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

Bil	Berita	Media	Capaian Berita Penuh
2 JANUARI 2019 (RABU)			
1.	**Under the radar** An illegal sand-washing operation ordered closed two years ago is furtively back in business behind hoardings and foliage on the Sungai Klang riverbank.	Star Metro	Rujuk lampiran 1
2.	**Answer to treatment of waste is in technology** Despite the positive conclusions, the committee has recommended further action to rectify the flaws with the Energy, Science, Technology, Environment and Climate Change Ministry insisting that Lynas should send the waste back to Western Australia.	New Straits Times	Rujuk lampiran 2
1 JANUARI 2019 (SELASA)			
3.	**Amaran angin kencang, laut bergelora di Kelantan, Terengganu, Pahang** Menurut kenyataan Jabatan Meteorologi Malaysia malam ini, keadaan angin kencang dan laut bergelora itu berbahaya kepada semua aktiviti perkapalan dan pantai termasuk menangkap ikan serta perkhidmatan feri.	Sinar Harian	Klik pada tajuk berita

4.	**Amaran angin kencang, laut bergelora di Kelantan, Terengganu dan Pahang** Menurut kenyataan Jabatan Meteorologi Malaysia malam ini, keadaan angin kencang dan laut bergelora itu berbahaya kepada semua aktiviti perkapalan dan pantai termasuk menangkap ikan serta perkhidmatan feri.	Berita Harian	Klik pada tajuk berita
5.	**Amaran angin kencang, laut bergelora di Kelantan, Terengganu, Pahang sehingga Sabtu** Menurut kenyataan Jabatan Meteorologi Malaysia pada Selasa malam, keadaan angin kencang dan laut bergelora itu berbahaya kepada semua aktiviti perkapalan dan pantai termasuk menangkap ikan serta perkhidmatan feri.	Astro Awani	Klik pada tajuk berita
6.	**Lelaki warga India cetus onar ketika operasi tahun baharu** Pengarah JPJ Kuala Lumpur, Datuk Ismail Mohd Zawawi, berkata operasi turut disertai Agensi Antidadah Kebangsaan (AADK), Jabatan Alam Sekitar (JAS), Jabatan Siasatan dan Penguatkuasaan Trafik (JSPT) serta Jabatan Keselamatan Jalan Raya (JKJR).	Berita Harian	Klik pada tajuk berita

TEMPATAN

Bil	Berita	Media	Capaian Berita Penuh
2 JANUARI 2019 (RABU)			
7.	**Save energy** While it may be difficult to do away with air-conditioning in commercial buildings, it should commercial buildings, it should be possible to design houses that provide a comfortable environment with just fans for circulation.	The Star	Rujuk lampiran 3
8.	**A storm brewing in Taiping** A storm may be brewing over the inclusion of Taiping – touted as Penisular Malaysia's wettest town – on the list of the world's 100 Sustainable Cities last year.	The Star	Rujuk lampiran 4
9.	**Pemimpin muda alam sekitar** Chemical Company of Malaysia Berhad (CCMD) menganjurkan program Rakan Saintis Sungai (RSS) sempena perayaan Hari Alam Sekitar Kebangsaan 2018 peringkat negeri di Kota Kinabalu, Sabah baru-baru ini.	Sinar Harian	Rujuk lampiran 5
10.	**Nestle & YSD tanam sejuta pokok menjelang 2020** Sebagai sebahagian daripada komitmennya terhadap kelestarian alam sekitar, Nestle (Malaysia) Berhad dan Yayasan Sime Darby (YSD) akan melanjutkan usaha sama dalam Projek RiLeaf Kinabatangan dengan sasaran baharu untuk menanam sejuta pokok di sepanjang Sungai Kinabatangan menjelang tahun 2020.	Sinar Harian	Rujuk lampiran 6

11.	**Jijik... KL penuh sampah tahun baharu** Dalam rakaman video berdurasi 27 saat yang tular di media sosial pelbagai jenis sampah termasuk tin dan botol minuman, plastik serta kotak bersepah di bahu dan tengah laluan jalan raya.	Sinar Harian	Klik pada tajuk berita
12.	**Eco-shopping with a conscience** I think I'm ready for my first introduction to a zero waste store. In fact, I'm actually looking forward to it. However, a few uncertainties begin to creep in.	New Straits Times	Klik pada tajuk berita
13.	**Teknologi pertanian hasil empat kali ganda** MARDI juga memperkenalkan teknologi terkini, Tube-Plot yang merupakan system tanaman bertingkat bercirikan moden dan versatile menggunakan sistem pengairan titis yang direka bentuk sesuai untuk ruang terhad.	Utusan Malaysia	Rujuk lampiran 7
14.	**Making sense out of STEM and IoT** The alleged waning interest in science, technology, engineering and mathematics (STEM) among school students have been lamented by various quarters.	New Straits Times	Rujuk lampiran 8
1 JANUARI 2019 (SELASA)			
15.	**Pantau kebersihan KL dengan lebih tegas** SAMBUTAN ambang tahun baru di Kuala Lumpur pada malam tadi telah dicemari dengan longgokan sampah sarap yang dibuang oleh para pengunjung yang memenuhi tempat-tempat tumpuan di sekitar Kuala Lumpur.	Harakah Daily	Klik pada tajuk berita

16.	**Malaysia blacklists imports of non-recyclable plastic waste** Malaysia is banning all imports of non-recyclable plastic waste from overseas - and New Zealand is one of those currently sending millions of kilograms of plastic waste to the southeast Asian country every year.	News Hub	Klik pada tajuk berita
17.	**Pelihara alam sekitar** Baru-baru ini beberapa akhbar mendedahkan mengenai pencerobohan kawasan hutan bakau di Batu Maung, Pulau Pinang, yang dilakukan pihak tidak bertanggunjawab.	Sinar Harian	Rujuk lampiran 9
18.	**Mixed reaction to new policies** The electricity rebate has also been doubled to RM40 each for 185,000 poor and hardcore poor households in the e-kasih system.	The Star	Rujuk lampiran 10
19.	**Art students win trip to Beijing for science show** Two students from Sekolah Menengah Kebangsaan Tun Abdul Razak, Sarawak were crowned as Champions at the recent 2018 Petrosains Science Show Competition.	New Straits Times	Rujuk lampiran 11
20.	**Suhu menentukan jantina anak penyu hijau** Pola cuaca yang berubah drastic disebabkan perubahan iklim memberi impak yang sangat besar bukan sahaja terhadap alam sekitar malahan hidupan marin.	Kosmo	Rujuk lampiran 12

ANTARABANGSA

Bil	Berita	Media	Capaian Berita Penuh
2 JANUARI 2019 (RABU)			
21.	**Kapal angkasa NASA memasuki orbit Bennu** Tampa 1 Jan. - Pentadbiran Angkasa dan Aeronautik Kebangsaan (NASA) mencatat sejarah apabila kapal angkasa miliknya Berjaya memasuki orbit sebuah asteroid yang dikenali sebagai Bennu.	Utusan Malaysia	Rujuk lampiran 13
22.	**Nasa rings in historic New Year feat** Tampa: Nasa rang in the New Year with a historic flyby of the farthest, and quite possibly the oldest, cosmic body aver explored by human-kind – a tiny, distant world called Ultima Thule (pronounced TOO-lee) – in the hopes of learning more about how planets took shape.	The Star	Rujuk lampiran 14
23.	**2019 bermula dengan tragedi** Tragedi disebabkan bencana alam dan keganasan memulakan 2019, meskipun sambutan tahun baharu rata-rata diraikan dengan meriah di seluruh dunia.	Berita Harian	Rujuk lampiran 15
1 JANUARI 2019 (SELASA)			

24.	**Spaceship zooms towards distant world** Tampa: A Nasa spaceship is zooming towards the farthest, and quite possibly the oldest, cosmic body ever photographed by humankind, a tiny, distant world called Ultima Thule some 6.4 billion kilometers away.	The Star	Rujuk lampiran 16
25.	**Environmental impact on health** The World Health Organization (WHO) defines the environment in relation to health as “all the physical, chemical, and biological factors external to a person, and all the related behaviors”.	The Star	Rujuk lampiran 17
26.	**Tsunami Anak Krakatau ‘amaran’ kesiapsiagaan** Jakarta 31 Dis – Kejadian tsunami yang berpunca daripada Gunung Berapi Anak Krakatau di Selat Sunda minggu lalu memberi isyarat kepada dunia mengenai kelemahan kesiapsiagaan menghadapi bencana.	Utusan Malaysia	Rujuk lampiran 18
27.	**68 terbunuh dibadai ribut Usman** Filipina melangkah ke tahun baharu 2019 dengan berita duka apabila jumlah korban ribut tropika Usman yang melanda timur negara itu selepas sambutan Krismas meningkat kepada 68 orang.	Utusan Malaysia	Rujuk lampiran 19
28.	**Dahsyatnya Letusan Krakatau** Letusan gunung berapi terbesar dalam sejarah bumi, Gunung Krakatau di Indonesia pada 1883 menyebabkan dentuman teramat kuat boleh didengari sehingga 3,000 kilometer di Pulau Andaman dan Nikobar serta 5,000 kilometer di Papua New Guinea serta Australia Barat, diikuti bumi bertukar menjadi gelap.	Harian Metro	Rujuk lampiran 20

LAMPIRAN 1
STAR METRO (STAR EXCLUSIVE): MUKA SURAT 1, 2 & 3
TARIKH: 2 JANUARI 2019 (RABU)

Under the radar

An illegal sand-washing operation ordered closed two years ago is furtively back in business behind hoardings and foliage on the Sungai Klang riverbank. > 2&3

Sneaky activities: An aerial view of the sand-washing operation near 5th Mile off Jalan Kelang Lama found to be active again after two years. An excavator is also seen encroaching into the riverbank. — FAIHAN GHANI/The Star

LAMPIRAN 1 (SAMB.)
STAR METRO (STAR EXCLUSIVE): MUKA SURAT 1, 2 & 3
TARIKH: 2 JANUARI 2019 (RABU)

An aerial image showing the illegal sand washing activity and river encroachment at the 5th Mile, off Jalan Kelang Lama. — Photos: AZMAN GHANI, YAP CHEE HONG and FAIHAN GHANI

Sand pirates back in action

Culprits resume operation two years after expose, hampering government's billion-ringgit river rehabilitation efforts again

By BAVANI M
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THEY are back! Operators of an illegal sand washing site are back in action two years after the activity in Jalan Kelang Lama was exposed and shut down by Kuala Lumpur City Hall (DBKL) following public complaints.

The operation has kicked off again but this time, extra effort has been put into camouflaging the illegal business.

A reader who followed *StarMetro*'s exclusive report on May, 2016, titled "Dirty riverside business", said the sand washing activity resumed along Sungai Klang's riverbank which faced the 5th Mile off Jalan Kelang Lama.

This is approximately 8km away from where billions of ringgit is being spent on the River of Life project (RoL) at Masjid Jamek.

The matter was also brought to the attention of Kepong MP Lim Lip Eng's special assistant Sean Oon, who lives 10 minutes away from the operation site.

Attempts by Oon to visit the site to get first-hand evidence proved futile as businesses nearby were not cooperative in helping him obtain information.

Besides hoardings surrounding the project site, mounds of sand, huge trees and foliage along the perimeters help block off the operation from public view.

The use of a camera drone gave a better idea of what was going on at the riverbank.

Oon, a former Petaling Jaya City (MBPJ) councillor, also managed to gain access via a carpark nearby and saw excavators scooping and dumping sand into tipper lorries.

Also noticeable were a makeshift office and sleeping quarters at the site.

Images of a crude sand washing machine and excavators dumping debris into Sungai Klang, however, were captured with drone camera.

Aerial photographs showed a discharge of murky substance from the site which flowed through a crude piping system directly into the river.

But the most disturbing image was the sight of an excavator encroaching into the riverbank and digging sand.

This act is prohibited by the Drainage and Irrigation Department (DID).

Oon (left) went to the ground to investigate the matter and saw tipper lorries transporting sand from the river.

The StarMetro report on the issue in May 2016.

River encroachment

"This is bad," was the immediate response from Global Environment Centre's (GEC) river care programme coordinator Dr K. Kalithasan when he saw the drone images.

"There is encroachment along the riverbank and there is no buffer.

"The excavator should not be there at all," said Dr Kalithasan, adding that the location of the sand washing activity was in the heart of the RoL project and within proximity of the Sungai Kerayong, the nearest tributary in the vicinity.

"There are two water quality sampling stations operated by the Department of Environment (DoE) and DID just 2km downstream to monitor water quality, so this (sand washing operation) should not be happening."

Dr Kalithasan said the illegal activity was hampering the Government's billion-ringgit river cleaning and rehabilitation operations under the RoL.

Sand washing, he said, was one of the culprits causing river pollution.

"These people were shut down before so how can this be, and it is all happening under a new Government," he lamented.

A reader of *StarMetro* who only identified himself as Lim said he noticed excavators and tipper lorries working at the site while dining on the 23rd floor of a nearby hotel.

"I had my binoculars with me, and I was actually looking out for birds when I saw the excavators working near the riverbank.

"I knew something was amiss," said Lim, adding that he read about the illegal sand washing activity two years ago.

StarMetro also spoke to workers at a nearby furniture showroom. They confirmed that the operation resumed over a year ago.

"It started some time back," said a staff member there, adding that officers from the Federal Territory of Kuala Lumpur Land and Mines Office (PTG) even came by to snap photos.

Repeat offender

"*Alamak*, (they) started again!"

This was the response of DID director-general Datuk Dr Md Nasir Md Noh when informed of the operation.

Md Nasir then instructed the Federal Territories of Kuala Lumpur DID director Nishad Mohamed Mohd Shaffy to investigate.

When contacted, Nishad said the operation was illegal and that they

LAMPIRAN 1 (SAMB.)
STAR METRO (STAR EXCLUSIVE): MUKA SURAT 1, 2 & 3
TARIKH: 2 JANUARI 2019 (RABU)

were dealing with a repeat offender.

"I have notified the Federal Territories of Kuala Lumpur PTG director Sharez Izuan Md Zaidi, who promised to send a team to check the site," he said.

In *StarMetro*'s 2016 report, it was stated that the area where sand washing was spotted is a private land.

Excavators and lorries were transporting sand using an inner route along the riverbank to avoid being detected.

When their cover was blown in 2016, the then Kuala Lumpur mayor Tan Sri Mohd Amin Nordin Abd Aziz ordered the site to be shut down.

The project did not have the necessary permits from DBKL, PTG and other relevant agencies.

The culprits managed to dodge the authorities for years as they hid their operations behind huge trees and hoardings.

A meeting was then chaired by the Federal Territories Ministry with multiple agencies to discuss the matter.

Last October, Water, Land and Natural Resources Minister Dr Xavier Jayakumar, Federal Territories Minister Khalid Abdul Samad and Kuala Lumpur mayor Datuk Nor Hisham Ahmad Dahlan, visited the Lembangan Sungai Klang in conjunction with World River Day.

Dr Xavier said his ministry's toughest challenge was ensuring that the rivers were pollution-free.

Khalid said the Government would continue keeping the rivers clean but called upon the community to lend a helping hand to stop pollution.

Oon, however, added that government agencies like PTG, DBKL and DID must also do their part to carry out coordinated enforcement to stop illegal sand washing activities from polluting the river.

"If numerous complaints have been made to the authorities, and if PTG is aware of the activity as reported by residents, then why is there no action taken?" Oon asked.

Dr Kalithasan agreed with Oon, adding that there must be political will to stop the rot as river-cleaning efforts upstream were going to waste downstream.

He added that water was Class 1 and drinkable upstream of the river at Klang Gates dam.

"As the water flows downstream; the quality changes to Class II. At this point, it needs to be treated before it can be consumed," he said.

Dr Kalithasan said the river then flowed past MRR2 and Zoo Negara, and as it entered the Ampang township, the quality dropped to Class III.

As it went further down into Kuala Lumpur city centre, the quality was between Class III and Class IV; indicating that the water was not even safe to touch.

"However, the real impact is hard to tell. If there is contamination along the way, water quality may further erode downstream," he said.

"PTG has a crucial role to play here to save Kuala Lumpur's rivers. No matter how much advice DID provides, when it comes to land matters, only the state is in control and it is up to the land office to do something about it," he added.

Meanwhile, *StarMetro*'s attempts to get information from the PTG proved futile as numerous emails and text messages went unanswered.

At ground level, one cannot see anything as the illegal sand washing site is blocked by hoardings and trees.

Dr Kalithasan says the illegal activity is hampering the Government's billion-ringgit river cleaning and rehab operations under the River of Life project.

LAMPIRAN 2
NEW STRAITS TIMES (LETTERS): MUKA SURAT 17
TARIKH: 2 JANUARI 2019 (RABU)

Answer to treatment of waste is in technology

AN executive review committee formed at the ministerial level on the operations of Lynas Advance Material Plant (LAMP) concluded that Lynas' operations complied with regulations.

Despite the positive conclusions, the committee has recommended further action to rectify the flaws with the Energy, Science, Technology, Environment and Climate Change Ministry insisting that Lynas should send the waste back to Western Australia.

This is odd, knowing fully well that the waste does not pose the radiation risks as claimed earlier.

Even nuclear power plants, which import uranium from third countries, are not obligated to send back their nuclear waste to the uranium exporting country.

If we can still recollect the early days when the country was once colonised, the colonial masters took our raw rubber, tin and palm oil converting them into higher value products and exporting them back to us.

We not only earned the low value end of the value chain but also paid for their high value items through imports.

Inadvertently, waste was produced but it was not sent back to us.

Through the development of advanced processing technology, most developed economies earn their income through the conversion of low value imported crude products into higher value consumer and commercial items for export.

Hence, Malaysia should do the same if we want to be a world-processing and value-adding centre.

Developing the right waste treatment technologies would also bring handsome returns in the future.

Many agree that waste will become the resource of the future, as we witness the continued depletion of the world's natural resources.

The real answer lies in technologies.

One technology is to produce viable biodegradable plastics, and another technology to reprocess waste plastics.

The recycling of electronic waste, initiated by the Multimedia and Communications Ministry, should be commended.

More than just bringing in technologies from outside, we also need to develop our own.

The waste from Lynas should be treated the same.

Since radiation is not an issue any more, as articulated by the experts' committee, we can ask Lynas to put in the necessary remediation technologies before the waste is safely disposed.

The important consideration is that it should not harm the environment.

If indeed the presence of heavy metals is confirmed, then the necessary technologies should be deployed to neutralise the potential hazards.

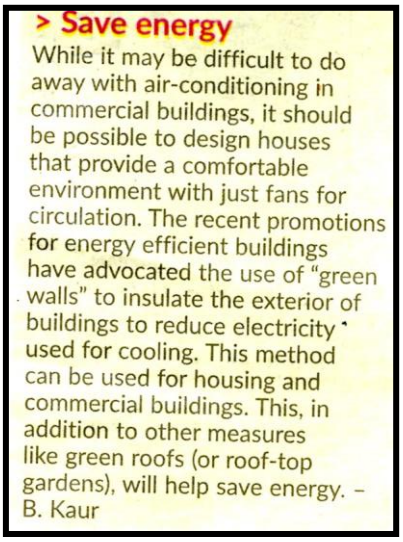
We can emulate Germany, which has made treatment of heavy metal waste a standard practice.

So there is no need to ask Lynas to send back the waste.

PROFESSOR DATUK DR AHMAD IBRAHIM
Fellow, Academy of Sciences Malaysia, UCSI University

Lynas can put in the necessary remediation technologies to neutralise hazards. FILE PIC

LAMPIRAN 3
THE STAR (VIEWS): MUKA SURAT 25
TARIKH: 2 JANUARI 2019 (RABU)



> Save energy

While it may be difficult to do away with air-conditioning in commercial buildings, it should be possible to design houses that provide a comfortable environment with just fans for circulation. The recent promotions for energy efficient buildings have advocated the use of "green walls" to insulate the exterior of buildings to reduce electricity used for cooling. This method can be used for housing and commercial buildings. This, in addition to other measures like green roofs (or roof-top gardens), will help save energy. – B. Kaur

LAMPIRAN 4
THE STAR (NATION): MUKA SURAT 11
TARIKH: 2 JANUARI 2019 (RABU)

A storm brewing in Taiping

SAM questions naming of town as a sustainable city by organisation

PETALING JAYA: A storm may be brewing over the inclusion of Taiping – touted as Peninsular Malaysia's wettest town – on the list of the world's 100 Sustainable Cities last year.

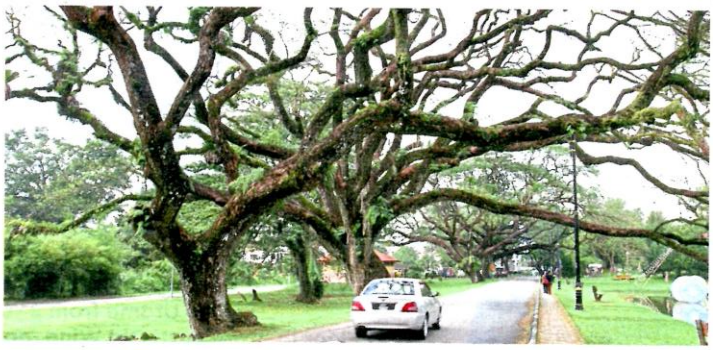
Questioning the inclusion, Sahabat Alam Malaysia (SAM) said a recent survey of the town showed there were several "unenvironmentally" friendly and unsustainable activities in Taiping.

Among the places it surveyed were the hills in Jalan Kamunting Lama, Jalan Bukit Mas, the area near the water tank of Lembaga Air Perak, Kamunting as well as the hills near Taman Kuningsari, Air Kuning.

"There was development on slopes measuring 25 degrees. Does this development abide with the guidelines under town planning such as quarrying?" asked SAM president S.M Mohamed Idris.

He said any housing project should take into account elements such as the suitability of the site, the conservation of the topography as well as the environment so that there would not be any negative impact.

"Did Green Destination go down to the ground and survey all areas in Taiping and its surroundings before giving the town the award?" he said in a statement.



Status questioned: Taiping currently has unfriendly and unsustainable activities in the town, according to Sahabat Alam Malaysia.

He also questioned if Green Destinations was a body or a standards and accreditation organisation.

Mohamed Idris was responding to a report in local dailies that Taiping had been named as one of the 100 Sustainable Cities, the only Malaysian city which made it to list by Green Destinations.

The "2018 Sustainable Destinations Top 100" list, made available at *greendestinations.org*, aims to give recognition to efforts by the authorities in the tourism industry through a sustainable environment.

Green Destinations is a non-profit organisation which focuses on efforts to create sustainable tourism, leading a global cooperation comprised of experts, firms and academy institutions in 80 countries.

Taiping Municipal Council president Datuk Abd Rahim Md Ariff was quoted as saying that Green Destinations had been informed of the matter through an email on Dec 21.

He said the council had provided detailed documents which included pictures, video and promotion materials during the nomination process which ended on Oct 15.

Having an average annual rainfall of about 4,000mm, way above Peninsular Malaysia's rainfall of between 2,000mm and 2,500mm, Taiping is famous for its century-old rain trees in Taiping Lake Gardens.

However, some of the rain trees fell over in October due to root rot.

The town also has the country's first railway built from Taiping to Port Weld as well as other attractions such as the oldest museum – Perak Museum, Taiping Zoo and the old Clock Tower.

Mohamed Idris hoped all local councils would be more sensitive and careful in approving applications for development and change in land use.

LAMPIRAN 5
SINAR HARIAN (CAKNA SINAR): MUKA SURAT 4
TARIKH: 2 JANUARI 2019 (RABU)

Pemimpin muda alam sekitar

RSS DEDAH PELAJAR AMALAN JAGA AIR SUNGAI

Chemical Company of Malaysia Berhad (CCMB) menganjurkan program Rakan Saintis Sungai (RSS) sempena perayaan Hari Alam Sekitar Kebangsaan 2018 peringkat negeri di Kota Kinabalu, Sabah baru-baru ini.

Program RSS dianjurkan buat kali kelima di Sabah dan kali pertama di Kota Kinabalu ini bertujuan mendidik 48 pelajar dan 12 guru dari sekolah menengah di Sabah tentang langkah berkesan memuliharа air dan memberi semangat kepada pelajar menjadi pejuang alam sekitar yang bertekad mahu menjamin kelestarian masa depan.

Diketuai Bahagian Bahan Kimia CCMB, program RSS dianjurkan dengan kerjasama Jabatan Alam Sekitar Sabah, Jabatan Air Sabah, Jabatan Pendidikan Sabah, serta Jabatan Perlindungan Alam Sekitar dan Jabatan Pengairan dan Saliran Sabah.

Pengarah Urusan Kumpulan CCMB, Nik Fazila Nik Mohamed Shihabuddin berkata, program RSS adalah inisiatif tepat untuk mendekati generasi muda dan menanamkan perasaan cinta kepada alam sekitar supaya mereka akan berkongsi pengetahuan dan pengalaman yang baru diperoleh dengan keluarga dan kawan-kawan, serta membawa isu ini untuk perbincangan.

"Sebagai organisasi mempunyai kepakaran dalam rawatan air, CCMB percaya pemuliharaan sungai sangat penting kerana sungai sihat membolehkan flora dan fauna hidup subur, dan masyarakat sekeliling bergantung hidup kepada sumber asli mengukuhkan keadaan ekonomi mereka.

"Program akan membantu pelajar lebih yakin dan menambah minat merungkai situasi dunia sebenar, dan bentuk mereka menjadi pemimpin masa depan, serta komited menangani cabaran alam sekitar," katanya.

Tetamu jemputan bersama Rakan Saintis Sungai.

Sementara itu, Pengarah Jabatan Alam Sekitar Sabah, Tunku Khalkausar Tunku Fathahi, memuji usaha CCMB untuk membolehkan generasi muda menimba pengalaman dan pembelajaran pemuliharaan air, di luar bilik darjah.

"Sabah kaya dengan biodiversiti dan lokasi untuk aktiviti penyelidikan dan pembelajaran perlindungan alam sekitar.

"Saya teruja usaha menggalakkan pelajar main peranan menambah baik keadaan sumber asli kita. Saya harap inisiatif ini akan menggalakkan pelajar terus mempelajari dan menyertai projek mesra alam secara lebih aktif," katanya.


Mengikuti ujian kualiti air di Sungai Kiulu.

Aktiviti dijalankan termasuk menguji kualiti air di Sungai Kiulu, menjayakan 'Program Pendidikan Alam Sekitar Sungai dan Tadahan' (CREEP), lawatan ke loji rawatan Air Telibong 2 dan empangan sungai di Tuaran.

Sekolah menyertai program RSS tahun ini termasuk SM St. John (M), SMK Tenghilan, SMK Taman Ria Tuaran dan SMK Badin dari Tuaran; SMK Taman Tun Fuad dan SMK SANZAC dari Kota Kinabalu; SMK Majakir dari Papar; dan SM St. Patrick dari Membakut.

Sejak dimulakan pada 2010, RSS CCM melibatkan sekolah-sekolah dari Perlis, Sabah, Negeri Sembilan, Melaka, Pulau Pinang dan Johor, mencapai seramai 2,000 pelajar.

LAMPIRAN 6
SINAR HARIAN (CAKNA SINAR): MUKA SURAT 4
TARIKH: 2 JANUARI 2019 (RABU)

Nestlé & YSD tanam sejuta pokok menjelang 2020

SEBAGAI sebahagian daripada komitmennya terhadap kelestarian alam sekitar, Nestlé (Malaysia) Berhad dan Yayasan Sime Darby (YSD) akan melanjutkan usaha sama dalam Projek RiLeaf Kinabatangan dengan sasaran baharu untuk menanam sejuta pokok di sepanjang Sungai Kinabatangan menjelang tahun 2020.

Ketua Pegawai Eksekutif, Nestlé (Malaysia) Berhad, Juan Aranols berkata, Sungai Kinabatangan ialah nadi kehidupan

penting bagi Sabah, memainkan peranan berharga bukan sahaja untuk hidupan liar, tetapi juga manusia.

"Kami bertekad memulihara kepelbagaian biologi ini menerusi Projek RiLeaf Kinabatangan dan terus mencipta landskap di mana manusia, alam semula jadi dan agrikultur boleh wujud pada masa sama, dan disatukan oleh sumber penting, iaitu air.

"Kami teruja memperluas lagi Projek RiLeaf Kinabatangan demi menanam sejuta pokok menjelang 2020. Visi kami melindungi dan memulihara kepelbagaian biologi Kinabatangan yang kaya dikongsi bersama YSD dan Jabatan Perhutanan Sabah (SFD), dan kami komited untuk menghidupkan semula Sungai Kinabatangan," katanya.

Kawasan penanaman baharu bagi Projek RiLeaf Kinabatangan terletak di kawasan European Union Reduce Emissions From Deforestation and Forest Degradation-Plus (EU REDD+), merupakan inisiatif global menyokong urus tadbir kerajaan bagi mengurangkan penerokaan dan pembasmian hutan.

Ahli Majlis Pentadbiran Yayasan Sime Darby dan Ketua Pegawai Eksekutif Sime Darby Berhad, Datuk Jeffri Salim Davidson berkata, pihaknya berharap Projek RiLeaf bukan sahaja akan mengurangkan bahan pencemar dan memelihara habitat hidupan liar di sepanjang sungai, tetapi juga memainkan peranan positif terhadap koridor hidupan liar pedalaman, sanktuari terbabit dan kawasan menghadapi ancaman banjir.

Ketua Pemuliharaan Hutan, Jabatan

Dari kiri: Juan Aranols, Mashor dan Jeffri di tapak Projek Kinabatangan RiLeaf.

Perhutanan Sabah, Datuk Mashor Mohd Jaini pula berkata, berbekalkan komitmen menanam sejuta pokok menjelang 2020, Projek RiLeaf Kinabatangan akan memberikan sumbangan besar ke arah memulihara hutan riparian di sepanjang Sungai Kinabatangan.

Inisiatif pemuliharaan oleh Nestlé, Projek RiLeaf Kinabatangan ditubuhkan tahun 2011 dan disokong YSD sejak 2014.

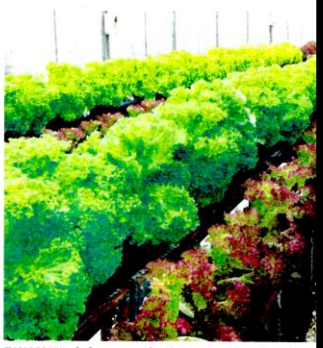
Projek ini berjaya mencapai sasaran sebelum ini menanam semula di kawasan seluas 2,500 hektar di sepanjang sungai (bersamaan lebih 3,500 padang bola sepak) pada tahun 2017, dengan 700,000 pokok.

Seiring kesan alam sekitarnya yang positif, Projek RiLeaf Kinabatangan juga berjaya memperkasakan masyarakat tempatan tinggal di sepanjang Sungai Kinabatangan, dengan peluang membina keupayaan dan meraih pendapatan tambahan menerusi Komuniti Anak Pokok Kinabatangan (KAPOK), pengeluar anak benih yang berpangkalan di dalam negara.

LAMPIRAN 7
UTUSAN MALAYSIA (MEGA AGRO): MUKA SURAT 28
TARIKH: 2 JANUARI 2019 (RABU)

"Teknologi ini mampu mengurangkan sisa racun kimia, pencemaran air dan tanah. Malah sayuran yang di taman melalui kaedah ini tidak terbantut pembesarannya ekoran perubahan cuaca ataupun penyusutan kawasan pertanian."

DR. MOHD SYAIFUDIN ABDUL RAHMAn menunjukkan teknologi kilang tanaman yang dibina di Pusat Penyelidikan Kejuruteraan, MARDI Serdang.



TANAMAN salad menggunakan komputer sepenuhnya berte[k]nologi pertanian persekitaran terkawal Mardi hari ini

INFO

- Kilang tersebut dilengkapi sistem kawalan dan pemantauan bersepadu termasuk sistem hidroponik bertingkat berautomasi
- Penggunaan diod pemancar cahaya (LED) bagi memberi cahaya kepada tumbuhan selain turut disediakan sistem robotik bagi proses semaian.
- Infrastruktur kilang tanaman bersaiz 80 kaki x 30 x 20 mampu menghasilkan 13,000 tanaman semusim iaitu antara 15 hingga 20 hari yang menyampai hampir dua ekar pengeluaran dengan anggaran pengeluaran 75 kilogram sehari iaitu 6:1 pengeluaran berbanding kaedah konvensional
- Sayuran ditanam secara bertingkat bagi menjimatkan ruang sekali gus membolehkan petani mengaut pulangan lumayan pada kos pengeluaran yang minimum.
- Penyelidikan juga menyumbang kepada pengurangan kos untuk elektrik, operasi dan sistem pengeluaran, penggunaan tenaga efektif dan bangunan serta infrastruktur.

Teknologi pertanian hasil empat kali ganda

Oleh AQILAH MIOR KAMARULBAID
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BIDANG pertanian masa depan tidak lagi harus bergantung pada konsep ruang tanah yang luas serta perlu turun ke lapangan untuk membajak dan menuai. Sebaliknya kelebihan tanah yang ada di negara ini diberikan kepada pembinaan infrastruktur seperti jalan raya, landasan kereta api mahupun lapangan terbang. Kemudahan tersebut menyokong pembangunan ekonomi dan membawa pulangan lumayan bagi rakyat dan juga pelancong sekali gus meningkatkan pendapatan negara.

Justeru, perkembangan teknologi pertanian kini membolehkan masyarakat tanpa mengira latar belakang mengusahakan sendiri tanaman walaupun di ruang yang terhad.

Menyedari tanaman seperti sayuran merupakan sumber utama makanan rakyat Malaysia, Institut Penyelidikan dan Kemajuan Pertanian Malaysia (MARDI) tidak melihat isu tanah terhad sebagai halangan untuk terus membantu petani atau individu menghasilkan tanaman yang bermutu tinggi sama ada untuk kegunaan sendiri atau dijual.

Terbaharu, Pusat Penyelidikan Kejuruteraan MARDI menemukan satu alternatif terbaik bagi memastikan negara masih kekal mampu mengeluarkan hasil pertanian melalui kilang tanaman tanah.

DR. MOHD SYAIFUDIN ABDUL RAHMAN memberikan penerangan tentang infrastruktur kilang tanaman yang dibina di Pusat Penyelidikan Kejuruteraan, MARDI , Serdang baru-baru ini.

Kilang tanaman merupakan sistem pengeluaran sayuran dalam bangunan yang semua elemen yang diperlukan seperti cahaya, suhu, gas rumah hijau iaitu gas karbon dioksida (CO_2) dan kelembapan di kawal secara tiruan dengan sokongan sistem kawalan pembajaan serta pengairan secara mekanisasi juga automasi.

Timbalan Pengarah Program Pertanian Tepat, Pusat Penyelidikan Kejuruteraan MARDI, **Dr. Mohd. Syaifudin Abdul Rahman** berkata, menerusi teknologi kilang tanaman itu juga memberi keperluan kepada jaminan dan keselamatan makanan.

"Teknologi ini mampu mengurangkan sisa racun kimia, pencemaran air dan tanah.

Malah sayuran yang di taman menerusi kaedah ini tidak terbantut pembesarannya ekoran perubahan cuaca ataupun penyusutan kawasan pertanian.

"Malah, tiada lagi isu kekurangan tanah pertanian yang sesuai selain dapat mengelak daripada berlakunya bencana alam," katanya yang ditemui di Serdang baru-baru ini.

Tambahnya, melalui kaedah penanaman di kilang tanaman mampu menghasilkan sayuran bernilai tinggi yang segar, bernutrisi dan bebas daripada semburan racun kimia.

Malah, mampu menghasilkan produktiviti sebanyak empat kali ganda atau lebih berbanding kaedah konvensional kerana konsep baharu tersebut tidak dipengaruhi oleh persekitaran dan perubahan cuaca.

Bukan itu sahaja, kaedah ini juga membantu petani generasi baharu mampu menjana pendapatan lumayan.

Ini kerana teknik itu menghasilkan pengeluaran yang mampan dan dalam masa sama menjimatkan kos ekoran tanaman dapat dilaksanakan tanpa faktor kesuburan tanah.

Tanaman yang sesuai melalui kaedah ini adalah salad dan tomato.

Kaedah itu juga mampu sekali menarik minat golongan muda menceburi bidang pertanian.

"Kaedah ini membolehkan petani mendapatkan hasil tani sepanjang tahun kerana terhindar daripada perubahan cuaca ekstrem seperti banjir, ribut, kemarau atau hujan lebat.

"Malah penggunaan air dan baja yang efektif membantu petani menjimatkan kos selain amat mudah digunakan tanpa perlu latihan kursus kerana ia dicipta bagi membolehkan suasana pertanian bandar tercipta.

"Lebih menarik, ia boleh dituai mengikut masa dan keadaan yang dikehendaki. Ini membolehkan petani mendapat hasil berganda bagi seunit kawasan," ujarnya.

MARDI juga mem[perkenalkan teknologi terkini,Tube-Plot yang] merupakan sistem[im tenaman bertingkat bercirikan moden dan] versatil menggun[akan sistem pengairan titis yang direka bentuk] sesuai untuk ruang[ng terhad - GAMBAR HIASAN.

Tambahnya, penyelidik MARDI berjaya menjalankan penyelidikan dan pembangunan (R&D) bagi meningkatkan hasil pengeluaran sayuran yang mampan menerusi sistem semaian dan tanaman menggunakan sistem pencahayaan daripada lampu yang mampu mencegah tanaman daripada serangga perosak dan penyakit.

Teknologi terbaharu itu memberi kesan positif kepada sosial dan alam sekitar dengan memupuk kesedaran kesihatan ke atas sisa baki kimia, indeks bangunan hijau (GBI), persijilan Skim Amalan Pertanian Baik Malaysia (myGAP) dan persijilan Amalan Pengilangan Baik (GMP) selain membantu meningkat ekonomi serta diterima oleh komuniti bandar.

Tambah Mohd. Syaifudin, prototaip kilang tanaman telah dibina sejak 2014 dan simulator kilang dan kilang tanaman berskala besar dibina bermula 2016 bukan sahaja infrastruktur kos efektif malah menjimatkan tenaga.

Katanya, kesan pencahayaan memberi kesan terhadap pertumbwuhan kualiti salad, justeru pemilihan LED yang sesuai wmembantu menghasilkan salad yang berkualiti tinggi.

LAMPIRAN 8
NEW STRAITS TIMES (HIGHERED /PROGRAMME): MUKA SURAT 42
TARIKH: 2 JANUARI 2019 (RABU)

Making sense out of STEM and IoT

ROZANA SANI
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THE alleged waning interest in science, technology, engineering and mathematics (STEM) among school students have been lamented by various quarters.

Among the main issues students face is that the teaching and learning of STEM in schools generally present very little excitement and is very much a one-sided affair in the classroom, with teachers providing the information and knowledge. As the delivery is not engaging, many students are not able to grasp scientific concepts and their relevance in every day life, hence, the disinterest in STEM.

The situation is worse at schools in rural or semi-urban areas, where exposure to all things STEM and the chance to have exploratory activities to learn about STEM are hard to come by.

Members of the Graduate Academic Competence Empowerment Programme (Program Pemerkasaan Kompetensi Akademik Siswazah) at Faculty of Engineering and Built Environment (FEBE) in Universiti Kebangsaan Malaysia (UKM), also known as PKAS, took the matter into their own hands and decided to immerse students at three secondary schools in Sepang, Selangor, in the world of STEM.

The schools — SMK Sungai Rawang, SMK Pantai Sepang Putra and SMK Sungai Pelek — participated in a five-phase mentor-mentee project that kicked off in October 2017 and lasted until December last year.

PKAS director Dr Kalaivani Chellappan said PKAS was an interdisciplinary research group focusing on Industry 4.0 — particularly the Internet of Things (IoT) automation in healthcare, education and industry safety, and productivity improvement.

"Working closely with UKM's Faculty of Education and the Selangor State Education Department (JPNS), we emphasised the importance of STEM and highlighted to teachers, parents and students how knowledge and skills in STEM will bring us into the era of the Fourth Industrial Revolution (4IR)," she said.

"With the help of mentors comprising undergraduates and graduates, the UKM-JPNS Mentor-Mentee: STEM-IoT programme aimed to instil interest in students in STEM, and show them the potential of technology and how it could shape their career choices in the future."

The programme started with awareness talks and a STEM carnival that were aimed to introduce the concept of STEM and the development of STEM-based innovations.

Dr Kalaivani Chellappan

Muhammad Hazid Ikhwan Zulkarnain

Nur Iman Mohd Shahrel Faizal

Nur Iman Mohd Shahrel Faizal (sitting) demonstrating how the Smart Door System works while her mentor, Nor Shahirah Shaik Amir (standing right) looks on.

Muhammad Hazid Ikhwan Zulkarnain (left) and his mentor, Mohd Syakir Fathillah with his invention, the Smart Queue Management System. PIC BY AZHAR RAMLI

It then progressed to the selection of 20 Form 2 students from each school to enter a STEM design thinking challenge. It saw the students participating in embedded systems and circuit design workshops as well as in workshops where they learned to develop mobile applications that could interface with their designs.

This was followed by mentoring sessions by UKM undergraduate and postgraduate students, who guided their mentees for the STEM-IoT 2018 competition, which required them to come up with a solution for urban farming.

The subject is close to them as they are members of an agricultural-based community in Sepang.

"Through the competition, we could test their understanding and assess their level of thinking. We also noted students with potential to attend the STEM-IoT School Attachment programme at the UKM main campus in Bangi for three weeks starting from Dec 2," said Kalaivani, adding that the enthusiasm and seriousness of mentees in the programme made the selection process a challenge.

Muhammad Hazid Ikhwan Zulkarnain, 14, from SMK Sungai Rawang and Nur Iman Mohd Shahrel Faizal, 14, from SMK Pantai Sepang Putra were selected as apprentices at UKM's FEBE.

For three weeks, Hazid and Iman stayed at the university hostel and led the life of university students, which included getting to the labs via the UKM bus transport and working from 9am to 6pm on their STEM-IoT projects.

Under the tutelage of mentor Mohd Syakir Fathillah, a UKM research officer who has a electronic systems engineering masters degree, Hazid came up with an android-based smart queue management system that he said was ideal for the healthcare service industry.

"The solution allows patients to be notified of their turn and the room where they will be treated through their mobile phones. They no longer need to wait in front of the LED signage in the clinic for their numbers to be displayed.

"I used Arduino, the open-source electronic prototyping platform enabling users to create interactive electronic objects, developed a mobile app, and learned about the use of Web servers among others," he said at a sharing session.

During the first week of his attachment, Hazid mostly followed Syakir's instructions.

By the second week, however, Hazid was confident and independent enough to work out the problems and try his hand at coming up with solutions.

"This programme helped me to think critically to develop the app and work out the solution with the knowledge and skills that I have acquired. I hope more students can experience this."

Iman, meanwhile developed a smart door system that would enable a house owner to lock or unlock doors without being physically present through the use of a mobile application.

Her mentor, Nor Shahirah Shaik Amir — a post graduate student in electrical, electronic and systems, said Iman blossomed from being a quiet girl to someone who could discuss and argue out ideas in the lab in the three-week period.

"She became a proactive and self-motivated student — qualities that even university students find hard to acquire. Her exposure to IoT and systems integration as well as technical skills enabled her to be more creative," said Nor Shahirah.

Iman believes other kids too should have the opportunity to experience the programme.

"Before this, I thought going to university was just a process after secondary school. From my experience, I can see that being at university exposes you to beyond classroom experience — there are so many avenues for exploration of all kinds of knowledge here."

Sepang Education Department assistant director Mohd Alias Awang said the mentor-mentee programme had given a positive impact on the schools.

"It would be delightful if the programme continues. Effective mentoring processes enable students to continuously explore STEM in the future. With mentoring added with patience, hard work and a high level of discipline, it is not impossible for local scientists to be born from rural areas," he said, adding that Iman and Hazid had to be role models for their friends and schoolmates and inspire their interest in STEM.

Kalaivani said PKAS intended to continue and expand the mentor-mentee programme in future.

"PKAS is confident that quality university students are moulded from those who have a strong STEM interest and knowledge at the school level. PKAS also trains students and alumni of UKM to become entrepreneurs and technopreneurs in their respective fields of expertise. PKAS aims to produce high quality human capital in terms of scientific integrity as well as willingness to serve the country in the future."

LAMPIRAN 9
SINAR HARIAN (FORUM): MUKA SURAT 18
TARIKH: 2 JANUARI 2019 (RABU)

Pelihara alam sekitar

SAUDARA PENGARANG,

BARU-BARU ini beberapa akhbar mendedahkan mengenai pencerobohan kawasan hutan bakau di Batu Maung, Pulau Pinang, yang dilakukan pihak tidak bertanggungjawab.

Ekoran pendedahan itu, kerajaan negeri telah mengheret pihak berkenaan ke mahkamah di bawah Akta Jalan, Parit dan Bangunan yang mengenakan hukuman denda maksimum RM50,000.

Nampaknya, kerajaan negeri bersikap tidak serius apabila menggunakan akta yang mengenakan hukuman ringan sedangkan pihak terbabit boleh didakwa di bawah tiga hingga lima undang-undang lain yang hukumannya lebih berat.

Kes pihak yang merosakkan alam sekitar dikenakan hukuman ringan bukanlah kali pertama berlaku, kerana banyak kes lain yang didedahkan pelbagai pihak sebelum ini. Apa yang berlaku itu berpunca daripada kelemahan penguatkuasaan oleh agensi dan jabatan di bawah kerajaan negeri yang bertanggungjawab menjaga alam sekitar.

Pembangunan lestari bergantung kepada tiga aspek iaitu penyertaan pertubuhan bukan kerajaan (NGO) dan orang ramai dalam proses membuat keputusan, kemajuan ekonomi serta pemuliharaan alam sekitar. Setakat ini, kerajaan negeri hanya berjaya dalam aspek kemajuan ekonomi terutamanya dalam pembinaan hotel dan kondominium mewah, tetapi telah gagal dalam dua aspek lain.

Kegagalan kerajaan Pulau Pinang mengambil kira pendapat NGO dan orang ramai dapat dilihat ketika kerajaan negeri menggubal Pelan Induk Pengangkutan Pulau Pinang (PTMP). Walaupun dikritik pelbagai pihak kerana pelan itu terdapat pelbagai kelemahan, kerajaan negeri masih berdegil untuk meneruskan projek berkenaan.

Kenapakah pendapat pihak berkepentingan tidak diambil kira dalam menggubal pelan baharu itu? Sepatutnya PTMP ditangguhkan sehingga pihak berkepentingan dan orang awam berpuas hati. Jika ini tidak diendahkan, bermakna hasrat kerajaan negeri mewujudkan pembangunan lestari hanyalah satu janji kosong.

Mengenai pemuliharaan alam sekitar pula, kerajaan Pulau Pinang telah gagal dalam aspek ini apabila berlaku kejadian tanah runtuh yang berpunca dari pembangunan lereng bukit di Tanjung Bungah dan Bukit Kukus.

Malangnya, kerajaan Pulau Pinang mengambil mudah tragedi tersebut dan tidak serius dalam menguatkuasakan undang-undang bagi memastikan kejadian sama tidak berulang. Cukup malang, NGO dan individu yang mengkritik dilabelkan sebagai 'pembangkang' dan mempunyai agenda peribadi untuk menggulingkan kerajaan negeri.

NICOLE WONG SIAW TING
Ketua Pemuda MCA

LAMPIRAN 10
THE STAR (NATION): MUKA SURAT 1 & 2
TARIKH: 1 JANUARI 2019 (SELASA)

A healthy new year

A slew of measures that takes off today is set to bring smiles to the people, the poor and public transport users. While the smoking ban may result in cleaner air and healthier lungs, not everybody is happy. Despite some confusion, it's all systems go for the no-smoking ruling. > See reports on Pages 4 and 6

Smoking ban enforced in all restaurants and eateries

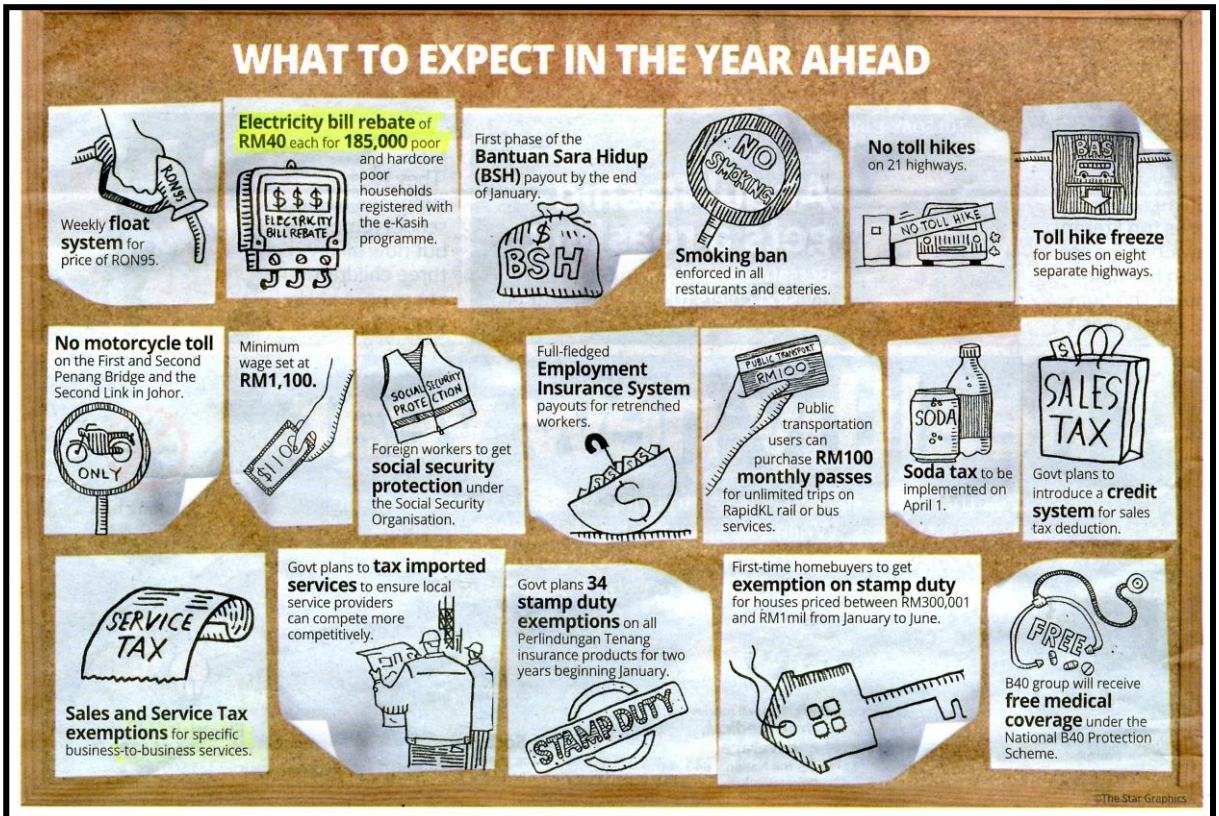
Public transportation users can purchase **RM100 monthly passes** for unlimited trips on RapidKL rail or bus services

B40 group will receive **free medical coverage** under the National B40 Protection Scheme

Soda tax to be implemented on April 1

Electricity bill rebate of RM40 each for 185,000 poor and hardcore poor households registered with the e-Kasih programme

LAMPIRAN 10 (SAMB.)
THE STAR (NATION): MUKA SURAT 1 & 2
TARIKH: 1 JANUARI 2019 (SELASA)



Mixed reaction to new policies

M'sians laud financial aid measures but worry over soda tax, petrol prices

By FATIMAH ZAINAL
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PETALING JAYA: As Malaysians ring in the new year, 2019 will see a set of at least 15 policies being rolled out.

They cover a variety of areas from health to workers' welfare to transportation and social security nets.

Starting today, smokers must stand three metres away from all eateries and restaurants before lighting up their cigarettes.

Malaysians nationwide will also enjoy a streamlined minimum wage of RM1,100 starting this month.

Making a comeback starting the first week of January is the weekly managed float system for the price of RON95 petrol, which was formerly utilised by the Barisan Nasional administration.

The Bantuan Sara Hidup (BSH) payout, formerly known as BR1M (1Malaysia People's Aid) and also introduced by Barisan, will be made before the end of January.

Software engineer Tan En Yi, 34, said he was looking forward to the smoking ban at eateries being implemented today.

"This is a good policy and should have been introduced a long time ago but I'm glad that it's in place now," said Tan, who is also a non-smoker.

"One thing that I'm not looking forward to is the weekly float system for RON95."

His views were echoed by Zainuddin Mohd Sayuti, 60, who supported the smoking ban as it prioritises public health.

"I'm a smoker but I support this new policy. Second-hand smoke is dangerous to the public," he said.

In terms of what he wants to see in 2019, Zainuddin hopes for social media platforms to be regulated by the Communications and Multimedia Ministry.

"This is because platforms such as WhatsApp have been used to fan racial tensions through the spread of negative viral messages.

"I hope something can be done," he said.

In the same vein, software engineer Loo Wai Min, 34, also wants to see better racial harmony in 2019.

He said racially charged events such as the anti-Icerd (International Convention on the Elimination of All Forms of Racial Discrimination) rally on Dec 8 painted a picture of disunity among Malaysians.

Starting today, the B40 income bracket group will receive free health insurance and takaful protection under the National B40 Protection scheme.

The electricity rebate has also been doubled to RM40 each for 185,000 poor and hardcore poor households in the e-Kasih system.

But starting April 1, sweet-toothed Malaysians will be paying more for sugary drinks as the soda tax is set to be implemented.

Lorry driver Harun Abdul Rahman, 48, however, is worried about the cost of living going up.

"I'm worried about the weekly float system for petrol and also the new soda tax. They will drive up expenses.

"The prices of things keep going up but my wage stays the same so I'm not looking forward to those changes," said the father of four.

On a more positive side, travellers are set to take more cost-efficient journeys as toll hikes are frozen for 21 highways and a RM100 monthly pass for unlimited trips on RapidKL rail or bus services is introduced.

There will also be no motorcycle toll on the First and Second Penang Bridge and the Second Link in Johor, saving motorcyclists RM1.40 and RM1.70 for the First and Second bridges in Penang and RM1.10 toll on the Malaysian side of the Second Link.

There is also a toll hike freeze for buses on eight separate highways.

For businesses, there will be Sales and Service Tax (SST) exemptions for specific business-to-business services and a credit system for sales tax deductions will also be introduced.

The government also plans to tax imported services, including online services, to ensure fair competition between local and overseas service providers.

The first six months of 2019 from January to June will also see first-time house buyers getting a 100% exemption in stamp duty payment for houses priced between RM300,001 and RM1mil.

The government has also agreed to exempt the real property gains tax (RPGT) to individual Malaysian citizens who dispose of their properties at a consideration price of RM200,000 and below.

The government will also exempt 34 stamp duties on all Perlindungan Tenang insurance products, an affordable insurance and takaful scheme, for two years.

Foreign workers, including expatriates, are also set to be covered under the Social Security Organisation (Socso).

A 33-year-old Sri Lankan expatriate who wished to be anonymous welcomed the move.

"All this while I've seen mostly policies affecting Malaysians but this is a good move for foreign workers like myself," he said.

LAMPIRAN 11
NEW STRAITS TIMES (SCHOOL NEWS): MUKA SURAT 37
TARIKH: 1 JANUARI 2019 (SELASA)

Art students win trip to Beijing for science show

ATIQAH MAT SENIN AND MURNIATI ABU KARIM
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Two students from Sekolah Menengah Kebangsaan Tun Abdul Razak, Sarawak were crowned as champions at the recent 2018 Petrosains Science Show Competition. Showcasing a scientific theory on why honeycombs are hexagonal, Pink Rakim and Carlos Tinos Kirip, both 18, also took home the best presenters award.

The duo, who called themselves Mysterious Hexagon, won a trip to the China Science and Technology Museum in Beijing, RM10,000 cash prize, a trophy and certificates.

Curious about honeycombs, Pink said: "We were fascinated by this and wondered about the hexagonal shapes made by bees. This sparked our interest in finding out more about the natural phenomenon."

"Based on our readings, we found out that hexagons are the strongest shape to hold the honeycombs together. Using triangles, squares and circles would leave gaps between the honeycombs making it easy to collapse," he added.

Pink and Carlos Tinos stole the show with their hands-on experiment and clear demonstration which was easily understood by the audience. Interestingly, both of them are arts stream students.

According to team coordinator and Chemistry teacher Tchong Fui Mui, one of her challenges is that both students have little background in the science subject. However for her, learning science does not stop in school, it is actually something that can be learned in everyday life.

"Both of them needed guidance to explore and understand the topic. Besides, they are in the middle of preparing their coursework for Sijil Tinggi Pelajaran Malaysia (STPM) so, time management is crucial.

"They were willing to take up the challenge and join a science competition which is something outside their comfort zone. That really made me proud," she said.

Pink also said: "Both of us share the same dormitory room and we would rehearse our lines together in our free time including while doing our laundry."

"However, we still need to keep up our academic so that we don't fall behind in class. Besides, both of us are quite busy preparing our STPM coursework," he said.

The Education Ministry's director of Education Planning, Policy and Research Division Ahmad Rafee Che Kassim was at the final showdown together with Petrosains chief executive officer Fedora Zulkifli, a panel of judges from Universiti Putra Malaysia, Sunway University, and management personnel from Petrosains. Bank Islam is a collaborator and co-sponsor for this competition.

In his speech, Ahmad Rafee said: "The creation of a scientific and progressive nation which will produce skilled workforce in science and technology has been identified as an important component in the development and economic growth of the country."

In its tenth year, the annual competition was first held by Petrosains in 2009 to support the nation's education agenda in popularising science and promoting effective learning methods in science for students.

During the finals, eight secondary schools battled it out to creatively present a science show performance consisting of an experiment or demonstration to illustrate a scientific theory they have learnt.

Awards at the competition included Best Script Award, WOW Demonstration Award, Most Promising Talent, Social Media Award, and Bank Islam's Special Award for School with Highest Number of Participation.

(From left) Pink Rakim, Carlos Tinos Kirip and Tchong Fui Mui from Sekolah Menengah Kebangsaan Tun Abdul Razak, Sarawak who won the 2018 Petrosains Science Show Competition.

LAMPIRAN 12
KOSMO (INFINITI): MUKA SURAT 28 & 29
TARIKH: 2 JANUARI 2019 (RABU)

SPESIES penyu hijau tergolong dalam keluarga Cheloniidae.

SARANG penyu hijau semakin terancam apabila paras air laut semakin meningkat.

KIRA-KIRA 93 peratus anak penyu hijau yang lahir menjelang tahun 2100 nanti adalah daripada jantina betina.

Suhu menentukan jantina

RONA *alam*

POLA cuaca yang berubah drastik disebabkan perubahan iklim memberi impak yang sangat besar bukan sahaja terhadap alam sekitar malah hidupan marin.

Tanpa kita sedari, faktor tersebut turut mempengaruhi jantina segelintir hidupan laut termasuk penyu hijau.

Baru-baru ini, sekumpulan penyelidik mendedahkan, perubahan iklim menyebabkan lebih 93 peratus anak penyu hijau yang lahir menjelang tahun 2100 nanti adalah betina.

Sehingga kini, terdapat kira-kira 52 peratus bersamaan satu per tujuh spesies anak penyu hijau adalah daripada jantina betina.

Jantina anak penyu yang baru dilahirkan itu ditentukan oleh suhu.

Justeru, kajian University of Exeter dan Pusat Sains Marin dan Alam Sekitar Portugal menunjukkan senario suhu panas yang diramal oleh Intergovernmental Panel on Climate Change (IPCC) menyebabkan 76 hingga 93 peratus anak penyu hijau adalah betina.

Angka berkenaan spesifik terhadap kajian lapangan yang dilakukan di Guinea-Bissau, Afrika Barat, namun para penyelidik meramal gambaran yang hampir sama di peringkat global.

Nisbah perubahan gender hidupan marin terbabit akhirnya mendorong lebih banyak kawanan penyu betina dan meningkatkan populasi anak penyu hijau.

Kajian itu turut meramal peningkatan paras air laut akan menenggelamkan 33 hingga 43 sarang sedia ada yang digunakan oleh penyu hijau di pantai-pantai lokasi kajian itu dilakukan.

Penyelidik di Pusat Ekologi dan Konservasi University of Exeter's Penryn Campus di Cornwall, Britain, Dr. Rita Patricio berkata, penyu hijau akan berdepan masalah pada masa depan disebabkan kehilangan habitat dan suhu yang semakin meningkat.

"Dapatan kajian kami menyarankan penempatan populasi habitat penyu hijau di Bijagos Archipelago, Guinea-Bissau dapat mengurangkan kesan perubahan cuaca sehingga tahun 2100.

"Suhu yang lebih sejuk lebih-lebih lagi di penghujung musim mengawan dan sesetengah kawasan redup menjamin anak penyu hijau yang dilahirkan itu adalah jantan.

"Biarpun peningkatan suhu itu akan mendorong lebih banyak anak penyu hijau betina dilahirkan dengan kawanan sebanyak 32 hingga 64 peratus menjelang tahun 2120 nanti, kadar kematian dalam telur juga meningkat lebih tinggi ketika suhu panas," jelasnya.

Tambah Patricio, peningkatan suhu yang berterusan itu dikhuatiri menyebabkan peratusan telur penyu hijau untuk menetas dan terus hidup adalah hampir mustahil.

Pasukan penyelidik yang turut disertai Institut Biodiversiti dan Kawasan Perlindungan Guinea-Bissau turut memberitahu, habitat penyu hijau di pinggir laut yang dinaiki air, tidak boleh sewenang-wenangnya dijadikan sarang kawanan.

"Pengunduran pinggir laut mungkin boleh berlaku di sesetengah kawasan, namun penyu yang kami kaji ini bersarang di pulau kecil. Maka

LAMPIRAN 12 (SAMB.)
KOSMO (INFINITI): MUKA SURAT 28 & 29
TARIKH: 2 JANUARI 2019 (RABU)

PERUBAHAN iklim turut memberikan pengaruh jantina penyu hijau yang dilahirkan.

a anak penyu hijau

terdapat limitasi terhadap sejauh mana pantai itu boleh didiami.

"Di sesetengah kawasan pula terdapat halangan semula jadi atau pembinaan yang menghalang pantai daripada bergerak ke dalam," ujarnya.

Bijagos Archipelago merupakan habitat penting untuk penyu hijau yang terletak di Afrika.

Ia merupakan kawasan membiak baka paling utama bagi spesies itu di Selatan Atlantik.

SUHU yang lebih sejuk menjamin anak penyu yang dilahirkan adalah jantan.

LAMPIRAN 13
UTUSAN MALAYSIA (LUAR NEGARA): MUKA SURAT 44
TARIKH: 2 JANUARI 2019 (RABU)

Kapal angkasa NASA memasuki orbit Bennu

TAMPA 1 Jan. - Pentadbiran Angkasa dan Aeronautik Kebangsaan (NASA) mencatat sejarah apabila kapal angkasa miliknya berjaya memasuki orbit sebuah asteroid yang dikenali sebagai Bennu.

Memetik laporan *AFP*, kapal angkasa yang dinamakan OSIRIS-REx adalah misi angkasa pertama Amerika Syarikat (AS) yang dilaksana untuk mengunjungi asteroid dan membawa sampel debu pulang ke Bumi.

Asteroid tersebut dikenal pasti sebagai objek paling kecil yang pernah dikelilingi kapal angkasa setakat ini.

Kapal angkasa tanpa pemandu yang bernilai AS$800 juta (RM3.3 bilion) dilancarkan dua tahun lalu di Cape Canaveral, Florida dan tiba ke destinasinya pada 3 Disember lepas selepas menempuh perjalanan sejauh 110 juta kilometer.

Setelah berminggu-minggu kajian dilakukan, kapal angkasa tersebut bergerak memasuki orbit Bennu pada pukul 2.43 petang waktu tempatan, semalam.

Asteroid tersebut dianggarkan berkeluasan 500 meter.

Ketua Penyiasat OSIRIS-Rex di Universiti Arizona, Dante Lauretta berkata, kejayaan itu merupakan hasil perancangan yang dilakukan bertahun lamanya.

"Memasuki orbit sekitar Bennu adalah satu pencapaian yang dirancang pasukan kami sekian lama," katanya.

NASA menganggap kejayaan itu sebagai sejarah baharu dalam peradaban manusia kerana belum ada mana-mana kapal angkasa yang berjaya mengelilingi objek kecil di ruang angkasa lepada pada jarak dekat.

Pada 2016, kapal Agensi Angkasa Eropah berjaya mengelilingi orbit sebuah komet pada jarak jauh, kira-kira empat batu daripada pusat komet tersebut.

OSIRIS-REX dilancar dalam misi angkasa pertama Amerika Syarikat untuk menerokai asteroid. - AGENSI

LAMPIRAN 14
THE STAR (WORLD): MUKA SURAT 18
TARIKH: 2 JANUARI 2019 (RABU)

Nasa rings in historic New Year feat

Agency welcomes 2019 with flyby of farthest world ever explored by humans

TAMPA: Nasa rang in the New Year with a historic flyby of the farthest, and quite possibly the oldest, cosmic body ever explored by humankind – a tiny, distant world called Ultima Thule (pronounced TOO-lee) – in the hopes of learning more about how planets took shape.

"Go New Horizons!" said lead scientist Alan Stern as a crowd including kids dressed in space costumes blew party horns and cheered at the Johns Hopkins Applied Physics Laboratory in Maryland to mark the moment at 12.33am local time when the New Horizons spacecraft aimed its cameras at the space rock four billion miles (6.4 billion kilometres) away in a dark and frigid region of space known as the Kuiper Belt.

Offering scientists the first up-close look at an ancient building block of planets, the flyby took place about a billion miles beyond Pluto, which was until now the most faraway world ever visited up close by a spacecraft. Real-time video of the actual flyby was impossible, since it takes more than six hours for a signal sent from Earth to reach the spaceship, and another six hours for the response to arrive.

The first signal back to Earth should come about 10 hours after the flyby, around 9.45am, letting Nasa know if New Horizons survived the risky, high-speed encounter.

The spacecraft aimed to make its closest approach within 2,200 miles (3,540km) of the surface of Ultima Thule.

"This is a night none of us are going to forget," said Queen guitarist Brian May – who also holds an advanced degree in astrophysics – and who recorded a solo track to honour the spacecraft and its spirit of exploration.

Stern said Ultima Thule is unique because it is a relic from the early days of the solar system and could provide answers about the origins of other planets.

"The object is in such a deep freeze that it is perfectly preserved from its original formation," he said.

"Everything we are going to learn about Ultima – from its composition to its geology to how it was originally assembled, whether it has satellites and an atmosphere and those kinds of things – are going to teach us about the original formation conditions of objects in the solar system."

Scientists are not sure what Ultima Thule looks like – whether it is cratered or smooth, or even if it is a single object or a cluster.

It was discovered in 2014 with the help of the Hubble Space Telescope, and is believed to be 12-20 miles (19.3km - 32km) in size.

A blurred and pixelated image released on Monday, taken from 1.2 million miles away, has intrigued scientists because it appears to show an elongated blob, not a round space rock.

The spaceship was to collect 900 images over the course of a few seconds as it shaved by. Even clearer images should arrive over the next three days.

"Now it is just a matter of time to see the data coming down," said deputy project scientist John Spencer of the Southwest Research Institute.

Scientists decided to study Ultima Thule with New Horizons after the spaceship, which launched in 2006, completed its main mission of flying by Pluto in 2015, returning the most detailed images ever taken of the dwarf planet. — AFP

Incredible achievement: Stern (centre) celebrating with schoolchildren at the exact moment that the New Horizons spacecraft made the closest approach of Kuiper Belt object Ultima Thule at Johns Hopkins University Applied Physics Laboratory in Laurel, Maryland. — AFP

LAMPIRAN 15
BERITA HARIAN (DUNIA): MUKA SURAT 47
TARIKH: 1 JANUARI 2019 (SELASA)

BH DUNIA

Penduduk dan anggota penyelamat *mencari mangsa tanah runtuh di Kampung Sirnaresmi, Sukabumi, Indonesia.*

2019 bermula dengan tragedi

Bencana alam, keganasan buka tirai tahun baharu

Jakarta

Tragedi disebabkan bencana alam dan keganasan memulakan 2019, meskipun sambutan tahun baharu rata-rata diraikan dengan meriah di seluruh dunia.

Di **Jawa Barat,** Indonesia, sembilan orang maut dan puluhan lagi hilang di barat Indonesia kerana tanah runtuh berpunca daripada hujan lebat, kata pihak berkuasa.

Anggota mencari dan menyelamat telah menemui mayat mangsa terbabit dan sedang mencari 34 lagi penduduk yang hilang, kata pegawai agensi menangani bencana.

"Jalan sempit yang menuju ke tempat kejadian menyebabkan pasukan menyelamat, logistik dan ambulans terkandas beberapa jam," katanya ketika operasi mencari diteruskan pagi semalam.

Di **Bangkok,** satu lagi tragedi menyaksikan seorang lelaki tempatan menembak mati enam anggota keluarganya termasuk anak-anaknya ketika parti tahun baharu berlangsung, sebelum membunuh diri, kata polis.

Layanan dingin

Kejadian berlaku selepas tengah malam ketika Sucheep Sornsung menyertai keluarga isterinya untuk menyambut Tahun Baru bersama di wilayah Chumphon.

"Semua mangsa adalah anggota keluarganya termasuk anak lelakinya yang berusia sembilan tahun dan anak perempuannya, enam tahun. Dia marah kerana tidak disambut mesra oleh keluarga isterinya," kata Leftenan Kolonel Larp Kampapan.

Di **Tokyo**, sembilan orang cedera dan seorang parah selepas seorang lelaki yang memandu kenderaan sengaja merempuh orang ramai yang sedang meraikan Tahun Baru di satu kawasan popular di ibu negara itu.

Lelaki berusia 21 tahun dikenali sebagai Kazuhiro Kusakabe memandu sebuah kereta kecil memasuki Jalan Takeshita di kawasan mewah Harajuku, Tokyo, 10 minit selepas tengah malam, kata jurucakap polis.

Balas dendam

Stesen televisyen NHK melaporkan, Kusabake memberitahu polis dia bertindak demikian kerana membalas dendam, tetapi enggan memberitahu butir lebih lanjut.

NHK menyiarkan gambar kereta itu yang pecah bahagian depan manakala anggota perubatan membawa mangsa dengan pengusung masuk ke dalam ambulans.

Sementara itu, di **London,** polis menyatakan bahawa tiga orang cedera selepas diserang dengan pisau.

Mangsa adalah seorang lelaki, wanita dan anggota polis yang sedang dirawat atas kecederaan mereka selepas kena tikam di stesen kereta api Victoria, Manchester, kata polis.

Seorang saksi, Sam Clack, 38, yang juga seorang produser rancangan BBC, memetik suspek yang telah ditahan sebagai berkata:

"Selagi kamu terus mengebom negara lain, perkara seperti ini akan terus berlaku."

Di **Amsterdam,** sebuah dewan di Lapangan terbang Schiphol dikosongkan untuk beberapa ketika selepas seorang lelaki mendakwa memiliki sebutir bom.

Bagaimanapun, tiada bahan letupan yang ditemui di lapangan terbang itu dan polis memberitahu bahawa lelaki yang sebenarnya ditahan adalah seorang warga Kanada. Polis tidak mendedahkan lebih lanjut identiti suspek. Lelaki itu kemudian ditahan. **AGENSI**

LAMPIRAN 16
THE STAR (WORLD): MUKA SURAT 24
TARIKH: 1 JANUARI 2019 (SELASA)

Spaceship zooms towards distant world

TAMPA: A Nasa spaceship is zooming towards the farthest, and quite possibly the oldest, cosmic body ever photographed by humankind, a tiny, distant world called Ultima Thule some 6.4 billion kilometres away.

The US space agency will ring in the New Year with a live online broadcast to mark the historic flyby of the mysterious object in a dark and frigid region of space known as the Kuiper Belt at 12.33am on Jan 1.

A guitar anthem recorded by legendary Queen guitarist Brian May – who also holds an advanced degree in astrophysics – will be released just after midnight to accompany a video simulation of the flyby, as Nasa commentators describe the close pass on *www.nasa.gov/nasalive*.

Real-time video of the actual flyby is impossible, since it takes more than six hours for a signal sent from Earth to reach the spaceship, named New Horizons, and another six hours for the response to arrive.

But if all goes well, the first images should be in hand by the end of New Year's Day.

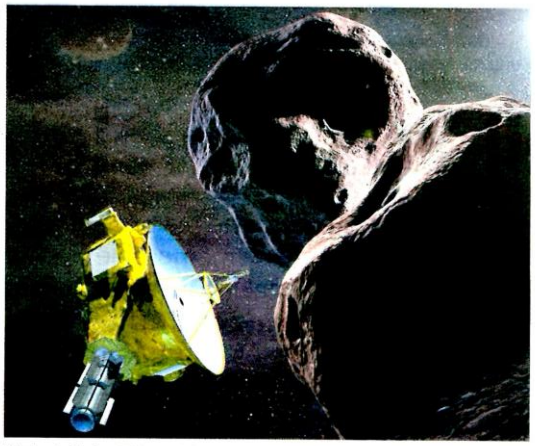
And judging by the latest tweet from Alan Stern, the lead scientist on the New Horizons mission, the excitement among team members is palpable.

"IT'S HAPPENING!! Flyby is upon us! @NewHorizons2015 is healthy and on course! The farthest exploration of worlds in history!" he wrote on Saturday.

Scientists are not sure what Ultima Thule (pronounced TOO-lee) looks like – whether it is round or oblong or even if it is a single object or a cluster.

It was discovered in 2014 with the help of the Hubble Space Telescope, and is believed to be 20km-30km in size.

Scientists decided to study it with New Horizons after the spaceship, which launched in 2006, completed its main mission of flying by Pluto in 2015, returning the most detailed images ever taken of the dwarf planet. — AFP



Historic flyby: This artist's illustration shows the New Horizons spacecraft encountering 'Ultima Thule' – a Kuiper Belt object that orbits one billion miles beyond Pluto. — AFP

LAMPIRAN 17
THE STAR (HEALTH): MUKA SURAT 16
TARIKH: 1 JANUARI 2019 (SELASA)

Environmental impact on health

THE World Health Organization (WHO) defines the environment in relation to health as "all the physical, chemical, and biological factors external to a person, and all the related behaviours".

There's no avoiding interaction with the environment as we go about our daily business of living. And as the world changes and gets more polluted, these environmental factors will inevitably affect our health.

Air quality

Air pollution has become a major cause of death and disease worldwide.

Pollutants in the air that have been identified as major culprits include particulate matter (PM), ozone (O3), nitrogen dioxide (NO2) and sulphur dioxide (SO2).

WHO has estimated that approximately 4.2 million deaths worldwide are linked to air pollution, mainly from heart disease, stroke, lung disease, lung cancer and acute lung infections in children.

The estimated figures:

- 29% of all deaths and disease from lung cancer
- 24% of all deaths from stroke
- 25% of all deaths and disease from ischaemic heart disease
- 43% of all deaths and disease from chronic obstructive pulmonary disease

Water quality

This applies to both drinking and "other" water.

Contamination of such waters can potentially cause mild to severe illness. The source of contaminants are myriad, and could include biological contaminants, discharge of waste, industrial and radioactive waste, excessive use of pesticides, fertilisers and leakage from water tanks.

Biological contaminants include bacterial, viral, fungal and parasitic sources, and could cause diseases like typhoid, cholera, encephalitis, hepatitis and gastrointestinal diseases.

Chemical sources are myriad, and depends on the type of chemicals as well as location of the leaks.

Air pollution can increase the risk of lung diseases, heart diseases, adverse pregnancy outcomes (such as preterm birth), diabetes and even death. — AFP

The built environment

Even this has a major impact on health. Consider the implications of high-rise buildings with high density occupation and the effects on inhabitants.

Add to this the issues of drainage, waste disposal, transport access, physical activity patterns and access to resources, and it becomes a potential cauldron of trouble.

Climate change

Despite some prominent naysayers, climate change has a huge impact on health.

The phenomenon not only impacts sea level, it can influence the pattern and spread of infectious diseases and air quality.

And no surprise, the severity of natural disasters such as floods, droughts and storms will worsen with climate change.

All this points to the issue of preparedness. Are we planning for healthy environments to nurture and protect health?

Are we prepared to change to lessen the impact of climate change on the world?

Are we prepared for anything that nature throws at us, including flood and disaster preparedness?

LAMPIRAN 18
UTUSAN MALAYSIA (LUAR NEGARA): MUKA SURAT 43
TARIKH: 1 JANUARI 2019 (SELASA)

ASEAN

LETUSAN Gunung Berapi Anak Krakatau dilaporkan berhenti sejak kelmarin. – AGENSI

Tsunami Anak Krakatau 'amaran' kesiapsiagaan

JAKARTA 31 Dis. – Kejadian tsunami yang berpunca daripada Gunung Berapi Anak Krakatau di Selat Sunda minggu lalu memberi isyarat kepada dunia mengenai kelemahan kesiapsiagaan menghadapi bencana.

Hal demikian kerana alat amaran awal tsunami yang ada setakat ini hanya berupaya mengesan pergerakan yang berpunca daripada plat tektonik dan bukannya akibat gunung berapi.

Pakar-pakar seismologi berpendapat, sudah tiba masanya untuk mempergiatkan penyelidikan dan pembangunan (R&D) sistem amaran awal bencana supaya sistem itu dapat mengesan sebarang bencana dengan lebih baik.

Seorang pakar seismologi dari University of Southampton, Stephen Hicks berkata, insiden Selat Sunda telah 'mengajar' dunia mengenai faktor-faktor yang boleh mencetus tsunami selain gelongsoran yang diakibatkan gempa bumi.

"Kita perlu melakukan lebih banyak penyelidikan. Ini kerana dalam insiden-insiden sebelum ini tsunami diakibatkan oleh gempa bumi namun peristiwa Selat Sunda sesuatu yang di luar jangkaan para penyelidik," katanya.

Sementara itu, Ketua Penyelidik Institusi Bencana Antarabangsa Jepun, Fumihoko Inamura juga menyatakan kesangsian terhadap kemampuan sistem amaran awal tsunami yang dipasang di Jepun.

"Jepun mempunyai 111 gunung berapi aktif dan ditambah dengan kapasiti pengawasan letusan gunung berapi yang berupaya mengesan tsunami masih rendah," katanya.

Kebimbangan itu turut dicetuskan oleh Penasihat Jawatankuasa Pengurangan Risiko Bencana Filipina, Renato Solidum yang memberitahu, insiden Gunung Berapi Anak Krakatau telah membuka mata penduduk Filipina mengenai potensi berlakunya tsunami ekoran aktiviti yang disebabkan oleh gunung berapi.

Dalam pada itu, *Jakarta Post* melaporkan, letusan Gunung Berapi Anak Krakatau telah berhenti sejak semalam.

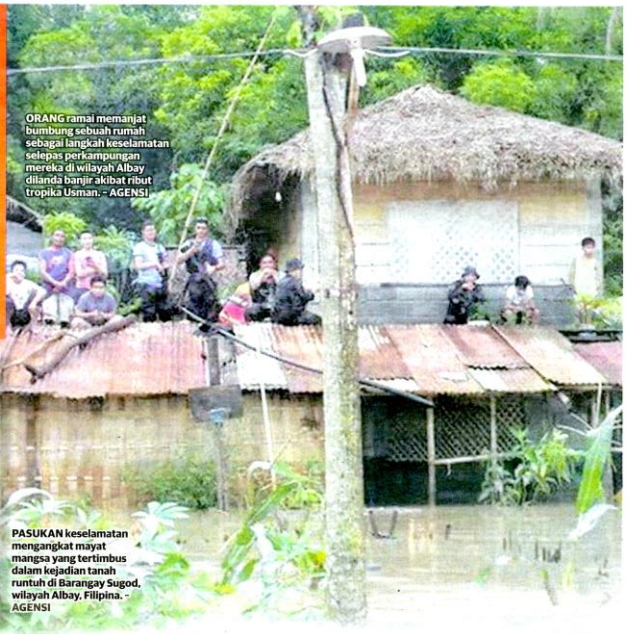
Perkara itu disahkan oleh Pusat Volkanologi dan Mitigasi Bencana Geologi (PVMBG) dalam kenyataan berdasarkan data seismologi dari Kepulauan Sertung yang merekodkan tiada pergerakan luar biasa berlaku di gunung berapi terbabit. – **REUTERS/AGENSI**

LAMPIRAN 19
UTUSAN MALAYSIA (LUAR NEGARA): MUKA SURAT 40
TARIKH: 1 JANUARI 2019 (SELASA)

SELASA • 01.01.2019

LUAR NEGARA

luarnegara@utusan.com.my



ORANG ramai memanjat bumbung sebuah rumah sebagai langkah keselamatan selepas perkampungan mereka di wilayah Albay dilanda banjir akibat ribut tropika Usman. - AGENSI

PASUKAN keselamatan mengangkat mayat mangsa yang tertimbus dalam kejadian tanah runtuh di Barangay Sugod, wilayah Albay, Filipina. - AGENSI

Lebih 40,000 mangsa hilang tempat tinggal, 17 masih hilang

68 terbunuh dibadai ribut Usman

■ **MANILA 31 DIS.**

FILIPINA melangkah ke tahun baharu 2019 dengan berita duka apabila jumlah korban ribut tropika Usman yang melanda timur negara itu selepas sambutan Krismas meningkat kepada 68 orang.

Menurut pihak berkuasa keselamatan, angka itu dijangka terus bertambah dalam waktu terdekat.

Seramai 57 orang terbunuh di wilayah Bicol di tenggara Manila manakala 11 lagi maut di Pulau Samar akibat tanah runtuh dan lemas dalam banjir.

Pengarah Pertahanan Awam Bicol, Claudio Yucot berkata, jumlah korban berkemungkinan naik kerana masih banyak kawasan yang terjejas akibat Usman belum dapat dimasuki petugas penyelamat.

"Orang ramai tidak mengambil langkah berjaga-jaga kerana Usman bukan ribut yang kuat untuk dikategorikan sebagai taufan di bawah sistem amaran ribut kerajaan.

"Namun, Usman membawa hujan lebat sehingga menyebabkan banjir dan tanah runtuh di beberapa kawasan yang mudah terjejas," katanya.

Selain itu Yucot memberitahu, angka korban yang tinggi juga disebabkan tiada amaran ribut dikeluarkan.

Biarpun Usman kini sudah bergerak meninggalkan Filipina, masih banyak kawasan yang terjejas mengalami hujan lebat, sekali gus menyukarkan operasi mencari serta menyelamat dilakukan.

Pasukan kecemasan juga bertungkus-lumus membersihkan jalan-jalan utama yang ditenggelami banjir serta tanah runtuh.

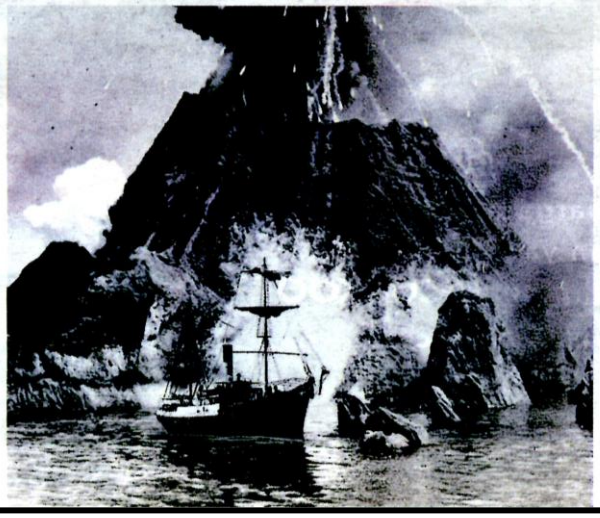
Ribuan pelancong turut terkandas di beberapa pelabuhan, lapangan terbang dan terminal bas selepas kesemua perkhidmatan tersebut dihentikan buat sementara waktu sehingga keadaan kembali reda.

Sekurang-kurangnya 17 orang hilang dan lebih 40,000 mangsa kehilangan tempat tinggal di seluruh negara susulan ribut tropika berkenaan.

Secara purata, dianggarkan kira-kira 20 taufan dan ribut melanda Filipina setiap tahun, menyebabkan ratusan penduduk terkorban dan kehidupan jutaan yang lain terjejas.

Taufan Haiyan yang merupakan taufan paling kuat melanda Filipina pada 2013 menyaksikan lebih 7,360 orang terbunuh atau hilang. - AFP/AGENSI

LAMPIRAN 20
HARIAN METRO (EKSTRA): MUKA SURAT 43
TARIKH: 1 JANUARI 2019 (SELASA)



DAHSYATNYA LETUSAN KRAKATAU

Letusan gunung berapi terbesar dalam sejarah bumi, Gunung Krakatau di Indonesia pada 1883 menyebabkan dentuman teramat kuat boleh didengar sehingga 3,000 kilometer di Pulau Andaman dan Nikobar serta 5,000 kilometer di Papua New Guinea serta Australia Barat, diikuti bumi bertukar menjadi gelap.

Malah penduduk yang berada sejauh 7,000 kilometer di Pulau Rodrigues, Lautan Hindi, dekat Mauritius turut dikejutkan dengan bunyi terbabit.

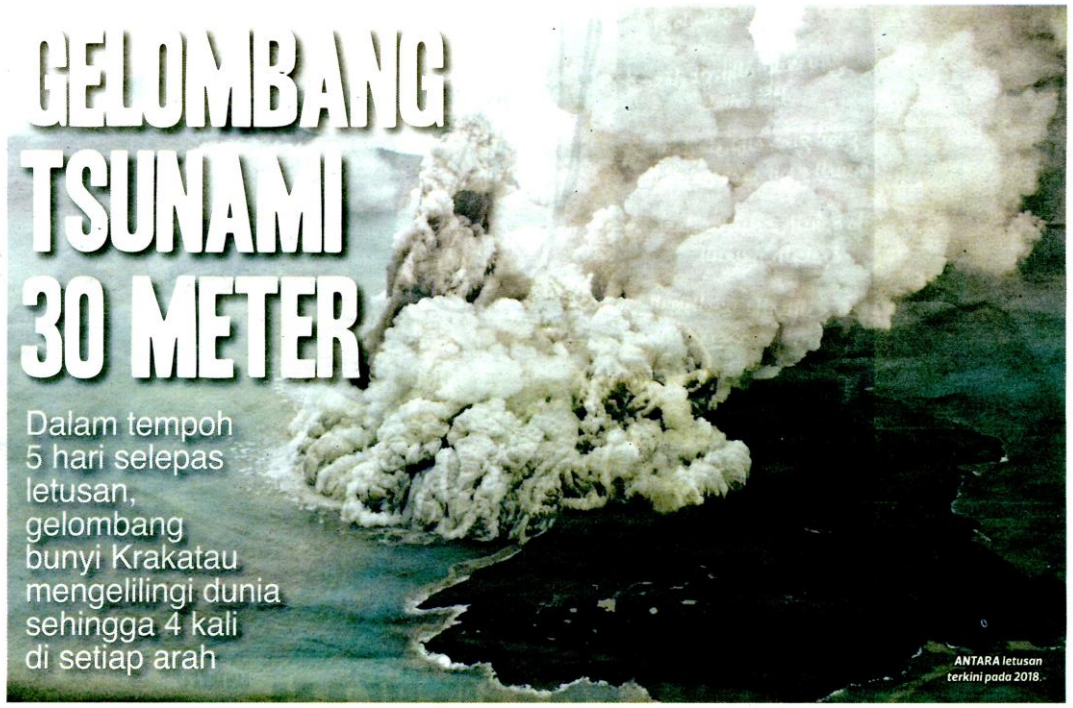
Menerusi catatan saksi yang direkodkan, letupan gunung berapi itu boleh didengar satu pertiga penduduk seluruh dunia di lebih 50 lokasi.

Begitulah dahsyatnya gambaran letusan Gunung Krakatau pada 27 Ogos 1883 yang mengorbankan 36,000 orang.

> 43

GELOMBANG TSUNAMI 30 METER

Dalam tempoh 5 hari selepas letusan, gelombang bunyi Krakatau mengelilingi dunia sehingga 4 kali di setiap arah



ANTARA letusan terkini pada 2018.

DARI MUKA 42

Catatan ahli geologi menyebut Krakatau mengeluarkan kepulan asap setinggi empat kilometer ke udara dan membawa gelombang tsunami setinggi 30 meter tinggi, memusnahkan 165 kampung di pesisir pantai.

Pulau Sebesi yang terletak kira-kira 13 kilometer dari Krakatau, kehilangan semua penduduk seramai 3,000 orang. Kira-kira 18 hingga 21 kilometer batuan terangkat membentuk lembangan sekitar Krakatau.

Krakatau mengganas memuntahkan debu dan gema letupannya begitu kuat hingga menyebabkan gegendang telinga separuh kru kapal yang belayar beberapa kilometer dari gunung itu, pecah.

Kapten sebuah kapal Britain, Kastil Norham, mencatatkan kejadian itu dalam buku log pelayarannya.

"Ledakan amat dahsyat sehingga gegendang telinga lebih separuh kru saya pecah. Saya yakin hari kiamat sudah tiba," tulisnya.

Dalam tempoh lima hari selepas letusan, gelombang bunyi Krakatau mengelilingi dunia sehingga empat kali di setiap arah selama 34 jam yang dikesan di Melbourne dan Sydne di Australia, St Petersburg (Russia), Rom (Itali), Paris (Perancis), selain New York, Washington dan Toronto (Kanada).

Menurut artikel LiveScience, letusan itu juga mempengaruhi iklim, menurunkan suhu dunia dua darjah Celsius manakala cahaya matahari berubah menjadi warna ganjil. Ada tempat yang matahari terbit lebih lambat manakala malam lebih panjang.

Pada 1927 iaitu 44 tahun kemudian, muncul gunung berapi baru di lokasi itu, dikenali sebagai Anak Krakatau yang mencetuskan tsunami Selat Sunda minggu lalu, selepas lereng selatan gunung berapi terbabit runtuh.

Angka korban akibat tsunami itu mencapai 430 orang dan 159 masih hilang manakala 1,495 orang lagi cedera dengan 22,000 penduduk kehilangan tempat tinggal. – Agensi

LEDAKAN yang dahsyat.