling station will be the first dedicated for transportation in South-East Asia.

Chief Minister Datuk Patinggi Abang Johari Tun Abang Openg recently performed the earth-breaking ceremony for the project located adjacent to SEB's western region office at Jalan Belian.

"The pilot plant will be able to produce 130kg of hydrogen per day, which can power five buses and 10 cars per day," SEB group chief executive officer Sharbini Suhaili told *StarBiz*.

The state authorities have ordered three hydrogen-powered buses from China. Sarawak plans to roll out these hydrogen buses in the state capital later this year.

SEB, which was tasked by the state government to spearhead the research in hydrogen fuel cell application last year, is undertaking the hydrogen plant and refuelling station project in partnership with Linde Malaysia, an industrial gas supplier.

Linde and state-owned SEB have also entered into a memorandum of understanding to explore the potential market for hydrogen and to undertake a joint technical study to assess the technology of the whole value chain.

According to Linde's head of regional business unit Rob Hughes, the Linde group has worked with partners in delivering some 150 hydrogen fuelling stations worldwide.

Hughes said the group was now extending its focus to Asia, adding that its partnership with SEB would enable the group to contribute its knowledge and expertise as a pioneer in the entire hydrogen value chain.

Last October, Johari led a state delegation to Europe, including Germany where they toured facilities involved in the production of hydrogen gas and manufacturing of trains powered by hydrogen. In a similar fact-finding mission to China later, Johari had a test ride on a hydrogen-powered train.

According to Johari, Sarawak plans to use hydrogen fuel cell trains when its proposed light rail transit (LRT) system is commissioned in five or six years. The LRT project will cover Kuching and Samarahan divisions in southern Sarawak.

He had said that hydrogen fuel cell system is not only cost effective but also environmentally friendly. Fuel cells, which combine hydrogen and oxygen to produce electricity, generate clean energy as heat and water are the only by-products.

ExxonMobil, UKM latih guru pakar STEM

SERAMAI 16 guru sekolah rendah di Terengganu dilatih sebagai Jurulatih Pakar Sains, Teknologi, Kejuruteraan dan Matematik (STEM) oleh ExxonMobil Exploration and Production Malaysia Inc. (EMEPMI) dengan kerjasama Universiti Kebangsaan Malaysia (UKM) di bawah program anjuran Kelab STEM ExxonMobil-UKM di Kuala Terengganu, baru-baru ini.

Pengurus Besar Perhubungan Awam dan Kerajaan EMEPMI, Sukiman Mohamed berkata, pihaknya menyokong inisiatif ini bagi memperkasakan kemahiran pengajaran guru dalam bidang STEM untuk mencetus minat murid dari peringkat sekolah rendah dan membantu mereka mencapai potensi masing-masing.

“Diharap kerjasama dengan UKM ini akan dapat meletakkan murid di laluan pantas dalam menguasai matematik dan sains bagi membangunkan generasi peneraju STEM pada masa depan,”



GURU mencuba aktiviti *hands-on* dalam program latihan Kelab STEM ExxonMobil-UKM@Terengganu bagi melahirkan Jurulatih Pakar STEM di Kuala Terengganu, baru-baru ini.

katanya dalam satu kenyataan menerusi e-mel baru-baru ini.

Program latihan itu bertujuan melahirkan jurulatih pakar yang berupaya menjadikan STEM lebih mesra murid dan seterusnya memotivasikan mereka untuk melanjutkan pengajian dan kerjaya

dalam bidang STEM.

Jurulatih pakar ini seterusnya akan melatih guru lain di dalam daerah masing-masing untuk memperluas impak program dan membangunkan lebih ramai guru pakar STEM di negeri Terengganu.

WATER QUALITY

GETTING EVERYONE ON THE SAME PAGE

A 'map' portraying the targeted water quality should be established and used as a reference by all federal and state agencies, writes **DR ZAKI ZAINUDIN**

MANY issues pertaining to shortcomings in water resource management have been highlighted in recent years. These include controversial issues from water supply disruption due to pollution and widespread environmental damage due to uncontrolled bauxite mining. These issues bring into question the water security status of the country.

Two new ministries, the Ministry of Water, Land and Natural Resources (MWLN) and the Ministry of Energy, Science, Technology, Environment and Climate Change were established by the new Pakatan Harapan government. Many "water related" agencies were reshuffled to fit into these two ministries. While the effort to rationalise relevant departments under the same "umbrella" is understandable, it is not really something new.

Such rationalisation efforts are common after elections or when a new administration comes into power (new government or not). Despite such efforts, however, history has shown the country continued to face various water troubles.

Hence, while rationalisation seems to make sense, more important is getting the water authorities to work together towards achieving a common goal. This is the difficult part as there are a multitude of state and federal agencies involved in river basin management.

It may not be apparent to many,

but water issues in Malaysia and the disintegrated management style, stem from administrative and even political entanglement, be it between federal level agencies or between state and federal agencies. Some attribute this to the fact that water, as a resource, is under state purview as guaranteed by the Federal Constitution. In the previous administration, most states guarded their resources diligently and sometimes viewed "federal-led water initiatives" with suspicion.

This was one of the main reasons behind the Selangor water supply debacle. Besides this, many states are also dragging their feet to support the "Water Resources Bill", which propagates Integrated River Basin Management (IRBM), despite it only being a "model law".

It remains to be seen whether such trepidation will continue in the newly-formed government. Perhaps it is also time for a paradigm shift.

For decades, the focus has been on rationalising the "hardware," aka agencies or authorities, hoping they will cooperate with one another by putting them "under one roof". While there has been some progress, the current scenario is still far from true IRBM.

Perhaps, rather than rationalising the agencies or ministries, more focus needs to be given to the "software" or mission, which is what really matters.

What matters is setting measurable, common goals, targets and outcomes which can be trans-



An illegal dumpsite along Sungai Semenyih in Selangor. FILE PIC

lated to department KPIs. This way, irrespective of ministry the agency falls under, they all work towards the same objective. While this may sound elementary, believe it or not, just a few years ago even KPIs of some water agencies contradicted one another!

An example is water pollution. When it comes to water pollution, many are quick to point the finger at the Department of Environment (DOE). However, many are not aware that under the Environmental Quality Act 1974 (EQA, 1974); the DOE only regulates industrial, sewage, leachate, rubber and palm oil mill surface discharges.

There are a host of other surface discharge(s) not regulated under EQA 1974 such as those from wet markets, workshops, aquaculture, animal husbandry, restaurants, etc. The discharge from these premises can be utterly grotesque.

The Selangor Water Management Authority (Luas) has taken proactive measures by including pollution sources not under EQA 1974 but under their own state enactment. What about the other states?

To add salt to the wound, more than 90 per cent of effluent generating premises under DOE's purview are already complying with limits as per the law; in other words, DOE has already met its KPI in terms of regulating pollution sources as per EQA 1974.

From this, one can deduce that it matters little if 90 per cent (or more) of effluent generating

premises meet limits as required by law, if rivers continue to be polluted. All of this is due to jurisdictional overlaps or discrepancies.

It is now time to shift the focus to what matters: the water quality of the rivers or surface water-courses themselves. The authorities (whoever they may be, federal or state) must have shared responsibility in the "outcome" water quality.

A "map" portraying the targeted water quality should be established and used as a reference by all federal and state agencies. The targets can be based on the National Water Quality Standards (or any other relevant standards related to use), but not the Water Quality Index (WQI). At least not in the current WQI form.

Targets should correspond with beneficial uses and locality (river stretches). Setting these common goals and targets is the first, most important step to achieve water quality preservation, because it gets everybody on the same page.

An overarching basin-wide single target such as that adopted by many state authorities previously is not only without basis, but also neither realistic nor sustainable.

For these targets to hold water (pun intended) it should be drafted and adopted by the states, to be followed by everyone, be it for preservation or water quality improvement.

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The writer is a water quality and modelling specialist

“An overarching basin-wide single target such as that adopted by many state authorities previously is not only without basis, but also neither realistic nor sustainable.”

NETWORKING OPPORTUNITY

Over 1,500 delegates, 150 exhibitors expected at energy event

KUALA LUMPUR: More than 1,500 delegates are expected at the Conference of the Electric Power Supply Industry (CEPSI) 2018, hosted by Tenaga Nasional Bhd (TNB).

TNB has secured 27 sponsors, with the latest being IBM, one of the world's largest information technology companies, and Rohas Tecnic Bhd, Malaysia's largest producer of lattice and monopole towers.

Other sponsors are Siemens, Edra Power Holdings Sdn Bhd, BMW ABB Group, General Electric, Accenture, Huawei, Sarawak Energy Bhd, Daelim Industrial, Manila Electric Company, CG Power Systems Indonesia, Tai and Chyun Associates Industries Inc, Schneider Electric, Pestech Energy Sdn Bhd, Ernst and Young, Nokia, LLC Bhd, Trilliant Inc, Samsung C&T, Perusahaan Listrik Negara, GMR Energy Ltd,



Malakoff Corp Bhd, PricewaterhouseCoopers, Andritz and Sagemcom.

TNB said the event, from September 17 to 22 at the Kuala Lumpur Convention Centre, is for electricity supply industry players who are keen to get insight on the best practices to overcome challenges.

International and local experts will share their knowledge on topics related to the theme,

"Reimagining Utility of the Future". The theme underpins the industry's transformation to cope with challenges from technology disruption, economic shifts, evolving sustainability and regulatory requirements, and increasing customer expectations.

With about 550 technical papers, 15 keynote speakers and about 150 exhibitors, CEPSI 2018 is expected generate fruitful discussions and establish meaningful networking among delegates from more than 30 countries.

TNB is hosting the 22nd edition of CEPSI on behalf of the Association of the Electricity Supply Industry of East Asia and Western Pacific.

Since its inception in 1976 in Hong Kong, CEPSI has grown into a key international meeting point for power industry companies, utility leaders, industry professionals and experts.

Melaka

Tiga kawasan masih catat jerebu tahap sederhana

Tiga kawasan di negeri ini masih mencatatkan jerebu pada tahap sederhana dengan bacaan indeks pencemaran udara (IPU) sekitar 61 hingga 73, semalam.

Pengarah Jabatan Alam Sekitar (JAS) negeri Shafe'ee Yasin berkata, bacaan IPU bagi tempoh 24 jam di tiga stesen kaji cuaca di negeri ini iaitu di Alor Gajah, Bukit Rambai dan bandar raya Melaka mendapati keadaan jerebu di negeri ini dikategorikan sebagai sederhana.

"Sehingga jam 11 pagi tadi (semalam), tiga stesen di negeri ini mencatatkan bacaan IPU sederhana iaitu di Alor Gajah (61), Bukit Rambai (67) dan bandar Melaka (73).

"Bacaan IPU di negeri ini bagaimanapun mencatatkan penurunan berbanding sebelum ini yang didorong faktor hujan," katanya ketika dihubungi, di sini, semalam.

Beliau berkata, bermula Khamis lalu JAS melalui Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim mula



IPU jerebu di bandar Melaka pada tahap sederhana dengan bacaan 73 setakat jam 2 petang, semalam.

menggunakan teknologi kadar ukuran IPU 2.5 mikrometer (PM2.5) yang berupaya mengukur bacaan IPU lebih tepat.

Sementara itu, Shafe'ee berkata, JAS negeri turut meminta masyarakat menghentikan pembakaran terbuka atau berdepan kompaun maksimum

RM2,000 bagi setiap kesalahan, denda RM500,000 atau penjara lima tahun atau kedua-duanya sekali jika sabit kesalahan.

Katanya, sebarang aduan pencemaran boleh menghubungi talian JASLINE 1 800 88 2727.

Dalam pada itu, semakin melalui laman web Sistem

Pengurusan Indeks Pencemaran Udara (APIMS) mendapati hanya satu kawasan di Miri, Sarawak yang mencatatkan bacaan IPU tidak sihat dengan bacaan 129.

Manakala, bandar raya Kuching turut menghampiri bacaan IPU tidak sihat (94).

LAMPIRAN 18
UTUSAN MALAYSIA (MINGGUAN MALAYSIA): MUKA SURAT 12
TARIKH: 19 OGOS 2018 (AHAD)

Indeks Pencemaran Udara Malaysia

(setakat pukul 5 petang 18.2.2018)



Negeri	Kawasan	Bacaan	Negeri	Kawasan	Bacaan
• Perlis	Kangar	53	• Melaka	Alor Gajah	68
• Kedah	Alor Setar	53		Bandaraya Melaka	63
	Langkawi	53	• Johor	Pasir Gudang	62
• Pulau Pinang	Seberang Perai	60		Kota Tinggi	57
	Balik Pulau	55	• Pahang	Temerloh	73
• Perak	Taiping	69		Indera Mahkota, Kuantan	68
	Pegoh Ipoh	62	• Terengganu	Kuala Terengganu	59
• W.P Putrajaya	Presint 18	70		Kemaman	62
• W.P Kuala Lumpur	Cheras	75	• Kelantan	Tanah Merah	65
• Selangor	Johan Setia, Klang	89		Kota Bharu	72
	Petaling Jaya	75	• Sabah	Kota Kinabalu	69
• Negeri Sembilan	Seremban	64		Tawau	48
	Port Dickson	65	• Sarawak	Kuching	84
				ILP Miri	228

PENGIRAAN IPU

Nilai IPU dikira berdasarkan kepekatan purata setiap pencemar udara iaitu SO₂, NO₂, CO, O₃ dan PM₁₀. Pencemar udara yang dominan dengan kepekatan tertinggi diambilkira sebagai pencemar yang akan menentukan nilai IPU. Pada lazimnya, kepekatan habuk halus (PM₁₀) adalah yang tertinggi berbanding dengan pencemar yang lain dan ini menentukan bacaan IPU.

●	0-50	Baik	●	201-300	Sangat Tidak Sihat
●	51-100	Sederhana	●	>301	Berbahaya
●	101-200	Tidak Sihat			

ILP Miri catat IPU sangat tidak sihat

KUALA LUMPUR 18 Ogos - Kawasan Institut Latihan Perindustrian (ILP) Miri, Sarawak mencatatkan Indeks Pencemaran Udara (IPU) sangat tidak sihat setakat pukul 5 petang ini.

Menerusi maklumat laman sesawang Sistem Pengurusan Indeks Pencemaran Udara (APIMS), ILP Miri mencatatkan tahap bacaan 228 meningkat daripada 214 pada pukul dua pagi ini.

Menurut Jabatan Alam Sekitar (JAS), peningkatan IPU di ILP Miri adalah berpunca daripada jerebu setempat ekoran kebakaran tanah gambut bersebelahan dengan Stesen Udara Jabatan Alam Sekitar di kawasan itu dan tindakan pemadaman sedang dilakukan agensi terlibat.

Sementara itu di Johan Setia, Klang yang mencatatkan bacaan IPU tidak sihat semalam telah beransur pulih kepada sederhana iaitu 89.

Situasi tersebut susulan kebakaran terbuka tanah gambut telah berjaya dipadamkan pasukan bomba selain dibantu hujan pagi ini.

Kawasan-kawasan lain di seluruh negara juga mencatatkan IPU baik dan sederhana.

Dalam pada itu, Ketua Unit Komunikasi Korporat, Jabatan Meteorologi, Ramlan Ab. Rahman berkata, berdasarkan pemantauan pihaknya, setakat pukul 3 petang ini masih terdapat kawasan yang merekodkan jarak ketampakan (penglihatan) lima kilometer di Kuching, Sarawak dan enam kilometer di Petaling Jaya, Selangor.

“Manakala IPU JAS menunjukkan bacaan sederhana di kebanyakan kawasan kecuali di ILP Miri. Dalam pada itu, hujan yang turun di beberapa kawasan di Lembah Klang hari ini telah mengurangkan kesan jerebu yang berlaku.

“Selain itu, operasi pembenihan awan semalam juga merupakan usaha untuk menangani masalah jerebu yang disebabkan oleh kebakaran hutan yang berlaku,” katanya.

Jelas Ramlan lagi, keadaan jerebu yang melanda ketika ini dijangka pulih pada bulan Oktober iaitu ketika berlakunya peralihan monsun.

“Pada waktu itu, keadaan cuaca ribut petir lebih kerap berlaku terutamanya di Pantai Barat Semenanjung Malaysia dan pedalaman pada sebelah petang dan awal malam.

“Pada masa sama, ketika itu arah tiupan angin lemah dan dari pelbagai hala berbanding semasa monsun barat daya yang berlaku sekarang. Cuaca lembap semasa peralihan monsun juga mengurangkan risiko kejadian kebakaran hutan yang boleh menyebabkan jerebu,” katanya.

TVET boost for local workforce

MMC Gamuda's Tunnelling Training Academy creates industry specialists

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UNDERGROUND land development in Malaysia has been progressing well since the commencement of the nation's biggest urban rail network, the Klang Valley Mass Rapid Transit (KVMRT) project.

Given the extreme karstic geological condition in the Klang Valley, mastering tunnelling technology has been a major achievement of MMC Gamuda.

However, implementing such a massive infrastructure project in a very busy and highly dense urban area has not been without challenges.

The right technology and human resources were needed to deliver the job. Based on the experience from MRT Line 1, plans were made to equip the local workforce with the right tunnelling knowledge and skills to reduce the nation's dependency on foreign expertise and add value to the national technical and vocational education and training (TVET).

With the added push by the government to develop a tunnelling training school, MMC Gamuda set up the world's first Tunnelling Training Academy (TTA) in 2011 to train professionals for the operations and maintenance of the Variable Density Tunnel Boring Machine (VD TBM).

LEVERAGING ON GERMAN TECHNOLOGY

An industry first, TTA is uniquely positioned to prep the local workforce by upskilling them on tunnel-related expertise – a field that has a huge demand globally – by engaging world renowned German engineering companies like Siemens and Bosch.

Gamuda Engineering managing director Datuk Ubull Din Om said Gamuda, which has always emphasised upskilling and positive career growth, believes it is important to train and hire the right staff at all levels as it contributes to the growth of the company.

"As we build significant infrastructure in Malaysia, it is important that we set the stage for the right kind of training to ensure a steady supply of talent in the necessary fields.

"Our collaboration with leading names like Siemens and Bosch asserts our commitment to ensure that only the best solutions are deployed to deliver our tunnelling jobs. This will result in valuable technology and knowledge transfer to sustain Malaysia's growth," said Ubull.

For instance, TTA collaborated with Siemens to localise a course on Programmable Logic Controllers (PLC) for tunnel electricians. Mastering the PLC is akin to controlling the brain of the VD TBM and tunnel electricians will be better equipped to understand

all the mechanisms that control the machine.

"Electrically, the VD TBM is a combination of different types of German technology. By understanding the 'brain', the electricians can understand why the machine behaves in a certain way and what can be done to control it," said Ubull adding that electricians will be exposed to universal codes so that they are able to perform their maintenance routine and troubleshoot when necessary.

TTA also invested in Bosch training facilities, mainly on the VD TBM's electro hydraulic system to train tunnel mechanics on the mechanical and hydraulic components of the TBM.

Bosch Rexroth Sdn Bhd managing director Michel Gunawan said the collaboration helped TTA trainees enhance their technical knowledge in hydraulics, mechanical and electrical operations.

"Our training equipment based on standard industrial components assures safe operations by the trainees. At the end of the course, the trainees receive certification that are accepted worldwide. As the country progresses and develops its infrastructure, we are proud to be part of this growth with the nation," said Gunawan.

Elaborating further on the inclusion of Siemens and Bosch modules, Ubull said the modules were completed

prior to work commencing on MRT Line 2, as there was a need to upskill tunnel electricians and mechanics who will be instrumental in operating and maintaining the TBMs.

"We are able to reduce or control our downtime if all tunnel mechanics are familiar with the basic mechanical and hydraulic systems used. So far, for MRT Line 2, we have been able to keep the VD TBM running 24/7 with the usual scheduled maintenance," added Ubull.

RAISING THE BAR ON TVET

TTA has also developed additional modules covering tunnel emergency procedures and quality, safety, health and environment (QSHE) components, based on their knowledge and experience of handling the VD TBM. This seamless knowledge transfer has increased the value of Malaysian tunnel experts by many folds.

For the record, Gamuda's tunnel building records include the world's first dual purpose tunnel, Stormwater Management and Road Tunnel (SMART), the Penchala Link tunnel, Kaohsiung Metropolitan MRT in Taiwan and the MRT Line 1. It is currently working on MRT Line 2 which connects Klang Valley to the administrative capital of Putrajaya.

This not only gives local youths a competitive advantage in the building industry, but also elevates the standard of TVET in the country, making it on par with other specialisations globally. This also goes in tandem with the government's plan to raise the bar on TVET.

TTA also works closely with the Education, Human Resources and Youth and Sports ministries and lead-

ing TVET institutions like Institut Latihan Perindustrian (ILPI) and Akademi Bina Malaysia (ABM) to select and train top graduates for various positions such as tunnel crew, assistant TBM operator, tunnel electrician, tunnel mechanic and erector operator covering the entire operational and management aspects of the VD TBM.

Youth Skills Development Division director-general Dr Wasitah Mohd Yusof said training provided by TTA has transformed the conventional theoretical and practical training provided to their ILKBS graduates.

"To date, many of our graduates who have joined TTA have been placed at various worksites," she said, adding that they have received positive feedback on training quality and encouraging work environment from former graduates who are currently employed in MRT Line 2.

She added that training provided by TTA is not only organised, but the training syllabus is also of international standard. Employees' welfare and career progression are also given equal emphasis.

"TTA has world-class training facilities for tunnelling projects in Malaysia. With the current exposure, ILKBS graduates not only can expand their career locally but also become a specialist at the international level," said Wasitah.

In years to come, TTA is poised to be the hub of tunnelling technology and education as it continues to upskill the workforce and set the standard for professional tunnel construction. Since its establishment, TTA has trained 1,000 graduates and is in the midst of training another 600 by the end of MRT Line 2 in 2022.



Tunnellers lifting the gantry rail beam to be sent to the front of the VD TBM at one of the MRT Line 2 worksites.



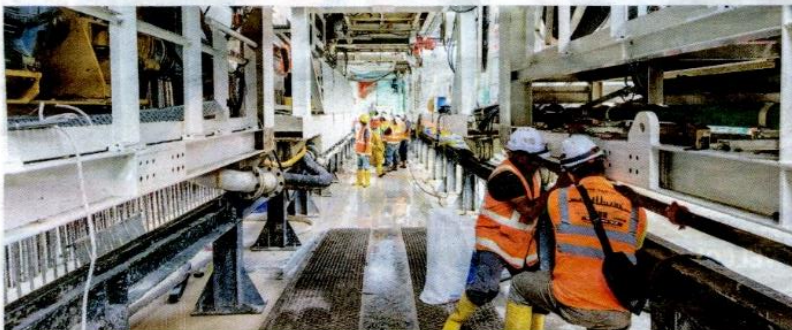
Datuk Ubull Din Om



Michel Gunawan



Dr Wasitah Mohd Yusof



MRT crew inspecting the installation of pipes for TBM grouting. Tunnellers trained at TTA are capable of managing tunnelling works as well as the groundworks.

Gempa bumi baharu gegar Lombok

LOMBOK, INDONESIA – Gempa bumi kuat bermagnitud 6.3 menggegarkan Lombok semalam, mengakibatkan orang ramai meluru ke kawasan terbuka, hanya dua minggu selepas gegaran kuat meragut lebih 460 nyawa di pulau berkenaan.

Gegaran berpusat di Lombok Timur itu melanda pada kedalaman cetek 7 kilometer dan dapat dirasai di seluruh pulau berkenaan, kata beberapa pegawai.

Bagaimanapun, ia tidak sekuat gempa bumi sebelumnya yang melanda pada awal bulan ini, manakala tiada kematian atau kecederaan dilaporkan.

"Gempa bumi itu menyebabkan orang ramai panik dan meninggalkan rumah mereka," kata jurucakap Badan Nasional Pengurusan Bencana (BNPB), Sutopo Purwo Nugroho kepada stesen televisyen *Metro TV*.

"Tiada laporan mengenai kematian atau

kerosakan serius yang diterima tetapi orang ramai trauma," tambahnya.

Tanah runtuh dilaporkan berlaku di Taman Negara Gunung Rinjani di mana ratusan pendaki terperangkap selepas gempa bumi melanda pada penghujung Julai lalu. Taman itu ditutup selepas bencana tersebut.

Beberapa penduduk berkata, gempa baharu itu dapat dirasai dengan kuat di Lombok Timur.

Gegaran itu turut dirasai di ibu negeri Lombok, Mataram dan pulau berdekatan, Bali.

Gegaran terbaharu itu berlaku dua minggu selepas gempa bumi kuat bermagnitud 6.9 meranapkan berpuluh ribu kediaman, masjid dan premis perniagaan di seluruh Lombok pada 5 Ogos lalu.

Lebih 460 orang terbunuh dan puluhan ribu yang lain cedera dalam bencana tersebut. – AFP



SERPIHAN dan debu kelihatan selepas sebuah kediaman runtuh semasa gempa bumi di Lombok semalam. REUTERS

Nasa and Elon Musk at odds on whether Mars can be habitable

FORGET about that vacation home on Mars, at least for now. Nasa says there isn't enough carbon dioxide on Mars to terraform the planet, according to a study. But Elon Musk disagrees, saying there's plenty available.

Terraforming is the hypothetical process of changing a planet's conditions in order to make it habitable for Earth's plants and animals, including humans. The most promising candidate for terraforming is Mars, according to Nasa.

In the past, scientists have theorised that carbon dioxide (CO₂) and other greenhouse gases stored in Mars's rocks and polar ice caps could be released back into the atmosphere to make it thicker, heat the planet and allow liquid water to remain on the surface.

But the study, published recently

in the peer-reviewed British journal *Nature Astronomy*, threw cold water on that idea.

"Our results suggest that there is not enough CO₂ remaining on Mars to provide significant greenhouse warming were the gas to be put into the atmosphere," said study lead author Bruce Jakosky of the University of Colorado. "In addition, most of the CO₂ gas is not accessible and could not be readily mobilised. As a result, terraforming Mars is not possible using present-day technology."

Although the current Martian atmosphere itself consists mostly of carbon dioxide, it is far too thin and cold to support liquid water, an essential ingredient for life.

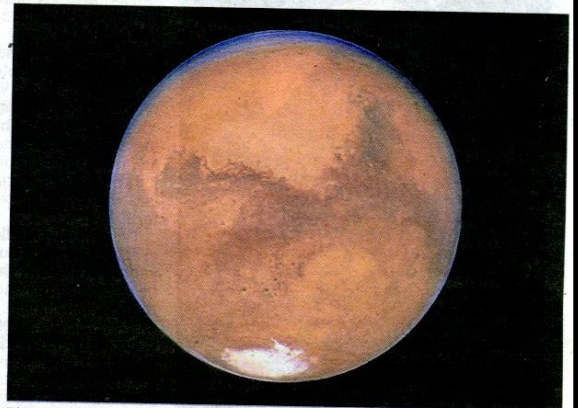
At best, the authors conclude, the readily accessible carbon dioxide could only triple Mars's atmospheric pressure – one-fiftieth of

the change needed to make Mars habitable.

However, in a tweet, Tesla founder Elon Musk said that "there's a massive amount of CO₂ on Mars adsorbed into soil that'd be released upon heating. With enough energy via artificial or natural (sun) fusion, you can terraform almost any large, rocky body."

In the study, Nasa examined how much carbon dioxide the planet's soil and minerals contain, but still found the amount released would be far too small to terraform the planet to the degree needed to support life.

"Terraforming Mars using the planet's known CO₂ will thus need technologies well beyond our current grasp. Any such efforts have to be very far into the future," the study concluded. – TNS



There isn't enough carbon dioxide on Mars to terraform the planet, says Nasa. — Reuters

Strong winds stoke Australia's east coast bushfires

SYDNEY: Firefighters were battling more than 70 bushfires on Australia's tinder dry east coast for the fourth day running.

Thousands of mostly volunteer rural fire service men and women struggled to keep the fires from taking homes as 60kph winds whipped the bushfires into raging fire fronts that leapfrogged defensive efforts.

Hundreds of people in threatened rural villages have been urged to evacuate their homes, particularly west of Port Stephens 185km north of Sydney, and Bemboka, 470km south of Sydney.

The entire state of New South Wales is tinder dry due to a severe drought but it is rare for bushfires to break out in the winter month of August, which has been unusually warm.

Three teenagers have been charged for lighting fires despite the strict ban on starting any outdoor fires such as barbecues.

A helicopter pilot fighting the flames was killed in a crash on Friday when the line carrying a water drum got caught in a tree. — dpa

'EXTREMELY GRAVE CRISIS'

DESPERATE PLEAS FOR HELP

Urgent rescue operation underway as Kerala flood death toll hits 324

KOCHI

TROOP reinforcements stepped up desperate rescue attempts in India's flood-stricken Kerala state yesterday after more than 100 bodies were found in a day and a half, taking the crisis death toll to at least 324.

With thousands trapped, power and communication lines down and fresh alerts of further torrential rain, authorities warned of even more trouble ahead.

More than 30 military helicopters and 320 boats are attempting rescues across Kerala, which is suffering its worst floods in nearly a century, officials said.

Extra troops have been sent in and local fishermen have also joined the operation. Thousands of people have been rescued so far, according to authorities, but they believe more than 6,000 are waiting to be saved.

More than 321cm of rain has fallen in Idukki, a hilly district in central Kerala, which since June 1 has been one of many areas now virtually cut off, according to the India Meteorological Department.

The floods have risen in the past 10 days. And with no end in sight to the deluge, people all over the state of 33 million people have made panic-stricken appeals on social media for help, saying they cannot get through to rescue services.

"My family and neighbouring families are in trouble with flood in Pandanad Nakkada area in Alappuzha," Ajo Varghese said in a Facebook post, which quickly spread.



People waiting for help on the roof of their flooded house in the state of Kerala yesterday. REUTERS PIX



Flood victims are airlifted by Indian Navy soldiers during a rescue operation.

"No water and food. Not able to communicate from afternoon. Mobile phones are not reachable and switch off. Please help... No rescue is available," he added.

A video of a man neck-deep in water in his house in Chengannur, another badly affected district, has also gone viral. Other messages have been sent from people trapped in temples and hospitals as well as in their homes.

"The chief minister has confirmed 324 deaths (since Aug 9). Around 100 people died in the last 36 hours alone," a Kerala government spokesman said.

Local media reports predicted that the toll would quickly mount amid unconfirmed reports of more deaths in landslides and people found drowned.

The Kerala government has said it faces an "extremely grave"

crisis and state Chief Minister Pinarayi Vijayan warned of a new wave of rainfall hitting the battered region.

The gates of dozens of dams and reservoirs across the state have been opened as water levels reach danger levels. That has added to the submerging of many villages.

North and central Kerala has been worst-hit by the floods with the international airport here shut until at least Aug 26.

Almost 200,000 people made homeless across the state have moved into hundreds of relief camps but many of those are now threatened by the floods.

On top of tourist cancellations, Kerala's valuable rubber industry has been badly hit by the floods.

The state government says 10,000km of road have been destroyed or damaged, along with thousands of homes.

Prime Minister Narendra Modi was due to visit the state yesterday, which is renowned for its palm-lined beaches and tea plantations.

The Home Ministry announced that 868 people have been killed in seven Indian states, including Kerala since the start of the monsoon in June. **AFP**