



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

Bil	Berita	Media	Capaian Berita Penuh
31 DISEMBER 2018 (ISNIN)			
1.	<u>Work together to save nature</u> THE Malaysian Nature Society (MNS) Selangor branch would like to congratulate the Energy, Science, Technology, Environment and Climate Change Minister Yeo Bee Yin on being recognised as one of 10 people who made a difference to the environment in 2018 in the science journal, <i>Nature Research</i> (online at tinyurl.com/star-nature).	The Star	Klik pada tajuk berita atau rujuk lampiran 1
2.	<u>Amaran angin kencang di Kelantan sehingga Khamis</u> Jabatan Meteorologi Malaysia mengeluarkan amaran angin kencang dan laut bergelora kategori pertama bagi perairan Pantai Timur bermula semalam sehingga 3 Januari 2019.	Kosmo	Rujuk Lampiran 2
3.	<u>Ketepatan Ribut Siklon Tropika boleh diragui</u> Pengarah Meteorologi Kelantan, Rabiah Zakaria berkata, penularan itu bukan daripada sumber Jabatan Meteorologi Malaysia (MMD), sebaliknya berdasarkan jangkaan satu model Ramalan Cuaca Numerical (NWP).	Sinar Harian	Rujuk Lampiran 3
4.	<u>Amaran angin kencang</u> Jabatan Meteorologi Malaysia mengeluarkan	Sinar Harian	Rujuk Lampiran 4



	amaran angin kencang dan laut bergelora di perairan Pantai Timur sehingga Khamis ini.		
5.	<u>Inisiatif didik pelanggan kawal penggunaan elektrik</u> HER merupakan inisiatif antara TNB dan Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim pada Julai 2015 bertujuan untuk mewujudkan kesedaran kepada orang ramai mengenai kecekapan penggunaan tenaga.	Kosmo	Rujuk Lampiran 5
6.	<u>Pencerahan atasi kenaikan kos bahan api elektrik</u> HER adalah inisiatif antara TNB dan Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim (MESTECC) yang dimulakan pada Julai 2015.	Berita Harian	Rujuk Lampiran 6
30 DISEMBER 2018 (AHAD)			
7.	<u>Amaran angin kencang dan laut bergelora di Kelantan sehingga Khamis</u> Jabatan Meteorologi Malaysia telah mengeluarkan amaran angin kencang dan laut bergelora kategori pertama bagi perairan Pantai Timur bermula hari ini sehingga Khamis, 3 Januari 2019.	Astro Awani	Klik pada tajuk berita
8.	<u>Angin kencang dan laut bergelora sehingga Khamis</u> Menurut kenyataan Jabatan Meteorologi Malaysia malam ini, keadaan angin kencang dan laut bergelora itu berbahaya kepada semua aktiviti perkapalan dan pantai termasuk menangkap ikan dan perkhidmatan feri.	Kosmo	Klik pada tajuk berita

9.	<u>Amaran angin kencang dan laut bergelora di Kelantan</u> Jabatan Meteorologi Malaysia mengeluarkan amaran angin kencang dan laut bergelora kategori pertama bagi perairan Pantai Timur bermula hari ini sehingga Khamis, 3 Januari 2019.	Berita Harian	Klik pada tajuk berita
10.	<u>Bersedia hadapi banjir gelombang ketiga</u> "Berdasarkan laporan Jabatan Meteorologi Malaysia (MetMalaysia), cuaca baik diramalkan berlaku di negeri ini sehingga penghujung Disember.	Harian Metro	Klik pada tajuk berita
11.	<u>Industri besi, keluli terjejas jika tarif elektrik naik</u> "Kami menyedari bahawa situasi sukar dan kebimbangan industri tidak mungkin diberikan pertimbangan serius walaupun banyak perbincangan bersama Suruhanjaya Tenaga, Tenaga Nasional Bhd (TNB) dan beberapa kementerian seperti Kementerian Perdagangan Antarabangsa dan Industri serta Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim.	Harian Metro	Klik pada tajuk berita
29 DISEMBER 2018 (SABTU)			
12.	<u>30 kenderaan tersadai selepas isi minyak</u> Terdahulu, Kementerian Perdagangan Dalam Negeri dan Hal Ehwal Pengguna (KPDNHEP) Selangor berkata, pihaknya akan menghantar sampel petrol daripada stesen minyak itu kepada Jabatan Kimia untuk siasatan.	Berita Harian	Rujuk Lampiran 7
13.	<u>Amaran angin kencang, laut bergelora hingga Khamis</u>	Sinar Harian	Klik pada tajuk berita

	Jabatan Meterologi Malaysia dalam satu kenyataan malam ini memaklumkan angin kencang dengan kelajuan 40 -50 km sejam dan ombak berketinggian sehingga 3.5m dijangka turut melanda perairan Selatan Condore, Bunguran, Selatan Reef North, Layang-layang, Reef South, Selatan Palawan dan Labuan dalam tempoh yang sama.		
14.	<u>Amaran angin kencang dan laut bergelora bermula Sabtu</u> Kawasan perairan utara Condore, utara Reef North dan utara Palawan ialah antara lokasi dipercayai berlaku fenomena tersebut, menurut kenyataan Jabatan Meteorologi Malaysia (MET Malaysia) pada Jumaat.	Astro Awani	Klik pada tajuk berita
15.	<u>Gempa bumi kuat landa Mindanao</u> Menurut kenyataan Jabatan Meteorologi Malaysia, pusat gempa bumi itu terletak pada jarak 177 kilometer (km) tenggara dari Davao, Filipina dengan kedalaman 10 kilometer.	Kosmo	Klik pada tajuk berita
16.	<u>Innergia Labs to address SME's pain points</u> It also received Cradle Fund Sdn Bhd (Cradle)'s Cradle Investment Programme 300 (CIP300) grant.	New Straits Times	Klik pada tajuk berita



TEMPATAN

Bil	Berita	Media	Capaian Berita Penuh
31 DISEMBER 2018 (ISNIN)			
17.	<u>Polemik sisa plastik</u> Isu pencemaran sisa plastik menjadi polemik pada tahun ini. Ia ekoran pembongkaran kes-kes berkaitan pada September lalu terutamanya apabila dilaporkan hampir 30,000 penduduk di sekitar daerah Kuala Langat, Selangor terpaksa menanggung derita menghirup udara tercemar setiap hari apabila daerah itu dijadikan tempat ahli-ahli perniagaan tidak bertanggungjawab melonggokkan beribu-ribu tan sisa pepejal plastik yang diimport ke Selangor dari seluruh dunia.	Kosmo	Rujuk Lampiran 8
18.	<u>Pertimbang insentif cukai bagi amalan tenaga hijau - Aktivis</u> Beliau berkata penggunaan bahan bakar fosil dan arang batu perlu digantikan secara beransur-ansur dengan tenaga mampan termasuk tenaga boleh diperbaharui seperti elektrik-hidro, tenaga suria dan tenaga pasang surut.	Malaysiakini	Klik pada tajuk berita
19.	<u>Companion Robot</u> Japanese startup Groove X, founded by an alumni of SoftBank Group Corp's robotics unit, unveiled its first creation – a companion robot designed to make users happy.	New Straits Times	Rujuk Lampiran 9
20.	<u>A robot that exists just to be loved</u> While most intelligent robots created nowadays are designed to help people	The Star	Rujuk Lampiran 10



	accomplish tasks, Groove X's Lovot exists just to spread love and affection and make you feel special.		
21.	<u>Made strictly for love</u> Japanese company Groove X recently officially introduced its new creation to the world, Lovot, a companion robot designed only to warm your heart.	The Sun	Rujuk Lampiran 11
22.	<u>Climate Change and Human Health</u> Study shows public health structure in many cities across the globe will be seriously compromised by climate change.	New Straits Times	Rujuk Lampiran 12
23.	<u>Kenaikan ICPT tidak sesuai</u> "Rekod prestasi kewangan Tenaga Nasional Berhad (TNB) masih mampu mendapat keuntungan berbilion ringgit setia[p tahun. Sekiranya tiada alasan kukuh sewajarnya di ditangguhkan dan jika tidak boleh sekurang-kurangnya kaji semula kadar kenaikan tersebut."	Utusan Malaysia	Rujuk Lampiran 13
30 DISEMBER 2018 (AHAD)			
24.	<u>Towards plastic-free</u> In efforts to reduce plastic waste to the environment, the Government announced the Roadmap Towards Zero Single-use plastics 2018-2030 in October.	The Star	Rujuk Lampiran 14
25.	<u>Tourism, homestays reap digital economy benefits</u> "Just look at the blockchain technology the Estonian government embraced a few years ago. Now they're the leading country in terms of sharing patients' records among their hospitals.	The Borneo Post	Klik pada tajuk berita



26.	<u>Five Young Companies Making An Impact On The World To Watch In 2019</u> It's been a great year for new startups and 2019 promises to be no less exciting, with new technologies to adopt, frontiers to explore, and environmental and sustainability challenges to overcome, testing entrepreneurs' innovative capabilities to the max.	Forbes	Klik pada tajuk berita
27.	<u>Banjir gelombang ketiga diramal berlaku bulan depan</u> Banjir gelombang ketiga diramal melanda negeri ini bulan depan dan para penduduk dinasihatkan mengambil langkah berwaspada bagi mengelak ditimpa bencana itu.	Utusan Malaysia	Klik pada tajuk berita
28.	<u>Bersedia hadapi banjir gelombang ketiga</u> PENDUDUK di kawasan berisiko banjir dinasihat berada dalam keadaan berjaga-jaga berikutan jangkaan berlaku banjir gelombang ketiga pada awal Januari ini.	Harian Metro	Klik pada tajuk berita
29.	<u>Perihelion fenomena biasa</u> KEJADIAN air pasang besar dan air surut mendadak di Johor serta Terengganu baru-baru ini adalah disebabkan daripada impak pertambahan graviti bumi berikutan kedudukannya paling hampir dengan matahari pada orbitnya dikenali sebagai Perihelion.	Harian Metro	Klik pada tajuk berita
30.	<u>Why Nobody In Renewable Energy Had A Better 2018 Than First Solar</u> In mid-2017 Arizona's First Solar was set up for a tricky 2018. It was overhauling its manufacturing facilities, juggling inventory, wary of the impact of Trump's planned trade duties on all imports of solar panels and facing	Forbes	Klik pada tajuk berita



	even stiffer competition from China.		
31.	<u>Malaysia moves to reap the benefits of processing global plastic waste</u> After China shut its doors to the world's plastic waste, Malaysia became a go-to destination for some countries looking to get rid of their trash.	Channel News Asia	Klik pada tajuk berita
32.	<u>From plastic waste to eco-bricks</u> GARBAGE, especially plastic discards, dumped into drains or by the roadsides, accidentally or otherwise, will eventually find their way into the sea.	The Borneo Post	Klik pada tajuk berita
29 DISEMBER 2018 (SABTU)			
33.	<u>Grateful for another year</u> Siti Ariana said the change in government had also jolted her interest in the Industrial Revolution 4.0.	The Star	Klik pada tajuk berita
34.	<u>Tiada rakyat Malaysia terkesan akibat gempa bumi di Filipina</u> Tiada rakyat Malaysia dilaporkan mengalami kecederaan atau terkesan secara langsung akibat kejadian gempa bumi dengan kekuatan 7.1 pada skala Richter yang melanda wilayah Governor Generoso dan Davao Oriental di Mindanao, selatan Filipina, pagi ini.	Kosmo	Klik pada tajuk berita
35.	<u>Tiada rakyat Malaysia terkesan gempa bumi Filipina</u> Tiada rakyat Malaysia dilaporkan mengalami kecederaan atau terkesan secara langsung akibat kejadian gempa bumi dengan kekuatan 7.1 pada skala Richter yang melanda wilayah Governor Generoso dan Davao Oriental di	Sinar Harian	Klik pada tajuk berita



	Mindanao, selatan Filipina, pagi ini.		
36.	<u>How mountains of U.S. plastic waste ended up in Malaysia, broken down by workers for \$10 a day</u> In a derelict warehouse complex plastered with “For Rent” signs an hour from the Malaysian capital, four women squatted on upturned buckets. Their fingernails were cracked and nubby, their headscarves dampened with sweat.	Los Angeles Times	Klik pada tajuk berita
37.	<u>Malaysia inundated with Western plastic waste after Chinese ban</u> Each year, the world’s developed countries generate millions of tons of plastic waste. Much of that used to be exported to China for recycling, but last year China banned the practice.	America CGTN	Klik pada tajuk berita
38.	<u>Higher debt, palatable gearing</u> Debt is an essential part of any business. All companies should have some amount of debt to help finance its growth and investments for the longer term. It is an efficient way of managing the balance sheet.	The Star	Rujuk Lampiran 15
39.	<u>Low waste tips for the holiday season</u> 1. When visiting people during the festival season, you may want to bring a customary gift for the host.	New Straits Times	Rujuk Lampiran 16
40.	<u>Tioman to get 15pc of electricity from RE</u> Tioman, located 32km off the coast of Pahang, will get 15 per cent of its electricity generated from the renewable energy (RE) beginning next year, said sources.	New Straits Times	Rujuk Lampiran 17



ANTARABANGSA

Bil	Berita	Media	Capaian Berita Penuh
31 DISEMBER 2018 (ISNIN)			
41.	<u>Seputar 2018: Gempa bumi, tsunami landa Palu</u> Gempa bumi kuat berukuran 7.5 pada skala Richter yang diikuti ombak besar tsunami setinggi lebih tiga meter melanda Pulau Sulawesi di Indonesia pada 28 September lalu.	Kosmo	Klik pada tajuk berita
42.	<u>Kapal angkasa China sedia mendarat di sisi gelap Bulan</u> Beijing - Sebuah kapal angkasa penjelajah China mengambil kedudukan untuk mendarat pada sisi gelap Bulan untuk kali pertama, lapor agensi berita <i>Xinhua</i> semalam.	Kosmo	Rujuk Lampiran 18
43.	<u>China probe to land on dark side of moon</u> Beijing - A Chinese space probe is moving into position to land on the dark side of the moon for the first time, the official Xinhua news agency reported yesterday, a mission seen as an important step as the country looks to push forward its space programme.	The Sun	Rujuk Lampiran 19
44.	<u>Dua beradik selamatkan 4 penyu di tengah Lautan Pasifik</u> Puerta Vallarta, Mexio - Dua beradik berjaya menyelamatkan empat ekor penyu daripada lemas disebabkan tersangkut pada jaring dan plastik sampah di tengah-tengah Lautan Pasifik baru-baru ini.	Kosmo	Rujuk Lampiran 20



45.	<u>Gunung Agung di Indonesia meletus lagi</u> Jakarta – Sebuah gunung berapi di pulau peranginan Indonesia, Bali meletus semalam dan menghamburkan abu ke beberapa perkampungan berdekatan, manakala pihak berkuasa meminta pelancong menjauhi lokasi bencana.	Kosmo	Rujuk Lampiran 21
46.	<u>Tsunami Indonesia kejutkan dunia</u> Jakarta – Pihak berkuasa di seluruh dunia kini mencari jalan untuk melakukan persediaan bagi menghadapi bencana tsunami di luar dugaan seperti yang melanda Selat Sunda di Indonesia pada bulan ini.	Kosmo	Rujuk Lampiran 22
47.	<u>Bali's Mount Agung shoots new burst of ash</u> Denpasar – A volcano on Indonesia's tourist island of Bali shot a new burst of hot ash into the air in the latest of the country's several eruptions within a week.	The Star	Rujuk Lampiran 23
48.	<u>Turning the tide on disasters</u> Jakarta: As Indonesia reels from the carnage of yet another natural disaster, authorities around the globe are working on how they can prepare for the kind of freak tsunami that battered coasts west of Jakarta this month.	The Star	Rujuk Lampiran 24
49.	<u>Landslides and floods kill 26 in eastern Philippines</u> Manila: Twenty-six people have been killed in landslides and floods caused by a tropical depression that brought heavy rains over the eastern Philippines, police and emergency officials said.	The Star	Rujuk Lampiran 25



30 DISEMBER 2018 (AHAD)			
50.	<u>Gempa bumi 5.7 skala Richter gegar Bengkulu</u> JAKARTA 30 Dis. - Gempa bumi berukuran 5.7 skala Richter menggegarkan wilayah Bengkulu di Pulau Sumatera hari ini. Menurut Badan Meteorologi, Klimatologi, dan Geofisika Indonesia (BMKG), gempa yang berlaku 3.39 petang waktu tempatan itu berpusat di 42 kilometer Timur Laut Lebong, wilayah Bengkulu.	Utusan Malaysia	Klik pada tajuk berita
51.	<u>Gempa bumi 5.7 skala Richter gegar Bengkulu, Indonesia</u> JAKARTA - Gempa bumi bermagnitud 5.7 pada Skala Richter menggegarkan daerah Bengkulu di Pulau Sumatera hari ini.	Kosmo	Klik pada tajuk berita
52.	<u>Electricity, gas tariffs to drop in 2019 first quarter</u> SINGAPORE: Electricity and gas tariffs are set to drop in the first quarter of 2019.	China News Asia	Klik pada tajuk berita
53.	<u>Electricity tariffs to go down by 1.2% in the first quarter of 2019</u> SINGAPORE — For the first time in over a year, electricity tariffs here are set to fall in the first quarter of 2019, with the average household living in a four-room Housing and Development Board (HDB) flat to pay about S\$1 less for electricity from January to March.	Today Online	Klik pada tajuk berita
29 DISEMBER 2018 (SABTU)			
54.	<u>Gempa bumi kuat landa Mindanao</u> Gempa bumi kuat berukuran 7.3 pada skala	Kosmo	Klik pada tajuk berita



	Richter melanda Mindanao, Filipina pada pukul 11.39 pagi tadi.		
55.	<u>Gempa bumi 6.9 magnitud landa Mindanao</u> FILIPINA. Gempa bumi berukuran 6.9 magnitud melanda pulau Mindanao, selatan Filipina hari ini, kata badan pemantau, menambah ada kemungkinan ancaman tsunami untuk sebahagian Filipina dan negara jiran Indonesia.	Sinar Harian	Klik pada tajuk berita
56.	<u>Gempa bumi berkekuatan 6.9 magnitud landa selatan Filipina</u> MANILA: Gempa bumi berkekuatan 6.9 magnitud menggegarkan selatan Filipina pada Sabtu (29 Disember), namun masih belum ada sebarang laporan tentang korban jiwa atau kemusnahan harta benda.	Astro Awani	Klik pada tajuk berita

Work together to save nature

THE Malaysian Nature Society (MNS) Selangor branch would like to congratulate the Energy, Science, Technology, Environment and Climate Change Minister Yeo Bee Yin on being recognised as one of 10 people who made a difference to the environment in 2018 in the science journal, *Nature Research* (online at tinyurl.com/star-nature).

MNS Selangor, along with other local environmental organisations, have long lobbied the Malaysian government for better energy, water, land and waste management policies, and stronger laws against single-use plastics.

While we are heartened by Yeo's pledge to phase out single-use plastics in Malaysia, we are concerned that the 12-year timeline is simply too long to be effective in dealing with an issue as urgent as marine plastic pollution. Kenya took drastic action to ban plastic bags over a year ago, while Bali is set to ban plastic bags and other single-use plastics by next year.

Malaysia should not be lagging behind our neighbours in taking decisive action to cut down on the manufacturing, consumption, use, distribution and disposal of single-use plastics. This is especially so after we witnessed how inadequate our recycling and waste management systems are in dealing with the world's plastic waste that was foisted on Banting, Klang and other Malaysian towns following China's refusal to accept any more plastic waste from developed nations for recycling.

A five-year roadmap would be a better testimony of the government's seriousness and sincerity in dealing with the issue of single-use plastics and plastic pollution.

Much more needs to be done to conserve Malaysia's environment, biodiversity, wildlife and natural resources, and unfortunately, we have not seen very much concrete action or moral courage on the part of the relevant authorities, enforcement agencies and government ministries.

The Housing and Local Government Ministry, Energy, Science, Technology, Environment and Climate Change Ministry, Works Ministry and Water, Land and Natural Resources Ministry



Dangerous: File photo of a landslide area along the hillside road of Jalan Paya Terubong, Penang, being worked on. Hill slopes and development do not go together, yet development in such sensitive areas continues.

have been conspicuously and alarmingly silent, for instance, on the issue of hill slope development in Penang, the encroachment into native customary lands by plantation companies, and the clearing of green lungs for development projects in Taman Bukit Kiara and Bukit Lagong in Selangor, among others.

Deforestation and development projects in forested areas, especially ecologically sensitive areas with high biodiversity and high conservation value, affect more than just the value of neighbouring properties. Increased disasters such as landslides, flash floods and drought, and increased air, water, noise and light pollution, will have an adverse impact on climate and environmental quality, and will affect human and animal quality of life and a particular community and ecosystem's ability to sustain itself.

Wildlife populations may end up unable to breed, find food or avoid conflict with humans. Highway and development projects may end up bisecting or fragmenting wildlife habitats and lead to an increase in wildlife roadkills. New roads and highways may create access for illegal loggers and poachers

where there was none before.

The degazettement of forest reserves and destruction of the natural environment are taking place on the watch of those entrusted to protect the environment. Those of us in environmental organisations are fully aware of the need to balance environmental protection with economic needs. However, in many instances, there is no actual pressing social or economic need resulting in a genuine conflict, and there should be no compromise on environmental protection.

For far too long, the Malaysian authorities have been defending environmentally destructive projects that benefit only a selected few with economic and political leverage. Environmental organisations and citizens' action groups with no ulterior motives or hidden agendas other than to speak up for the natural environment are treated as adversaries, instead of as valuable and impartial allies.

All of us have only a small window of time to help protect natural spaces and vanishing species. Politicians' windows of time are even smaller. While praise and credit must be given where it is due, we must remember that environmental conservation in

Malaysia is an uphill battle and many issues are not afforded the urgency and importance they deserve. We need to prioritise the environmental challenges with the highest stakes and greatest potential for lasting and irreversible damage.

Environmental organisations are always ready to meet with the government to discuss solutions. Environmental organisations are not trying to win a popularity contest against governmental agencies, we are racing against time to prevent the annihilation of the natural world.

It is wonderful that Malaysia has a minister acknowledged by a prestigious science journal to be a champion for the environment. It would be more wonderful still if we could have all the relevant government ministries work together with each other and with environmental organisations and citizens' action groups to expeditiously and courageously take action to protect Malaysia's natural environment and deliver environmental justice.

WONG EE LYNN
Malaysian Nature Society
Selangor branch

LAMPIRAN 2
KOSMO (NEGARA): MUKA SURAT 8
TARIKH: 31 DISEMBER 2018 (ISNIN)

Amaran angin kencang di Kelantan sehingga Khamis

KOTA BHARU – Jabatan Meteorologi Malaysia mengeluarkan amaran angin kencang dan laut bergelora kategori pertama bagi perairan Pantai Timur bermula semalam sehingga 3 Januari 2019.

Pengarah Jabatan Meteorologi Kelantan, Rabiah Zakaria berkata, angin kencang Timur Laut yang berkelajuan antara 40 hingga 50 kilometer sejam serta ombak sehingga 3.5 meter itu berbahaya kepada bot-bot kecil, rekreasi laut dan sukan laut.

Menurutnya, disebabkan keadaan itu, orang awam dan nelayan dinasihatkan agar peka dengan amaran yang dikeluarkan dan sebolehnya mengelakkan sebarang

aktiviti pantai.

“Nelayan khususnya yang menggunakan bot kecil diharap lebih berhati-hati keluar menangkap ikan ketika amaran masih berkuat kuasa,” katanya ketika dihubungi semalam.

Kelmarin, Jabatan Meteorologi Malaysia juga mengeluarkan amaran angin kencang dan laut bergelora melibatkan Kelantan, Terengganu dan Pahang sehingga 3 Januari ini.

Amaran kategori pertama itu turut melibatkan perairan Tenggara Samui, Selatan Condore, Selatan Palawan, Pulau Layang-Layang, Tioman, Selatan Reef North, Reef South, Labuan dan Bungguran. – Bernama

Ketepatan Ribut Siklon Tropika boleh diragui

KOTA BHARU - Penularan berita Ribut Siklon Tropika yang dikatakan akan menghentam Kelantan, masih berada di peringkat jangkaan awal dan ketepatannya masih boleh diragui.

Pengarah Meteorologi Kelantan, Rabiah Zakaria berkata, penularan itu bukan daripada sumber Jabatan Meteorologi Malaysia (MMD), sebaliknya berdasarkan jangkaan satu model Ramalan Cuaca Numerical (NWP).

Menurutnya, jabatan berkenaan sedang memantau rapi perkara itu dengan sebaiknya dan berharap orang awam peka amaran serta arahan dikeluarkan oleh pihak berkuasa serta dapat mengheadkan

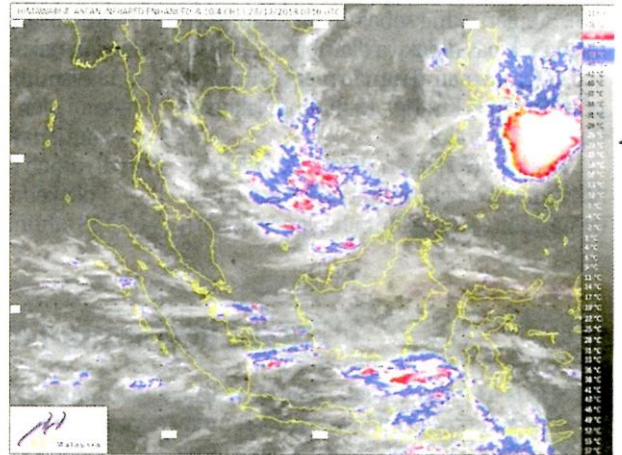
aktiviti pantai.

Beberapa hari lalu, tular berita mengenai Ribut Siklon Tropika akan menghentam Kelantan.

Menerusi perkongsian di laman sosial Facebook itu, ia berdasarkan data model ramalan komputer (GFS), mendedahkan ribut Siklon Tropika akan terbentuk di perairan Laut China Selatan.

Ia dikatakan bergerak ke daratan Pantai Timur Semenanjung Malaysia pada 1 hingga 4 Januari ini.

Mesej yang tular itu juga menyatakan daerah Tumpat dikatakan akan menerima hentaman terus Siklon Tropika termasuk Kota Bharu dan Selatan Thailand.



Tular Ribut Siklon Tropika yang dikatakan akan menghentam Kelantan pada 1 hingga 4 Januari ini.

Amaran angin kencang

Dijangka berlaku di Kelantan, Terengganu, Pahang, Sarawak dan Sabah Barat

AZLIDA ALIMIN

KOTA BHARU

Jabatan Meteorologi Malaysia mengeluarkan amaran angin kencang dan laut bergelora di perairan Pantai Timur sehingga Khamis ini.

Pengarah Jabatan Meteorologi Kelantan, Rabiah Zakaria berkata, angin kencang Timur Laut berkelajuan 40 hingga 50 kilometer sejam (kmsj) dengan ombak mencapai ketinggian sehingga 3.5

meter.

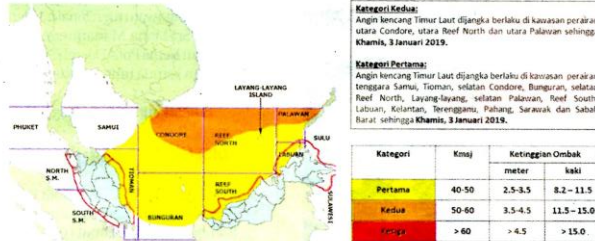
Menurutnya, ia dijangka berlaku di kawasan perairan Kelantan, Terengganu, Pahang, Sarawak dan Sabah Barat.

"Keadaan ini berbahaya kepada semua aktiviti perkapalan dan pantai bot-bot kecil serta rekreasi laut," katanya.

Sementara itu, Amaran Cuaca Waspada yang dikeluarkan jam 5.30 petang pada 28 Disember lalu meramalkan hujan lebat akan berlaku di Kelantan dan Terengganu mulai hari ini dan esok.

Antara kawasan dijangka berlaku hujan lebat di Kelantan ialah di Kota Bharu, Pasir Mas, Machang, Pasir Puteh, Kuala Krai, Tumpat, Bachok dan Jeli.

Jabatan itu turut mengeluarkan amaran angin kencang dan laut bergelora kategori



Jabatan Meteorologi Malaysia mengeluarkan amaran angin kencang dan laut bergelora di perairan Pantai Timur sehingga Khamis ini.

gori kedua untuk perkapalan di kawasan perairan utara Condore, utara Reef North dan utara Palawan.

Angin kencang Timur

Laut dijangka berlaku dengan kelajuan 50 hingga 60 kmsj, manakala ombak boleh mencapai ketinggian sehingga 4.5 meter.

Keadaan angin kencang dan laut bergelora itu berbahaya kepada semua aktiviti perkapalan dan pantai termasuk menangkap ikan serta

info

Angin kencang Timur Laut berkelajuan 40 hingga 50 kilometer sejam, ombak capai ketinggian sehingga 3.5 meter

perkhidmatan feri.

Amaran angin kencang dan laut bergelora kategori pertama turut dikeluarkan di kawasan perairan tenggara Samui, Tioman, selatan Condore, Banguran, selatan Reef North, Layang-Layang, Reef South, selatan Palawan dan Labuan, bagi tempoh yang sama.

Dijangka berlaku angin kencang Timur Laut dengan kelajuan 40 hingga 50 kmsj, manakala ombak dengan ketinggian sehingga 3.5 meter.

LAMPIRAN 5
KOSMO (NEGARA): MUKA SURAT 6
TARIKH: 31 DISEMBER 2018 (ISNIN)

Inisiatif didik pelanggan kawal penggunaan elektrik

Oleh NURULASYIKIN
TUAN MUSTAPHA



KUALA LUMPUR – Bermula 1 Mac 2019 pelanggan komersial atau industri akan mengalami caj tarif elektrik lebih tinggi iaitu 2.55 sen setiap kilowatt jam (kWh) berbanding 1.35 sen kWh pada masa ini.

Suruhanjaya Tenaga (EC) yang bertindak sebagai pengawal selia tenaga mengeluarkan kenyataan bahawa kenaikan caj tersebut disebabkan oleh peningkatan dalam purata harga arang batu kepada RM408.33 per tan, berbanding ramalan harga arang batu RM313.02 per tan yang ditetapkan sewaktu tarif asas untuk Tempoh Pengawasan Kedua dari 2018 hingga 2020.

“Oleh itu, kerajaan akan melaksanakan mekanisme Kos Pelepasan Tidak Simbang (ICPT) pada setengah tahun pertama 2019 untuk mengimbangi peningkatan kos.

“Namun, pelanggan kemudian tidak akan mengalami sebarang perubahan terhadap kadar mereka dan akan dicaj pada kadar semasa sehingga 30 Jun 2019,” ujar kenyataan tersebut.

Menurut kenyataan tersebut lagi, kerajaan meluluskan bayaran tambahan berjumlah RM308 juta dibiayai oleh Dana

Industri Elektrik yang akan disalurkan melalui mekanisme ICPT untuk pelanggan kemudian bagi mengurangkan beban kos RM1.82 bilion.

“Separuh daripada penajaan kuasa datang daripada arang batu yang diimport sementara gas asli dikawal selia dan bergerak ke arah harga pasaran,” katanya.

Selain itu, kenyataan EC juga menjelaskan, surcuj ICPT RM948 juta kepada pelanggan bukan isi rumah akan diteruskan melalui pelaksanaan ICPT berperingkat-peringkat bermula 1 Mac 2019.

“Sebanyak RM564 juta akan dibiayai oleh simpanan daripada kos dan pelarasan pendapatan Tenaga Nasional Bhd. (TNB) untuk tahun 2018,” katanya.

Menurut EC, ICPT adalah mekanisme di bawah rangka kerja Pelaksanaan Kawal Selia Berasaskan Insentif (IBR) yang dilaksanakan pada 1 Januari 2014.

“Ia membenarkan perubahan sama ada peningkatan atau pengurangan dalam kos bahan api dan berkaitan penajaan lain dalam tarif elektrik setiap enam bulan seperti diperuntuk-



BEBERAPA pekerja Unit Talian Hayat (UTH) TNB melakukan kerja-kerja menukar penebat porselin di talian penghantaran menara setinggi kira-kira 30 meter yang menghubungkan Pelabuhan Klang ke Bukit Raja, Selangor.

kan di bawah Seksyen 26 Akta Bekalan Elektrik (Pindaan) 2015,” jelas kenyataan itu.

Sementara itu, kenyataan EC itu juga menyatakan bahawa pelanggan boleh merancang kewangan dengan ICPT dan bil kalkulator yang boleh diakses di www.myelectricitybill.my untuk meramalkan bil elektrik bulanan dari Januari 2019 hingga Disember 2020.

Dalam pada itu, TNB melalui Laporan Tenaga Isirumah (HER)

mendidik pelanggan mengenai penggunaan tenaga supaya mereka boleh membuat pilihan berdasarkan penjimatan kos dan mengawal bil tenaga mereka.

HER merupakan inisiatif antara TNB dan Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim pada Julai 2015 bertujuan untuk mewujudkan kesedaran kepada orang ramai mengenai kecekapan penggunaan tenaga. Seorang pelanggan yang

tidak disebutkan namanya ketika ditanya mengenai kegunaan HER berkata, HER membantu dirinya untuk melihat tempoh tertentu ketika penggunaan elektriknya naik atau turun.

“Inisiatif tersebut baik kepada TNB dan agensi berkaitan yang terabit dalam penggunaan tenaga kerana mereka memberi pencerahan kepada pelanggan mengenai cara untuk menampung kos bahan api yang meningkat,” katanya.

Pencerahan atasi kenaikan kos bahan api elektrik

➔ TNB nasihat pelanggan nilai semula pola penggunaan, elak membazir

► Kuala Lumpur

Kita biasanya tidak dapat lepas daripada kuasa pasaran. Suruhanjaya Tenaga (EC) yang bertindak sebagai pengawal selia tenaga di Semenanjung dan Sabah, baru-baru ini mengumumkan kerajaan terus melaksanakan mekanisme Kos Pelepasan Tidak Simbang (ICPT) pada setengah tahun pertama 2019 untuk mengimbangi peningkatan kos.

Jelas EC, terdapat kenaikan kos bahan api dan penjana elektrik lain pada setengah tahun kedua 2018 berjumlah RM1.82 bilion.

Sepuluh penjana kuasa di Semenanjung datang daripada arang batu yang diimport sementara gas asli yang dikawal selia dan bergerak ke arah harga pasaran, menyumbang lebih 40 peratus.

ICPT adalah mekanisme di bawah rangka kerja Pelaksanaan Kawal Selia Berasaskan Insentif (IBR) dilaksanakan 1 Januari 2014 yang membenarkan perubahan (sama ada peningkatan atau pengurangan) dalam kos bahan api dan kos berkaitan penjana lain, yang diserahkan dalam tarif elektrik setiap enam bulan seperti diperuntukkan Seksyen 26 Akta Bekalan Elektrik (Pindaan) 2015.

Secara asasnya, ia mekanisme diluluskan kerajaan dan dilaksanakan EC sejak 1 Januari 2014 sebagai sebahagian pembaharuan pengawalseliaan lebih luas di bawah IBR.

Menurut EC, kos penjana tam-

bahan atau kos tidak seimbang RM1.82 bilion untuk Julai hingga Disember 2018 disebabkan peningkatan dalam purata harga arang batu kepada AS\$97.835 satu tan, berbanding ramalan harga AS\$75 satu tan yang ditetapkan ketika tarif asas untuk Tempoh Pengawalseliaan Kedua (RP2) dari 2018 hingga 2020.

Pelanggan kediaman tidak akan mengalami perubahan terhadap kadar mereka dan dicaj pada kadar semasa sehingga 30 Jun 2019. Pelanggan komersial atau industri akan mengalami caj lebih tinggi pada 2.55 sen/kilowatt jam (kWh) dari 1 Mac 2019 ke atas daripada 1.35 sen/kWh pada masa ini untuk membolehkan notis mencukupi disampaikan selain menyediakan tempoh peralihan mencukupi.

Bayaran tambahan RM1.82b

EC juga mendedahkan bagi mengurangkan beban kos RM1.82 bilion yang akan disalurkan kepada pelanggan melalui mekanisme ICPT, kerajaan meluluskan bayaran tambahan untuk pelanggan

kediaman RM308 juta, yang akan dibiayai daripada Dana Industri Elektrik (KWIE).

Sebaliknya, surcay ICPT RM948 juta kepada pelanggan bukan isi rumah diteruskan melalui pelaksanaan ICPT berperingkat hanya dari 1 Mac 2019. Sebahagian surcay ini, RM564 juta, akan dibiayai menerusi simpanan daripada kos dan pelarasan pendapatan TNB untuk 2018, yang dipersetujui ketika penetapan tarif asas dalam RP2 di bawah rangka kerja IBR.

Berdasarkan pola peningkatan kos bahan api untuk penjana elektrik, tidak dapat dielakkan kedua-dua pengeluaran tenaga dan pengguna di negara ini perlu menerima perkara kurang enak ini dan bersedia kemungkinan kos lebih tinggi dan akibatnya, pelarasan tarif yang lebih besar.

Bagi pelanggan, mereka boleh merancang kewangan dengan ICPT dan bil kalkulator yang boleh diakses di www.myelectricitybill.my. Kalkulator itu membantu mereka meramalkan bil elektrik bulanan dari Januari 2019 hingga

Disember 2020.

Pelanggan juga dinasihatkan menilai semula pola penggunaan dan mencari jalan mengurangkan penggunaan tenaga yang tidak perlu dan pembaziran.

Apabila seseorang merenung penggunaan kuasa, ada beberapa cara untuk mengurangkan peralatan lebih cekap. Sumber rujukan terbaik adalah laman web TNB, yang menyediakan petua berguna menjimatkan elektrik.

Tingkat kepuasan pengguna

Sebagai tambahan, TNB melalui Laporan Tenaga Isi Rumah (HER) mendidik pelanggan mengenai penggunaan tenaga supaya mereka boleh membuat pilihan berdasarkan penjimatan kos dan mengawal bil tenaga.

HER juga bertujuan meningkatkan kepuasan pelanggan, mewujudkan kesedaran kepada orang ramai mengenai kecekapan tenaga dan memenuhi matlamat kecekapan tenaga negara.

HER adalah inisiatif antara TNB

dan Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim (MESTECC) yang dimulakan pada Julai 2015.

Ketika program perintis HER selama setahun yang berakhir pada Jun 2016 dan membabitkan 200,000 pelanggan di Melaka, Putrajaya dan Lembah Klang, 13,979 kWh dijimatkan. Ini bersamaan dengan mengeluarkan 1,500 kereta dari jalan raya selama setahun.

HER yang dihantar secara berkala kepada pengguna, membuat perbandingan realistik terhadap 100 rumah yang sama atau berdekatan. Purata 100 rumah ini menunjukkan penggunaan biasa di kawasan tertentu. Oleh itu, penggunaan tenaga pelanggan terpilih dibandingkan dengan corak penggunaan sekumpulan kira-kira 100 rumah yang sama di kawasan yang sama dari segi saiznya.

Pemeriksaan dengan pelanggan yang menerima HER bersetuju ia sangat membimbangkan kerana perbandingan dibuat terhadap rumah jiran. Ia terutama apabila bil tenaga meningkat mendadak.

Seorang pelanggan, ketika ditanya kegunaan laporan itu, berkata ia membantunya untuk melihat tempoh tertentu ketika penggunaan elektriknya naik atau turun.

Seorang pelanggan lain mengatakan berlaku pengurangan yang ketara dalam bilnya apabila menukar peti sejuk baru dan kenai-kan berlaku apabila saudara maranya bertandang selama dua minggu sewaktu cuti sekolah!

"HER berguna kerana ia mengingatkan kita mengenai pola penggunaan selain membandingkan dengan pengguna lain di kejiranan saya," katanya.

Inisiatif ini adalah baik kepada TNB dan agensi berkaitan yang terabit dalam penggunaan tenaga kerana mereka memberi pencerahan kepada pelanggan mengenai cara menampung kos bahan api yang meningkat. **BERNAMA**

5 PERKARA YANG PERLU ANDA TAHU

➔ Pelanggan kediaman akan dicaj pada kadar semasa sehingga 30 Jun 2019.

➔ Pelanggan komersial atau industri akan mengalami caj tinggi iaitu 2.55 sen/kilowatt jam (kWh) bermula 1 Mac 2019.

➔ Surcay ICPT RM948 juta kepada pelanggan bukan isi rumah akan diteruskan melalui pelaksanaan ICPT pada 1 Mac 2019.

➔ Rancang kewangan dengan ICPT dan bil kalkulator yang diakses di www.myelectricitybill.my. Kalkulator itu akan meramalkan bil elektrik bulanan dari Januari 2019 hingga Disember 2020.

➔ Pelanggan juga dinasihatkan menilai semula pola dan mencari jalan mengurangkan penggunaan tenaga yang tidak perlu dan pembaziran.



Pelanggan boleh merancang kewangan dengan ICPT dan bil kalkulator yang boleh diakses di www.myelectricitybill.my. Kalkulator itu membantu mereka meramalkan bil elektrik bulanan dari Januari 2019 hingga Disember 2020"

Suruhanjaya Tenaga



GRAFIK BH

30 kenderaan tersadai selepas isi minyak

➡ PDB sahkan ada kebocoran menyebabkan bahan api bercampur air

Oleh Hasbi Sidek,
Hafidzul Hilmi Mohd
Noor dan Teoh Pei Ying
cnews@nstp.com.my

► Serdang

Kira-kira 30 kenderaan tersadai berhampiran Kilometer 7, dekat Lebuhraya Sungai Besi, dekat sini, selepas mengisi minyak di Stesen Minyak PETRONAS Solaris, di lebuhraya itu.

Dalam kejadian kira-kira jam 7 pagi semalam, 20 kereta dan enam motosikal difahamkan mengalami masalah enjin dan mati secara mendadak.

Kejadian itu turut tersebar luas di laman sosial, yang mendakwa tangki simpanan petrol di stesen minyak itu sudah bercampur dengan diesel, malah ada juga yang mendakwa ia dimasuki air.

PETRONAS Dagangan Berhad (PDB) dalam satu kenyataan mengesahkan terdapat kebocoran di satu tangki di stesen minyak itu menyebabkan bahan api itu bercampur dengan air.

Mohon maaf

PDB dalam satu kenyataan berkata, siasatan mendapati kebocoran itu mencemarkan bahan api dengan air di dalam tangki berkenaan.

"Tindakan pemulihan segera sudah dijalankan untuk mengeluarkan bahan api yang tercemar dan mengasingkan tangki yang terjejas.

"Pihak PDB juga sudah menghubungi dan membantu semua pelanggan, yang terjejas dari kejadian itu," katanya.

Menurut kenyataan itu, stesen minyak itu juga sudah beroperasi seperti biasa selepas siasatan dan ujian integriti bahan api dijalankan

di semua pam di stesen itu dijalankan.

"Pasukan kami akan kekal berada di stesen pada hari ini (semalam) dan esok (hari ini) untuk bantuan lanjut jika perlu," katanya sambil memohon maaf atas kesulitan yang berlaku.

Terdahulu, Kementerian Perdagangan Dalam Negeri Hal Ehwal Pengguna (KPDNHEP) Selangor berkata, pihaknya akan menghantar sampel petrol daripada stesen minyak itu kepada Jabatan Kimia untuk siasatan.

Ketua Pegawai Penguatkuasa Negeri, Azman Adam, berkata ia bagi memastikan petrol yang dijual di stesen terbabit menepati ciri petrol yang sebenar tanpa sebarang campuran bahan lain seperti diesel dan air.

"Kami menghantar pasukan ke stesen minyak berkenaan selepas mendapat berita tular pagi tadi (semalam). Ini tindakan awal kami dan pihak stesen minyak juga memberi kerjasama yang baik," katanya ketika ditemui di stesen minyak berkenaan, tengah hari semalam.

[FOTO ROSDAN WAHID / BH]



Pegawai KPDNHEP bersama pihak pengurusan meninjau Stesen Minyak PETRONAS Solaris dekat Lebuhraya Sungai Besi di Serdang, semalam.

LAMPIRAN 8
KOSMO (TEMPATAN): MUKA SURAT 21
TARIKH: 31 DISEMBER 2018 (ISNIN)

Polemik sisa plastik

ISU pencemaran sisa plastik menjadi polemik pada tahun ini. Ia ekoran pembongkaran kes-kes berkaitan pada September lalu terutamanya apabila dilaporkan hampir 300,000 penduduk di sekitar daerah Kuala Langat, Selangor terpaksa menanggung derita menghirup udara tercemar setiap hari apabila daerah itu dijadikan tempat ahli-ahli perniagaan tidak bertanggungjawab melonggokkan beribu-ribu tan sisa pepejal plastik yang diimport ke Selangor dari seluruh dunia.

Rentetan daripada itu, Kementerian Perumahan dan Kerajaan Tempatan (KPKT) mengarahkan pihak berkuasa tempatan (PBT) segera menghentikan semua operasi kilang memproses sisa barang plastik di sekitar Kuala Langat, Selangor.

Seterusnya, KPKT menghentikan pengeluaran permit import (AP) sisa plastik kepada 114 syarikat dan kilang di seluruh negara bagi tempoh tiga bulan.

Tidak berhenti begitu sahaja, kerajaan juga mengambil langkah drastik pada 27 Oktober lalu apabila mengambil keputusan muktamad menghentikan sepenuhnya pengeluaran permit import (AP) bagi sampah plastik.

Dalam pada itu juga, Majlis Daerah Kuala Langat (MDKL) menutup lapan buah kilang kitar semula plastik haram yang terletak di Banting, Jenjarom dan Teluk Panglima Garang serta menyita berjuta-juta tan timbunan sisa pepejal yang diimport dari seluruh dunia.



SEORANG anggota penguat kuasa memeriksa keadaan sebuah kilang kitar semula yang dipenuhi timbunan sampah di Jenjarom, Kuala Langat, Selangor.



MENTERI Perumahan dan Kerajaan Tempatan, Zuraida Kamaruddin meninjau kilang sisa plastik di Kuala Langat, Selangor pada September lalu.

LAMPIRAN 9
NEW STRAITS TIMES (BOTS/ HIGH ITES): MUKA SURAT 44
TARIKH: 31 DISEMBER 2018 (ISNIN)



COMPANION ROBOT ←

JAPANESE startup Groove X, founded by an alumni of SoftBank Group Corp's robotics unit, unveiled its first creation — a companion robot designed to make users happy.

The Lovot, an amalgam of "love" and "robot", cannot help with the housework but it will "draw out your ability to love", Groove X founder and CEO Kaname Hayashi told reporters at the launch in Tokyo.

Using artificial intelligence (AI) to interact with its surroundings, the wheeled machine resembles a penguin with cartoonish human eyes, has interchangeable outfits and communicates in squeaks.

Reuters

LAMPIRAN 10
THE STAR (TECHNOLOGY): MUKA SURAT 5
TARIKH: 31 DISEMBER 2018 (ISNIN)

A robot that exists just to be loved

WHILE most intelligent robots created nowadays are designed to help people accomplish tasks, Groove X's Lovot exists just to spread love and affection and make you feel special. In fact, the company explicitly outlined that this "is not a useful robot that will do tasks for human beings".

Instead, its Emotional Robots technology, touch sensors, and six-layer puppy-dog eye displays have the sole purpose to give owners, "a warm feeling inside".

Lovot will beg for your attention and get to know you specifically; in fact, the fuzzy little bot will even follow you around and shy away from strangers. Its character is

(allegedly) purely innocent and its gestures charming. Surely this kind of personality will "nurture people's 'capacity to love'", seems to be the Groove X line of thought. The company detailed just how it will accomplish this on the dedicated Lovot site.

The antenna atop Lovot's head is equipped with a luminosity sensor, 360° half-sphere camera and microphone, and a thermal camera, all of which work together to make sure Lovot understands its surroundings and can find you in a second.

Over 50 sensors all over the bot's body help its "brain" decide what to do next and decide quickly. Its

behaviour changes depending on the owner's interaction with it.

Its eyes project typical and natural-looking eye behaviour as a result of six-layer light displays. When you look at this little guy, it looks back, but thanks to its blinking and enlarged pupils, it's not strange but rather endearing.

If you tickle its body, it laughs; if you pet its fuzzy fabric, it shows contentment; if you sneak up on it, Lovot will be startled or turn for more attention.

Pre-order has started in Japan but Lovots can only be bought in pairs for 598,000 yen (RM22,400) and will start shipping next year. — AFP Relaxnews



Lovot will beg for your attention and follow you around but will shy away from strangers.

JAPANESE company Groove X recently officially introduced its new creation to the world, Lovot, a companion robot designed only to warm your heart.

While most intelligent robots created nowadays are designed to help people accomplish tasks, Groove X's Lovot exists just to spread love and affection and make you feel special, says Groove X CEO Kaname Hayashi at the launch in Tokyo.

In fact, the company explicitly outlined that this "is not a useful robot that will do tasks for human beings". Instead, its Emotional Robots technology, touch sensors, and six-layer puppy-dog eye displays have the sole purpose to give owners, "a warm feeling inside".

Lovot (*right*) will beg for your attention and get to know you specifically; in fact, the fuzzy little bot will even follow you around and shy away from strangers.

Its character is (allegedly) purely innocent and its gestures charming – the kind of personality which will surely "nurture people's capacity to love," according to Groove X.

The company detailed just how the bot will accomplish this on the dedicated Lovot site.

The antenna atop Lovot's head is equipped with a luminosity sensor, 360° half-sphere camera and microphone, and a thermal camera, all of which work together to make sure Lovot understands its surroundings and can find you in a second.

Over 50 sensors all over the bot's body help its 'brain' decide what to do next and decide quickly. Its behaviour changes depending on the owner's interaction with it.

Its eyes project typical and natural-looking eye behaviour as a result of six-layer light displays.

Made strictly for love

➤ A Japanese company has come out with a companion robot that is created not to perform tasks but only to warm your heart



When you look at this little guy, it looks back, but thanks to its blinking and enlarged pupils, it's not strange but rather endearing.

If you tickle its body, it laughs; if you pet its fuzzy fabric, it shows contentment; if you sneak up on it, Lovot will be startled or turn for more attention.

As if these weren't already cute

enough, you can dress your Lovot up like you. Not only can you match a tiny hoodie to your own, but you can also give your bot glasses or other accessories that you sport day to day.

This comes after you select the colours of the robot's body and face.

Pre-ordering has opened for this cutie, but just the reservation will

put you back ¥20,000 (RM750).

Right now, you can only order Lovots in pairs for ¥598,000 (RM22,430) which will start shipping in autumn 2019.

Later in 2020, shipments of individual Lovots will become available, starting at ¥349,000 (RM13,091). – AFP-Relaxnews





ZAKRI ABDUL
HAMID

VULNERABLE

CLIMATE CHANGE AND HUMAN HEALTH

Study shows public health structure in many cities across the globe will be seriously compromised by climate change

THE 24th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) — the most important climate conference since the conclusion of the Paris Climate Agreement in 2015 — ended on Dec 15 with the adoption of the Katowice Rulebook.

Though it is one further step forward, action to confront global warming is still wanting. Most countries' current climate targets will not be enough to limit global warming to significantly under 2°C and ideally to 1.5°C. Without further efforts, the global temperature could increase by over 3°C by 2100. The foreseeable effects of climate change would pose too great a challenge for many countries.

Late last month, international researchers under the ambit of The Lancet Countdown on Health and Climate Change sent a chilling warning to the world: climate change is affecting our health. More people than ever are vulnerable to heat exposure globally, and numbers are rising.

The report analyses 41 indicators tracking the link between climate change and health. And while the authors noted "a lot of variability year on year", the evident trend suggests we should expect heat wave events to spike higher.

We're starting to feel this already. This summer marked a

record in many parts of the world, with much higher temperatures than most populations are used to.

The latest report estimates that 42 per cent of over-65s in Europe and 43 per cent in the Eastern Mediterranean are already vulnerable to heat exposure; 38 per cent of this group are vulnerable in Africa and 34 per cent in Asia.

Dr Nick Watts, executive director of the Lancet project, highlighted a recent study suggesting that 2018 heat waves across Europe were made twice as likely as a result of climate change.

"Assigning attribution for every single event is difficult, but it's clear that these sorts of events are examples of what is likely to come if we don't rapidly respond to climate change," he said.

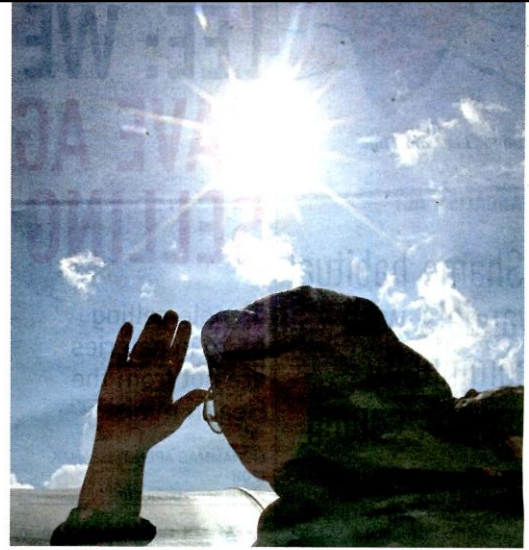
Small changes in temperature and rainfall will not only lower productivity and crop yields, it will impact health by helping to spread infectious diseases. For example, the capacity of the dengue virus to spread has increased by 7.8 per cent since the 1950s, the report found.

The seasonal capacity for the Aedes mosquito — the primary species spreading Zika, dengue and chikungunya — and its ability to spread has lengthened and strengthened, the report says.

2016 set a new record for dengue transmission, and the spread is expected to rise in step with average global temperatures.

Levels of global cholera bacteria are also worrying. From the 1980s to the 2010s, the US witnessed a 27 per cent increase in coastline areas suitable for Vibrio infections.

The report shows half of 478 global cities surveyed stated that their public health structure will be seriously compromised by climate change. The health threats



Constant exposure to hot weather can have a serious effect on people's health.

are expected to overwhelm services and extreme weather events pose a direct threat to health services.

Global spending on climate adaptation for health is at 4.8 per cent — too little, the researchers say, noting that Europe and Southeast Asia are the biggest spenders.

In a 2015 assessment by the World Health Organisation (WHO) and the UNFCCC, Malaysia was said to face numerous potential threats to health and development due to climate change. Among the futures foreseen by the assessment:

IF high emissions continue, mean annual temperature rises by about 4°C on average from 1990 to 2100. If emissions decrease rapidly, temperature rise is limited to about 1.1°C.

IF high emissions continue, and without large investments in adaptation, an annual average of 234,500 Malaysians are projected to be affected by flooding due to sea level rise between 2070 and 2100. If emissions decrease rapidly and there is a major scale up in protection (i.e. continued construction/raising of dikes) the annual affected population could be almost eliminated. Adaptation alone will not offer sufficient protection, as sea level rise is a long-term process, with high emissions scenarios bringing increasing impacts well beyond the end of the century.

IF high emissions continue, heat-related deaths among the

elderly (65+ years) are projected to increase to almost 45 deaths per 100,000 by 2080 compared to the estimated baseline of under one death per 100,000 annually between 1961 and 1990. A rapid reduction in emissions could limit heat-related deaths in the elderly to just over six deaths per 100,000 in 2080.

The WHO/UNFCCC assessment notes some opportunities for action. The country should continue refining its National Policy on Climate Change which incorporates health perspectives. Malaysia is implementing projects on health adaptation to climate change, building institutional and technical capacities to work on climate change and health, and has conducted a national assessment of climate change impacts, vulnerability and adaptation for health.

It is very obvious that climate change is a multi-faceted issue which needs the attention of many sectors of government. The close collaboration between the Ministry of Energy, Science, Technology, Environment and Climate Change and the Ministry of Health is imperative. Additionally, the inputs of climate scientists, health practitioners, the private sector and civil society could strengthen our national efforts to mitigate the impacts of climate change on human health.

The writer is former director of the United Nations University's Institute of Advanced Studies in Tokyo

6 Climate change is a multi-faceted issue which needs the attention of many sectors of government.



Kenaikan ICPT tidak sesuai

Oleh **SHAHIZAM TAZALI**
ekonomi@utusan.com.my

■ KUALA LUMPUR 30 DIS.

PEMAIN industri di Malaysia pasti terkesan dengan keputusan kerajaan menaikkan Ketidakeimbangan Pelepasan Kos Bahan Api (ICPT) daripada 1.35 sen/kWh kepada 2.55 sen/kWh bermula 1 Mac depan.

Elektrik merupakan utiliti asas penting di samping menjadi antara kos terbesar selepas bahan mentah. Perniagaan yang berintensifkan mesin dan teknologi robot dalam proses pengeluaran merupakan antara yang paling teruk terjejas.

Ada yang menganggap kenaikan ICPT pada ketika ini sebagai terlalu membebankan kerana terpaksa berhadapan dengan persekitaran ekonomi yang dijangka perlahan pada 2019

ditambah pula sentimen perang dagangan antara Amerika Syarikat (AS) dan China.

Menurut Persekutuan Industri Besi dan Keluli Malaysia (MISIF), industri besi dan keluli mengalami peningkatan kos pengeluaran daripada RM855 juta kepada RM1 bilion apabila ICPT berkuat kuasa. Kenaikan itu juga mendorong peningkatan kos pengeluaran sekali gus menjajaskan peserta industri tempatan.

Jelas MISIF, kebanyakan pemain industri kini hanya memikirkan kelangsungan perniagaan mereka berikutan margin keuntungan tertakluk kepada ketidakpastian perdagangan komoditi antarabangsa.

"Kami mahu kenaikan



AHMED RAZMAN

"Rekod prestasi kewangan Tenaga Nasional Berhad (TNB) masih mampu mendapat keuntungan berbilion ringgit setiap tahun. Sekiranya tiada alasan yang kukuh sewajarnya ia ditangguhkan dan jika tidak boleh sekurang-kurangnya kaji semula kadar kenaikan tersebut."

DR. AHMED RAZMAN ABDUL LATIFF

kadar elektrik yang berterusan dihentikan serta menghapuskan sistem legap dan berat sebelah yang hanya menguntungkan syarikat utiliti.

TNB seharusnya melihat bagaimana untuk mengimbangi antara penjanaan elektrik dan struktur tarif yang berkesan supaya dapat membantu pertumbuhan industri," katanya.

Melihat kepada situasi itu, Pengurus Pembangunan Perniagaan Putra Business School (PBS), Prof. Madya Dr. Ahmed

Secara asasnya, komponen elektrik terdiri daripada elemen tetap dan berubah dengan faktor berubah dipengaruhi oleh permintaan dunia terhadap arang batu dan gas, turun naik ringgit dan rasionalisasi subsidi gas. Naik turun faktor-faktor itu menyebabkan kos untuk menjana elektrik menjadi mahal.

Menurut Ahmed Razman, industri seharusnya mengambil kira pelbagai faktor apabila membuat perancangan strategik dan hala tuju syarikat.

"Dengan meningkatkan kecekapan sekali gus mengurangkan kos pembuatan dan industri mampu untuk berdaya saing walaupun berlakunya kenaikan ICPT," katanya kepada *Utusan Malaysia* di sini baru-baru ini.

Mengenai kenaikan ICPT di tengah-tengah kelembapan ekonomi, Ahmed Razman berkata, kerajaan sepatutnya menjelaskan mengapa kenaikan itu dilaksanakan sekarang.

Razman Abdul Latiff berkata, langkah terbaik yang boleh dilakukan oleh industri adalah dengan memfokuskan kepada penjimatan kos yang lebih cekap di samping rasionalisasi aset.

Kata beliau, syarikat harus mengenal pasti aset-aset yang menyumbang kepada pendapatan dan yang tidak memberi sebarang pulangan serta mempelbagaikan produk yang mempunyai nilai tambah agar punca pendapatan tidak datang daripada satu sumber sahaja.

LAMPIRAN 14
THE STAR (EMBRACING CHANGE): MUKA SURAT 9
TARIKH: 30 DISEMBER 2018 (AHAD)

IN efforts to reduce plastic waste in the environment, the Government announced the Roadmap Towards Zero Single-use Plastics 2018-2030 in October. Under the plan, there will be no more drinking straws and plastic carrier bags by 2030, with local councils imposing a "pollution charge" and a "no straw by default" policy. These measures will be introduced from next year until 2021 as part of Phase One of the road map.

A pollution charge would be imposed on plastic carrier bags via the local councils for hypermarkets, big retailers, and chain stores and restaurants. Phase Two of the plan, which will take place between 2022 and 2025, will see more widespread use of biodegradable bags.



Towards plastic-free

Higher debt, palatable gearing

By CECILIA KOK
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DEBT is an essential part of any business. All companies should have some amount of debt to help finance its growth and investments for the longer term. It is an efficient way of managing the balance sheet. But taking on too much debt can restrict a company's operational flexibility, and increase its risk of financial problems in a challenging economic environment.

So, there is only a fine balance between what is regarded as "healthy" and "dangerous" debt level and it varies across businesses and industries.

A research on 309 companies (excluding financial institutions) listed on Bursa Malaysia shows 188 firms in a net debt position as at end-September 2018.

In total, net debt increased 10.2% to RM286.3bil from a year ago.

Companies under Khazanah Nasional had accumulated the highest amount of net debt at RM54.7bil as of end-September 2018.

That represents an increase of RM5.5bil, or 11%, from a year ago.

The increase in the absolute debt of the companies under the sovereign wealth fund is largely driven by higher borrowings by Tenaga Nasional Bhd (TNB), Telekom Malaysia Bhd, UEM Sunrise Bhd and

IHH Healthcare Bhd. However gearing for all the companies remain at healthy levels.

As of end-September, TNB's debt stood at RM26.7bil, given the capital intensive nature and demands for funding power stations. In the last one year alone, the national utility firm had taken an additional debt of RM5.1bil.

It is the same for Tan Sri Francis Yeoh-controlled YTL Corp Bhd. The construction and infrastructure outfit had total net debt of RM27.2bil as of end-September, up 5% from RM25.8bil a year ago.

Much of the debt came from its ownership of controlling stakes in other companies within the group,

particularly YTL Power International Bhd, which like TNB is into a business that is capital intensive.

Similarly for companies controlled by Tan Sri Syed Mokhtar Al-Bukhary, through his private vehicles Seaport Terminal (Johore) Sdn Bhd and Etika Strategi Sdn Bhd, it is power company Malakoff Corp Bhd that had the biggest debt exposure, albeit at a lower level compared with a year ago.

The debt at YTL Power and Malakoff is a given considering that both companies are independent power producers (IPPs) and the

> TURN TO PAGE 16

Analyst: Power producers likely to take on debt

> FROM PAGE 13

nature of their business is capital-intensive. As such, they tend to maximise their borrowing capacity, and depend on their cash flow from their concession assets to support operations and growth.

"Power producers tend to stretch and maximise their balance sheet as cashflow is predictable. That is why companies such as TNB, YTL Power and Malakoff take on debt to optimise the capital structure," says an analyst

For companies in Permodalan Nasional Bhd's (PNB) stable, net debt had increased RM4.4bil, or 26%, to RM21.6bil.

Within PNB-controlled companies, both SP Setia Bhd and Sime Darby Property Bhd are set to see balance sheet improve after selling the phase two commercial assets of the Battersea Power Station in London to the Employees Provident Fund (EPF) and PNB for £1.58bil (RM8.4bil).

Positively for Ananda Krishnan, the balance sheet position of the companies he controls via Usaha Tegas Sdn Bhd has improved, with Bumi Armada Bhd, Maxis Bhd and Astro Malaysia Holdings Bhd seeing net debt collectively reduced by RM1.2bil, or 6%, to RM19.3bil.

The bulk of group's debt is in Bumi Armada, which needs big money to fund its

floating production storage and offloading operations, and Maxis, which needs investment to maintain and grow its cellular network business.

Notably, Top Glove Bhd recorded one of the highest percentage increase in absolute debt, flipping from a net cash position of RM80mil as at end September last year to a net debt position of RM1.8bil due to the financing of its recent acquisition of surgical glove maker Aspion Sdn Bhd.

Of concern, is the vulnerability of highly-indebted companies in the construction sector, as the economy slows down, which implies fewer jobs, and mega projects either get cancelled or postponed under the Pakatan Harapan-led government.

Among the construction companies with a gearing of more than 100% as of end-September are Zelan Bhd, WCT Holdings Bhd, WCE Holdings Bhd and Eversendai Corp Bhd.

Meanwhile, Malaysian Resources Corp Bhd's gearing is to reduce significantly in the current quarter after it received RM1.3bil from the government in settlement for the Eastern Dispersal Link and RM1.1bil from the EPF for the sale of its 80% stake in Bukit Jalil Sentral Property Sdn Bhd.

The company said current debt levels stand at RM1.48bil with a net gearing ratio of 0.24 times.



Predictable cashflow: Companies, including TNB, take on debt to optimise the capital structure. — Bernama

THE HIVE

WEBSITE: <https://thehivebulkfoods.com/>

FACEBOOK: <https://www.facebook.com/thehivebulkfoods/>

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LOW WASTE TIPS FOR THE HOLIDAY SEASON

1 When visiting people during the festive season, you may want to bring a customary gift for the host. If it's something like a box of chocolates or a bottle of bubbly, just forgo the wrapping and pretty ribbons. Quality food and beverage don't need such frills anyway.

2 Christmas presents don't always have to mean physical gifts. The gift of an experience can be delightful and memorable, such as a concert ticket, a theatre performance, a soothing massage, a haircare session, a fun workshop, a fitness class, a cooking class, etc.

3 If you're going to give a physical gift, consider pre-loved or second hand items like books or decor, especially when it comes to presents for children who outgrow toys and apparel quickly. Sancelot suggests checking out news on social media to find buy and sell events, swaps or similar offerings.

4 So much gift paper, ribbons and bows get thrown away each Christmas. Sancelot's zero-waste solution is to practise the Japanese wrapping tradition of 'furoshiki'. These pretty and colourful wrapping cloths can be a gift in itself and make a reusable eco-friendly alternative to expensive and short-lived gift paper. They're available at The Hive. Alternatively, ask your mum or aunties if they have any unwanted or spare fabric.

5 When shopping for festive meals, avoid wastage by planning ahead and buying what you need, instead of excess amounts, not forgetting to bring all your shopping bags. If you're taking away food from a restaurant, bring your own containers to pack the food. Go for quality over quantity.

RENEWABLE ENERGY

Tioman to get 15pc of electricity from RE

KUALA LUMPUR: Tioman, located 32km off the coast of Pahang, will get 15 per cent of its electricity generated from renewable energy (RE) beginning next year, said sources.

Tenaga Nasional Bhd (TNB), via wholly-owned TNB Energy Services Sdn Bhd, is beefing up electricity supply for the island with two RE projects that will have a combined capacity of 755

kilowatts.

The national utility corporation said it was rehabilitating its mini hydro station in Sungai Mentawak and installing solar panels on the rooftop of the island's jetty and TNB offices.

TNB said as of last month, works for the mini hydro station had reached 87 per cent completion and for solar panels, 92 per cent.

When completed next year, Tioman, a popular scuba diving and snorkelling spot, will be the first island in the peninsula to be powered with solar and mini hydro.

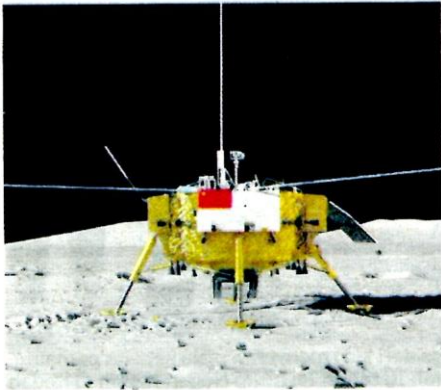
"The project is undertaken to reduce diesel operation costs and show TNB's commitment towards cleaner and green island for villagers and tourists of Tioman," it said.

A bulk of power for the island is supplied by TNB through its diesel generator power stations in Kampung Tekek and Kampung Genting with a total capacity of nine megawatts.

The government has set a target of 20 per cent energy generated via RE by 2030.

TNB has set its own target to achieve RE capacity of 1,700 megawatts by 2025.

Kapal angkasa China sedia mendarat di sisi gelap Bulan



ILLUSTRASI menunjukkan kapal angkasa Chang'e-4 mendarat di sisi gelap Bulan.

XINHUA

BEIJING – Sebuah kapal angkasa penjelajah China mengambil kedudukan untuk mendarat pada sisi gelap Bulan untuk kali pertama, lapor agensi berita *Xinhua* semalam.

Kapal angkasa Chang'e-4 itu memasuki orbit yang dirancang semalam sebagai persiapan untuk mendarat di kawasan gelap Bulan, kata agensi berita itu, memetik kenyataan Pentadbiran Angkasa Lepas Nasional China.

Xinhua tidak melaporkan bila pendaratan itu akan berlaku.

Bulan 'terkunci' secara graviti dengan Bumi dan berputar pada kadar sama dengan planet itu, menyebabkan

bahagian gelapnya tidak pernah kelihatan dari Bumi.

Beberapa kapal angkasa sebelum ini pernah melihat sisi gelap Bulan tetapi tidak pernah melakukan pendaratan.

China melancarkan Chang'e-4 awal bulan ini yang merangkumi sebuah kapal angkasa pendaratan dan kenderaan penjelajahan.

Menurut *Xinhua*, Chang'e-4 memasuki orbit itu pada pukul 8.55 pagi (waktu Beijing) dan berada di titik paling hampir iaitu pada jarak 15 kilometer dari permukaan Bulan.

Kapal angkasa Chang'e-4 memasuki orbit Bulan buat kali pertama pada 12 Disember lalu. – Reuters

China probe to land on dark side of moon

BEIJING: A Chinese space probe is moving into position to land on the dark side of the moon for the first time, the official Xinhua news agency reported yesterday, a mission seen as an important step as the country looks to push forward its space programme.

The probe, the *Chang'e-4*, entered a planned orbit yesterday "to prepare for the first-ever soft landing on the far side of the moon", the news agency said, citing the China National Space Administration.

It didn't say when the landing would occur. The moon is tidally locked to Earth, rotating at the same rate that it orbits our planet, so the far side – or the "dark side" – is never visible from Earth.

Previous spacecraft have seen the far side of the moon, but none has landed on it.

China launched the *Chang'e-4* probe earlier this month, carried by a *Long March-3B* rocket.

It includes a lander and a rover to explore the surface of the moon.

Xinhua said that the probe had entered an elliptical lunar orbit at 08.55 Beijing time, which brought it at its closest point just 15km away from the surface of the moon.

The *Chang'e-4* first entered a lunar orbit on Dec 12.

The tasks of the *Chang'e-4* include astronomical observation, surveying the moon's terrain, landform and mineral composition, and measuring the neutron radiation and neutral atoms to study the environment on the far side of the moon.

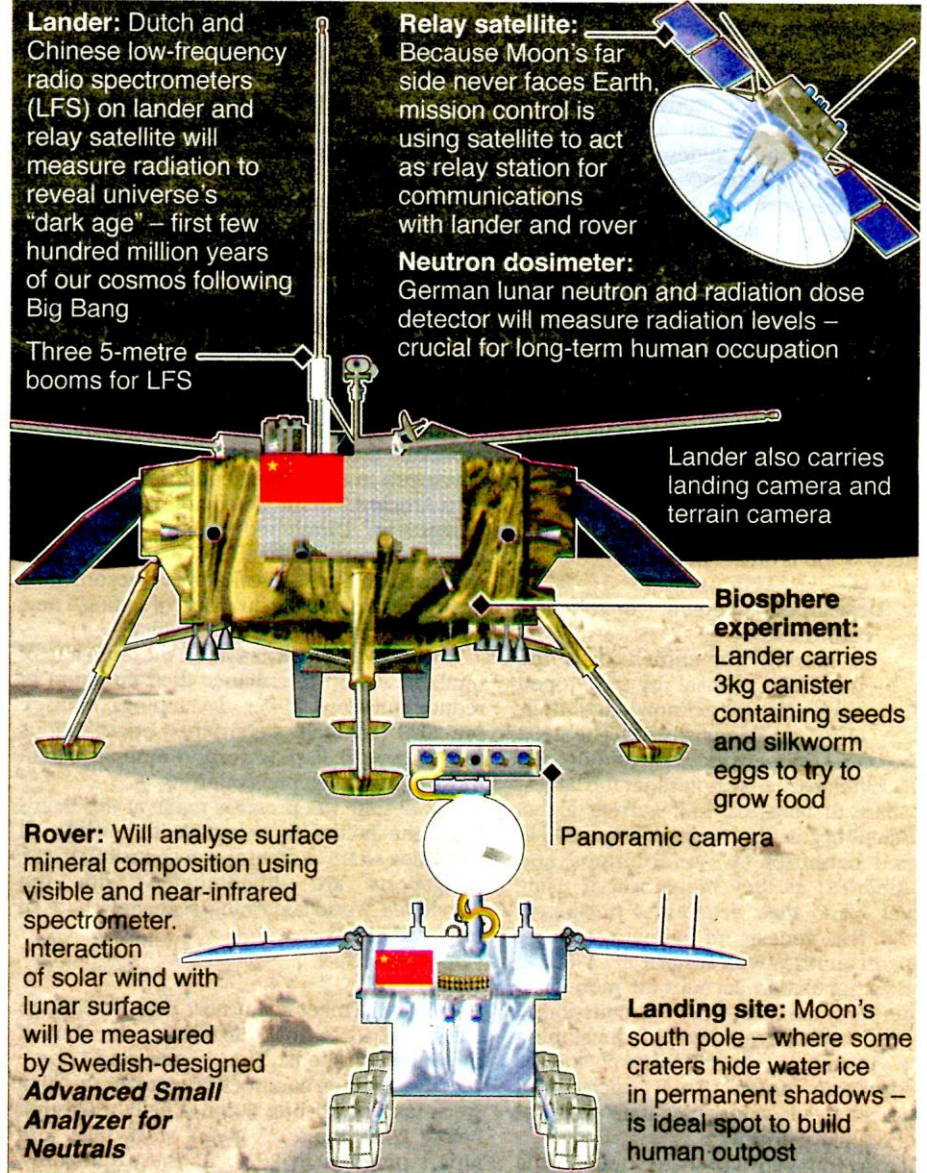
China aims to catch up with Russia and the United States to become a major space power by 2030.

It is planning to launch construction of its own manned space station next year.

While China has insisted its ambitions are purely peaceful, the US Defence Department has accused it of pursuing activities aimed at preventing other nations from using space-based assets during a crisis. – Reuters

China's mission to Moon's dark side

China's *Chang'e-4* will be the first spacecraft ever to land on the far side of the Moon. The mission will test plant growth and listen for radio emissions normally blocked by the Earth's atmosphere



Sources: Chinese Academy of Sciences, Swedish Institute of Space Physics

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Dua beradik selamatkan 4 penyu di tengah Lautan Pasifik



AGENSI

PUERTA VALLARTA, Mexico – Dua beradik berjaya menyelamatkan empat ekor penyu daripada lemas disebabkan tersangkut pada jaring dan plastik sampah di tengah-tengah Lautan Pasifik baru-baru ini.

Magnus dan Sverre Wiig dari Norway yang dalam penjelajahan mengelilingi dunia mahu berhenti seketika di bandar ini sebelum mengesan reptilia tersebut terjatuh pada jaring nelayan dan plastik.

Penyu pertama diselamatkan dengan mudah menggunakan gunting, sementara penyu kedua dan ketiga lebih rumit kerana terbelit teruk dengan jaring nelayan. Salah seekor penyu tersebut sukar bernafas kerana lehernya dijerut sejenis plastik.

Sebelum dua beradik itu meninggalkan kawasan tersebut, mereka mengesan seekor lagi penyu agak jauh daripada lokasi tiga penyu pertama tadi dan bergegas menyelamatkannya.

Selepas selesai menyelamatkan empat ekor reptilia tersebut, dua anak muda itu kelihatan lega dan gembira walaupun bot mereka dipenuhi tali plastik, jaring dan sampah. – Agensi

MAGNUS dilihat memotong tali plastik yang terbelit pada leher penyu keempat yang diselamatkan bersama abangnya.





Gunung Agung di Indonesia meletus lagi

JAKARTA – Sebuah gunung berapi di pulau peranginan Indonesia, Bali meletus semalam dan menghamburkan abu ke beberapa perkampungan berdekatan, manakala pihak berkuasa meminta pelancong menjauhi lokasi bencana.

Gunung Agung meletus beberapa kali sejak kembali aktif pada tahun 2017, letusan yang mengakibatkan

beratus-ratus penerbangan terkan-das dan 120,000 pelancong terpe-rangkap.

Pada pagi semalam, gunung be-rapi terletak sekitar 70 kilometer dari hab pelancongan Kuta itu menghamburkan abu panas dan meletus selama tiga minit, demiki-an menurut pusat vulkanologi Indo-nesia.

"Penduduk berdekatan Gunung Agung di samping pendaki dan pelancong tidak sepatutnya me-

lakukan apa-apa aktiviti di zon ber-bahaya atau dalam lingkungan 4 kilometer dari kawah gunung berapi itu," kata pusat berkenaan dalam satu kenyataan.

Pada Jun lalu, banyak penerba-ngan dibatalkan selepas Gunung Agung meletus dan memuntahkan abu panas setinggi lebih 1,000 meter ke udara.

Letusan gunung berapi itu pada tahun 1963 menyebabkan kira-kira 1,600 orang terkorban. – AFP

AGENCI
GUNUNG Agung menghamburkan abu tinggi ke udara pada Julai lalu.

Komuniti antarabangsa perlu lebih bersedia hadapi bencana alam

Tsunami Indonesia kejutkan dunia

JAKARTA – Pihak berkuasa di seluruh dunia kini mencari jalan untuk melakukan persediaan bagi menghadapi bencana tsunami di luar dugaan seperti yang melanda Selat Sunda di Indonesia pada bulan ini.

Ombak besar pada 23 Disember lalu itu mengorbankan 430 orang di kawasan pesisir pantai di Selat Sunda yang memisahkan Pulau Sumatera dan Pulau Jawa.

Tragedi itu menutup tirai siri bencana alam seperti gempa bumi dan tsunami yang melanda kepulauan Indonesia pada tahun ini.

Tiada siren kedengaran di bandar dan pantai di kawasan tersebut untuk memberi amaran kepada penduduk sebelum ombak tsunami melanda pantai.

Pakar-pakar seismologi dan pihak berkuasa berkata, terda-

pat beberapa faktor dalam kejadian itu yang mengakibatkan pengesanan awal tsunami hampir mustahil dilakukan termasuk kekurangan kelengkapan.

Bagaimanapun, sebilangan pakar berkata, bencana itu perlu dijadikan isyarat untuk meningkatkan penyelidikan mengenai faktor-faktor pencetus dan persediaan tsunami.

"Indonesia membuktikan kepada seluruh dunia bahawa pelbagai sumber memiliki potensi untuk mencetuskan tsunami. Lebih banyak penyelidikan diperlukan untuk memahami peristiwa di luar jangkaan tersebut," kata ahli seismologi Universiti Southampton, Stephen Hicks.

Menurutnya, kebanyakan tsunami yang direkodkan berpunca daripada gempa bumi tetapi di Indonesia baru-baru ini, letusan

gunung berapi Anak Krakatau mengakibatkan kawahnya runtuh ke dalam laut dan mencetuskan tsunami setinggi hingga 5 meter yang menghempas kawasan berpenduduk padat di Pulau Jawa dan Sumatera.

Semasa letusan itu, dianggarkan 180 juta kubik meter atau dua pertiga gunung berapi itu runtuh ke dalam laut.

Bagaimanapun, letusan Anak Krakatau yang berusia 100 tahun itu menimbulkan bacaan lemah pada alat pengesan gempa bumi sehingga menyebabkan Badan Meteorologi, Klimatologi dan Geofizikal Indonesia mengeluarkan kenyataan bahawa tiada tsunami berlaku.

Anak Krakatau muncul selepas gunung berapi Krakatau meletus pada tahun 1883 yang mengakibatkan lebih 36,000 orang terkorban. – Reuters



GUNUNG berapi Anak Krakatau memuntahkan abu panas semasa letusan yang dilihat dari bot peronda Indonesia, *KRI Torani 860* di Selat Sunda, Jumaat lalu. REUTERS

Bali's Mount Agung shoots new burst of ash

DENPASAR: A volcano on Indonesia's tourist island of Bali shot a new burst of hot ash into the air in the latest of the country's several eruptions within a week.

Mount Agung erupted for about three minutes yesterday, spewing white clouds of smoke and ash more than 700m into the air, the Volcanology and Geological Mitigation Agency said in a statement.

The eruption of the 3,031m volca-

no didn't prompt evacuations, and its alert status remains at the second-highest level. The agency warned tourists to stay away from the danger zone in a 4km radius around the crater.

Agency spokesman Sutopo Purwo Nugroho said that white dust from the eruption blanketed several villages close to the mountain slope in Karangasem district.

Ngurah Rai International Airport spokesman Arie Ahsanurrohm

said that flights were operating normally. Authorities said the air around Denpasar, the Bali provincial capital, is clear from ash.

More than 140,000 people had fled the area around the mountain in late September after its alert status was raised to the highest level, indicating an eruption may be imminent.

The alert status was lowered two weeks later, allowing for the return of those displaced from govern-

ment shelters.

An eruption in 1963 killed about 1,100 people. Agung lies about 70km northeast of Bali's tourist hotspot of Kuta.

It is among more than 120 active volcanoes in Indonesia, which is prone to volcanic eruptions and earthquakes because of its location on the so-called "Ring of Fire" – a series of fault lines stretching from the Western Hemisphere through Japan and South-East Asia. — AP

Turning the tide on disasters

Authorities worldwide looking for ways to better detect tsunamis

JAKARTA: As Indonesia reels from the carnage of yet another natural disaster, authorities around the globe are working on how they can prepare for the kind of freak tsunami that battered coasts west of Jakarta this month.

The Dec 23 tsunami killed around 430 people along the coastlines of the Sunda Strait, capping a year of earthquakes and tsunamis in the vast archipelago, which straddles the seismically active Pacific Ring of Fire.

No sirens were heard in those towns and beaches to alert people before the deadly series of waves hit shore.

Seismologists and authorities say a perfect storm of factors caused the tsunami and made early detection near impossible given the equipment in place.

But the disaster should be a wake-up call to step up research on tsunami triggers and preparedness, said several of the experts, some of whom have travelled to the South-East Asian nation to investigate what happened.

"Indonesia has demonstrated to the rest of the world the huge variety of sources that have the potential to cause tsunamis. More research is needed to understand those less-expected events," said Stephen Hicks, a seismologist at the University of Southampton.

Most tsunamis on record have been triggered by earthquakes.

But this time it was an eruption of Anak Krakatau volcano that caused its crater to partially collapse into the sea at high tide, sending waves up to 5m high smashing into densely populated coastal areas on Java and Sumatra islands.

During the eruption, an estimated 180 million cubic metres, or around two-thirds of the less-than-100-year-old volcanic island, collapsed into the sea.



Devastated: An aerial view of a damaged area after the tsunami hit Sunda Strait at Way Muli village in Rajabasa, South Lampung, Indonesia. — Reuters

But the eruption didn't rattle seismic monitors significantly, and the absence of seismic signals normally associated with tsunamis led Indonesia's geophysics agency (BMKG) initially to tweet there was no tsunami.

Muhamad Sadly, head of geophysics at BMKG, later said its tidal monitors were not set up to trigger tsunami warnings from non-seismic events.

The head of Japan's International Research Institute of Disaster, Fumihiko Imamura, said he did not believe Japan's current warning system would have detected a tsunami

like the one in the Sunda Strait.

"We still have some risks of this in Japan ... because there's 111 active volcanoes and low capacity to monitor eruptions generating a tsunami," he said in Jakarta.

Scientists have long flagged the collapse of Anak Krakatau, around 155km west of the capital, as a concern.

A 2012 study published by the Geological Society of London deemed it a "tsunami hazard". Anak Krakatau has emerged from the Krakatoa volcano, which in 1883 erupted in one of the biggest explo-

sions in recorded history, killing more than 36,000 people in a series of tsunamis and lowering the global surface temperature by 1°C with its ash.

Some experts believe there was enough time for at least a partial detection of last week's tsunami in the 24 minutes it took waves to hit land after the landslide on Anak Krakatau.

But a country-wide tsunami warning system of buoys connected to seabed sensors has been out of order since 2012 due to vandalism, neglect and a lack of public funds, authorities say. — Reuters

Landslides and floods kill 26 in eastern Philippines

MANILA: Twenty-six people have been killed in landslides and floods caused by a tropical depression that brought heavy rains over the eastern Philippines, police and emergency officials said.

More than 22,000 people were also displaced by the landslides and floods in six provinces that bore the brunt of the rains, the regional civil defence office said.

Most of the victims died in landslides, including a family of three who were sleeping when their house was buried in Albay province, 336km southeast of Manila, police said.

In nearby Tiwi town, also in Albay province, four people were also

killed in a separate landslide, the regional disaster relief agency said.

Landslides also killed four people in the nearby province of Sorsogon, two in Camarines Sur and three in Eastern Samar province, where the tropical depression made landfall on Saturday.

Three people drowned in floods in Eastern Samar and the adjacent province of Western Samar, the regional civil defence office said.

In Masbate province, six people drowned in floods while one person was killed after being struck by a falling tree, the office added.

Rescue teams were still searching for several missing in the affected

areas, emergency officials said.

The weather bureau said the tropical depression, locally named *Usman*, has weakened into a low pressure area after making landfall, but warned that eastern and central provinces would continue to experience rains.

A cold front and the northeast monsoon were also bringing bad weather over the capital and other parts of the country, which could dampen usually rowdy New Year's Eve celebrations.

Each year, the Philippines is hit by an average of 20 cyclones causing floods, landslides and other accidents. — dpa



In deep water: People wading through a flooded street in the town of Baao in Camarines Sur. — AFP