

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

Bil	Berita	Media	Capaian Berita Penuh
1.	<u>Projek gah sia-sia</u> Ketua Pengarah Jabatan Meteorologi Malaysia (METMalaysia), Alui Bahari berkata, alatan yang dipasang kontraktor utama iaitu Astronautic Technology (M) Sdn Bhd (ATSB) terpaksa dilupuskan dengan persetujuan Kabinet ekoran beberapa factor khususnya aspek kos penyelenggaraan, keberkesanan dan ketahanan untuk beroperasi jangka panjang.	Berita Harian	Rujuk lampiran 1
2.	<u>Taking science and maths further</u> In 2015, the school embarked on an Inquiry-Based Science Education (IBSE) method for teaching science, under the auspices of the International Science, Technology and Innovation Centre (Istic)- which in turn is governed by Unesco, the La main a la pate Foundation (Lamap), France and the Academy Science Malaysia (ASM) – and this proved to be effective and successful.	The Star	Rujuk lampiran 2
3.	<u>Nuclear option should stay</u> With regard to our amang nightmare, one must note that the controversial Asian Rare Earth Factory commenced its operation in 1982 when there was actually no proper legal and regulatory framework in place to regulate the sitting, licensing and operation of the factory. We now have the Atomic Energy Licensing Board (AELB) as the nuclear watchdog as well as Act 304, which empowers AELB to function.	The Star	Rujuk lampiran 3

TEMPATAN

Bil	Berita	Media	Capaian Berita Penuh
4.	<u>Eco Photon bukti kemampuan pelajar UiTM</u> “UiTM akan membawa Tuah ke pameran inovasi dan teknologi bagi membolehkan pengunjung menyaksikannya secara dekat, selain mendapatkan pendedahan serta memupuk minat bidang ini”,katanya.	Berita Harian	Rujuk lampiran 4
5.	<u>MAIA, Inacom jalin kerjasama sektor aeroangkasa</u> Presiden Persatuan Industri Aeroangkasa Malaysia (MAIA), Naguib Mohd Nor, berkata usaha sama itu dilaksanakan selepas MAIA dan Persatuan Pembuatan Komponen Pesawat Indonesia (Inacom) menandatangani satu memorandum persefahaman (MoU), di Kuala Lumpur, semalam.	Berita Harian	Rujuk lampiran 5
6.	<u>Pembuangan sisa pepejal ancaman terbesar dunia</u> Pembuangan sisa pepejal, terutama berasaskan plastik hanyut di laut dilihat menjadi antara factor penyebab kematian haiwan akuatik, khususnya membabitkan spesies penyu dan mamalia marin seperti paus, lumba-lumba dan dugong.	Berita Harian	Rujuk lampiran 6
7.	<u>3 komponen utama capai kelestarian alam sekitar</u> Beliau menjelaskan, “Di Malaysia, kami amat mengambil berat perihal alam sekitar. Sekitar 48 peratus daripada negara kami ialah hutan dara.	Berita Harian	Rujuk lampiran 7
8.	<u>Selat Melaka berisiko tsunami</u> Kesan gempa bumi di Sumatera, Indonesia berisiko kepada Semenanjung khususnya Selat Melaka untuk menerima tsunami pada masa hadapan.	Utusan Malaysia	Rujuk lampiran 8
9.	<u>Fuziah: PH govt is environment-friendly</u> Deputy Minister in the Prime Minister’s Department Fuziah Salleh has given assurance on government’s commitment in carrying out a	New Straits Times	Rujuk lampiran 9 atau klik pada tajuk berita

	review to ensure an environment-friendly operation of Lynas Malaysia.		
10.	<u>Plastic danger in eating fish</u> DISPOSAL of solid waste, in particular materials made from plastic, is seen to be the biggest environmental threat to the world, especially for countries surrounded by oceans, including Malaysia.	New Straits Times	Rujuk lampiran 10 atau klik pada tajuk berita
11.	<u>Sniffing out fakes</u> Unknown to many, fake and substandard biodegradable plastic bags are being widely used in the Federal Territories.	The Star	Rujuk lampiran 11
12.	<u>The rights skills for the Artificial Intelligence revolution</u> AI is developed to learn and think more like humans, and is used in specific fields including medical diagnosis, voice recognition, autonomous driving and smart city administration.	The Star	Klik pada tajuk berita

ANTARABANGSA

Bil	Berita	Media	Capaian Berita Penuh
13.	<u>Japan space probe lands new robot on asteroid</u> A Japanese probe landed a new observation robot on an asteroid on Wednesday as it pursues a mission to shed light on the origins of the solar system.	New Straits Times	Rujuk lampiran 12
14.	<u>Sulawesi terus ditimpa bencana</u> Pulau Sulawesi terus diancam bencana alam apabila Gunung Berapi Soputan yang terletak di daerah Minahasa, wilayah Sulawesi Utara meletus pagi semalam.	Kosmo	Rujuk lampiran 13 atau klik pada tajuk berita

15.	<u>Disaster death toll climbs to 1,407</u> About 1,407 people are now known to have died in the quake-tsunami that smashed into Sulawesi, Indonesia said, as police pledged to clamp down on looting by survivors taking advantage of the chaos.	The Star	Rujuk lampiran 14
16.	<u>Super fund alleged to have breached duties over climate change risk</u> Mark McVeigh, a 23-year-old ecology graduate and council worker from Brisbane, has ratcheted up his legal campaign against the super fund over its approach to climate change, accusing REST of breaching superannuation law by failing to act in his best interests.	The Sydney Morning Herald	Klik pada tajuk berita
17.	<u>Blockchain's potential in tackling climate change</u> The expert presented on the possible uses of blockchain technology in sustainability and climate action. The session focused specifically on SDG 13, which is to take urgent action to combat climate change and its impacts.	Open Gov Asia	Klik pada tajuk berita
18.	<u>Celebrating bold environmental leadership and a plastic-free future in India</u> For his leadership in the fight against plastic pollution in India, and his unwavering commitment to tackling climate change around the world, UN Environment has bestowed the United Nations' highest environmental honour upon Indian Prime minister Narendra Modi today, by awarding him the Champions of the Earth award.	UN Environment	Klik pada tajuk berita
19.	<u>Killing the environment</u> The filthy outside air that the average Dhaka dweller has become so accustomed to breathing is just one of the daily manifestations of the city's worsening environmental conditions.	The Daily Star	Klik pada tajuk berita

20.	<u>Saudi Arabia and Softbank continue work on multi-billion dollar renewable energy projects</u> Saudi Arabia's Public Investment Fund (PIF) is working with Softbank Vision Fund and other entities on a number of large-scale multi-billion dollar solar energy projects and denied a Wall Street Journal report that plans for a \$200 billion solar project were stalled.	The National	Klik pada tajuk berita
21.	<u>Miners turn to green power options</u> A rapid fall in the cost of solar and wind power has made renewable energy a viable alternative for miners, who need a huge amount of power to dig, crush and process the minerals needed for everyday life.	The Financial Times	Klik pada tajuk berita

LAMPIRAN 1 HARIAN METRO (SETEMPAT): MUKA SURAT 10 TARIKH: 4 OKTOBER 2018 (KHAMIS)

SISTEM BOYA TSUNAMI

BOYA

- Sebahagian daripada Sistem Amaran Awal Tsunami Nasional Malaysia (SAATNM).
- SAATNM mempunyai tiga komponen utama iaitu pengumpulan data dan maklumat, pemrosesan serta penyebaran.

- Boya berfungsi untuk mengumpul data dan maklumat meteorologi, mengukur perubahan paras air laut serta mengesan gelombang tsunami.
- Dijalarkan dari Norway Berharganya kira-kira RM3 juta seunit.
- Dipasang secara berperingkat sejak 2005 selepas insiden tsunami menghujung 2004.

3 Satelit Inmarsat C

4 Stesen pantai

Data dari satelit dihantar ke unit di pantai. Jika berlaku tsunami, amaran dikeluarkan.

5 MMD

Data dari satelit dikongsi Pusat Operasi Cuaca dan Geofizik Nasional.

LOKASI BOYA DIPASANG

AMARAN TSUNAMI

Amaran awal tsunami boleh menyelamatkan nyawa dan harta benda.

FUNGSI BOYA

- Setiap sistem boya dilengkapi komponen struktur asas lunas pengimbang, tiang dan sistem pembekal kuasa, penambat untuk dipasangkan ke dalam air dan pengesan.
- Ia termasuk pelatuk dasar laut, tsunameter, sistem telemetri akustik menghubungkan tsunameter dan boya serta sistem telemetri data satelit (Inmarsat C).
- Tsunameter akan dipasang pada sauh menggunakan pelatuk akustik bagi membolehkan unit berkenaan terendam di dasar laut.
- Alat itu akan berterusan mengukur dan menilai tekanan air di dasar laut. Semasa mod tsunami, data akan dihantar ke Pusat Operasi Cuaca dan Geofizik Nasional untuk setiap minit, manakala setiap jam bagi mod biasa.

- Data yang diperoleh akan dianalisis dan jika berlaku tsunami, mod tsunameter secara automatik bertukar ke mod tsunami dan seterusnya data yang diceraap akan dihantar ke Pusat Operasi Cuaca dan Geofizik Nasional melalui satelit.
- Ujian operasi untuk melihat kemampuan boya berfungsi dijalankan bagi mengesan secara menyeluruh penghantaran data sistem komunikasi satelit bagi penghantaran data yang diperlukan.

- Data yang diperoleh dari boya dan tsunameter akan dikongsi antara Jabatan Meteorologi Malaysia (MMD) serta jabatan sama dari negara terbabit dalam kerjasama berkenaan.

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Kosela 10mpuan

Tiga boya laut dalam, berharga kira-kira RM7.2 juta yang sepatutnya menceraap data dan menyebarkan maklumat awal mengenai amaran tsunami seolah-olah seperti tukul dan terpaksa dilupuskan sepenuhnya kerana tidak lagi berfungsi.

Pemasangan peralatan menggunakan teknologi dari Norway itu dilakukan secara berfasa sejak 2006 merangkumi tiga lokasi perairan iaitu Laut Andaman, Laut Sulu dan Laut China Selatan bagi memastikan sebarang risiko tsunami berpunca daripada pergerakan kerak bumi di tengah laut berupaya dikesan lebih awal.

Projek boya tsunami atau tsunameter hasil kerjasama dengan Indonesia itu dilaksanakan susulan gempa melanda Aceh pada 2004 yang menamatkan lebih 230,000 orang dari 14 negara, termasuk Malaysia terkorban, sekali gus

EKSKLUSIF

PROJEK GAH SIA-SIA

Tiga boya amaran tsunami berharga RM7.2 juta tidak berfungsi terpaksa dilupuskan

terpilih sebagai bencana alam terburuk dalam sejarah. Bagaimanapun, fungsi boya tsunami pertama yang ditempatkan kira-kira 500 kilometer (km) dari Langkawi dan kira-kira 60 km dari Bandar Aceh, Indonesia di Laut Andaman pada 30 Disember 2005 didapati tidak memancarkan data setiap 15 minit, sebelum pemeriksaan lanjut mendapati alat itu hilang daripada pusat sauh. Alatan sama yang diletakkan berhampiran Pulau Layang-Layang, Sabah

dekat Laut China Selatan pada 7 Mac 2006 turut menemui nasib sama dan dikategorikan sebagai dilupuskan pertengahan 2017 lalu selepas alat berharga jutaan ringgit itu didapati hilang sama ada hanyut dibawa arus atau menjadi mangsa perbuatan vandalisme. Boya tsunami ketiga yang dipasang berhampiran Pulau Sipadan, Sabah dekat Laut Sulu pada 2010 pula tidak digunakan lagi selepas meletup ketika diselenggara di atas kapal MV Pendamar sehingga menyebabkan kematian ketua jurutera

warga Norway, Stig Erik Lyng. Kejadian pada jam 11.45 pagi itu berlaku ketika Lyng, 53, cuba membuka salah satu skru pada penutup pelampung dengan menggunakan alat penggerudi, sebelum objek berwarna hitam dilihat terbang keluar daripada pelampung itu anggara letupan dan mengenal kepalanya. Ketua Pengarah Jabatan Meteorologi Malaysia (MET Malaysia), Alti Bahari berkata, alatan yang dipasang kontraktor utama iaitu Astronautic Technology

(M) Sdn Bhd (ATSB) terpaksa dilupuskan dengan persetujuan Kabinet ekoran beberapa faktor khususnya aspek kos penyelenggaraan, keberkesanan dan ketahanan untuk beroperasi jangka panjang. Katanya, peralatan yang berharga kira-kira RM2.4 juta seunit itu memancarkan data menerusi satelit Inmarsat C setiap 15 minit, namun masa pelayatran maklumat akan berubah menjadi penetapan tsunami, sekali gus menghantar isyarat setiap seminit sekiranya wujud bacaan paras ombak luar biasa. "Fungsi seperti ini terpaksa dilakukan kerana ingin menjimatkan

penggunaan kuasa bateri. Justeru ia hanya akan aktif menghantar maklumat setiap minit kepada MET Malaysia apabila sistem pengesan merekodkan bacaan ombak tsunami. "Susulan lokasi alat ini di tengah laut, kos penyelenggaraannya dua kali seratus diletakkan mahal, menjangkau hampir RM500,000 selain terdedah kepada risiko perbuatan vandalisme, kecurian, kerosakan akibat terdedah kepada air laut atau ditanamkan arus deras," katanya. Susulan pertimbangan, Alti berkata, fungsi boya tsunami yang keberkesannya dipengaruhi pelbagai faktor luaran diambil alih oleh

mekanisme lain menggabungkan penggunaan tolak pasang surut, kamera pantai dan sistem siren yang dipasang secara berperingkat di seluruh negara. Untuk rekod, amaran tsunami kepada penduduk tempatan di Palu, Sulawesi baru-baru ini gagal pada peringkat akhir komunikasi sehingga menyebabkan kematian lebih 1,000 orang, menurut pusat penyelidikan Jerman yang membangunkan sistem amaran digunakan Indonesia. Berikutan itu, ramai membangkitkan persoalan bagaimana sistem amaran gagal berfungsi, selepas gempa bumi 7.5 magnitud di

luar pesisir Indonesia, Jumaat lalu. Jurucakap Badan Nasional Pengurusan Bencana, Sutopo Purwo Nugroho mengakui semua 22 boya laut tambahan yang disambungkan pada sensor di dasar laut bagi mengesan tsunami di perairan Indonesia tidak berfungsi sejak enam tahun lalu. "Kami mempunyai kira-kira 60 boya di Indonesia. Sesetengahnya rosak sejak 2012 kerana perbuatan vandalisme. Penduduk tempatan mencurinya," katanya. **ESOK: Mekanisme lain beri amaran awal tsunami**

LAMPIRAN 2

THE STAR (EDUCATION GUIDE): MUKA SURAT 7 & 8

TARIKH: 4 OKTOBER 2018 (KHAMIS)

Taking science and maths further

THERE is a growing demand for job opportunities in the fields of science, technology, engineering and mathematics (STEM) but the industry is facing an ever shrinking talent pool.

In the US alone, it was reported that by 2024, there will be a shortfall of 1.1 million STEM workers and this phenomenon will be felt all over the world.

Although it was expected that teens would be encouraged to pursue STEM-related education for the highest likelihood of landing a secure job, in reality the opposite occurs.

Rather than increasing steadily, interest in STEM fields declined while demand for STEM-qualified graduates is predicted to grow substantially over the years – more so with the advent of today's buzzword, Industry 4.0.

There is a lacuna whereby the education system does not do a good job of informing students of STEM skills as opposed to STEM careers.

It was reported that the declining trend in interest towards STEM-related fields is more evident among teenage

boys compared to girls – due to the perception that STEM fields are too hard, with some fearing they will be unable to cope.

Young people should be encouraged to pursue technical careers, as non STEM-related jobs still rely on these subjects and will continue to be so. Graduates who have knowledge and skills in STEM will be in greater demand.

Equally important are knowledge and skills related to Ecology, or simply Eco – as global warming and sustainability are problems the world is currently wrestling with and may possibly be for upcoming generations. Efforts need to start in schools to inculcate the understanding of the various STEM and Eco aspects.

Sri Bestari Private School embarked on an Eco-niche agenda in 2012, which resulted in two Green Flag Awards from WWF-Malaysia and the Foundation for Environment Education, Denmark in 2015 and 2017.

TURN TO PAGE 8

LAMPIRAN 2 (SAMBUNGAN)
THE STAR (EDUCATION GUIDE): MUKA SURAT 7 & 8
TARIKH: 4 OKTOBER 2018 (KHAMIS)



Kindergarten children trying their hand in planting paddy.

Bestari goes all out to promote STEM education, eco principles

FROM PAGE 7

In 2015, the school embarked on an Inquiry-Based Science Education (IBSE) method for teaching science, under the auspices of the International Science, Technology and Innovation Centre (Istic) – which in turn is governed by Unesco, the La main à la pâte Foundation (Lamap), France and the Academy of Science Malaysia (ASM) – and this proved to be effective and successful.

On Sept 5, the school launched the Outdoor Science Lab, a dedicated Eco-Learning Corner and a Paddy Cultivation Plot to further enhance the institution's investment and efforts into promoting STEM education and eco principles among

its students.

Sri Bestari Private School led the STEM education agenda with continuous resource investments, teacher training and continuing professional development.

It ensures staff are kept abreast on the growth and developments, in order to guide its students towards a changing business and commercial environment.

Visit Sri Bestari Private School Info Day on Oct 6, from 9am to 1pm, to find out more.

There will also be a pre-Deepavali celebration in the spirit of Bestarian.

■ Call 03-6275 5888 to reserve a spot for the Info Day or visit www.sribestari.edu.my – special discounts are offered to those registered on that day.

LAMPIRAN 3
THE STAR (VIEWS): MUKA SURAT 29
TARIKH: 4 OKTOBER 2018 (KHAMIS)

Nuclear option should stay

PRIME Minister Tun Dr Mahathir Mohamad recently lamented our traumatic experiences with radioactive materials (*amang*) during his special address at the recent Conference of Power and Electricity Supply Industry 2018 (CEPSI 2018).

He said that until today, scientists still haven't delivered an acceptable solution for the radioactive waste problem and then stressed that nuclear power should never be an option for Malaysia.

This feels like we are unwittingly turning the clock back to the 80s. This is because nuclear power is now widely acknowledged as the only proven solution for carbon-free base load electricity generation. Nuclear power was so popular in the last decade that there was even a brief period of global nuclear renaissance when climate change felt inevitable and the hike in crude oil prices seemed unending. Unfortunately, the Fukushima nuclear accident in 2011 put a spanner in the works. Nevertheless, 436 nuclear power reactors are still in operation in 31 countries around the globe. In addition, 55 new reactors are currently under construction. Even Japan, which closed down or suspended the operations of all of its nuclear power plants after the Fukushima disaster, has restarted a few plants to meet domestic electricity demands.

Germany, on the other hand, decided in 2000 to shut down all of its nuclear power stations. It now imports electricity from (ironically) nuclear-powered France while sweating over a creeping increment of carbon index due to higher reliance on fossil fuels.

All these demonstrate the importance of nuclear power in advancing national interest while helping mitigate the effects of climate change.

As such, the decision to completely forgo nuclear power without seriously studying its implications on preventing the worst consequences of climate change is uncharacteristic of the famously thorough Dr Mahathir.

This is because there are actually proven solutions to the radioactive waste problems. The first approach is by closing the nuclear fuel cycle loop (recycling of nuclear spent fuels), which France has been doing for decades and what Bill Gates' TerraPower is working on.

The second option is to store the high-level



radioactive wastes in a very long-term underground repository like in Finland, Sweden and France. This radioactive waste repository is like a treatment facility where the activated nuclear materials are physically stored and constantly monitored.

Unlike chemical waste which remains the same forever, radioactive waste decays according to its various half-lives. With time, its radioactivity abates and becomes manageable.

Nature has even demonstrated the success of this approach. At Oklo in Gabon, there were 16 self-sustaining nuclear fission reactors approximately 1.7 billion years ago.

These natural nuclear reactors are thought to have run for a few hundred thousand years, producing an average thermal power of less than 100 kW. These sites are today deemed safe for human activity.

With regard to our *amang* nightmare, one must note that the controversial Asian Rare Earth factory commenced its operation in 1982 when there was actually no proper legal and regulatory framework in place to regulate the

siting, licensing and operation of the factory. We now have the Atomic Energy Licensing Board (AELB) as the nuclear watchdog as well as Act 304, which empowers AELB to function.

Nevertheless, AELB and Act 304 are by no means perfect. AELB needs to be improved holistically to be able to properly regulate nuclear power plants while Act 304 must be amended to be in line with international standards and best practices.

Nuclear power is admittedly neither popular nor easy. But nuclear power, in tandem with renewable energy and long-term power storage, offers a comprehensive solution for a greener future.

As the threat of climate change feels very real, we should not recklessly abandon nuclear power just because we have had traumatic experiences with radioactive wastes.

Nuclear power should remain an option for Malaysia.

DR MOHD SYUKRI YAHYA
Bandar Baru Bangi, Selangor

LAMPIRAN 4 BERITA HARIAN (VARSITI): MUKA SURAT 56 TARIKH: 4 OKTOBER 2018 (KHAMIS)

inovasi Eco Photon bukti kemampuan pelajar UiTM

● Kenderaan solar dihasilkan mampu tempuh jarak 3,000 kilometer

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Shah Alam

Kedua cuaca tidak mentu dan persaingan dengan 42 kumpulan ketika pertandingan Cabaran Bridgestone World Solar (WSC) 2017 di Australia, baru ini, tidak melemahkan semangat pasukan Universiti Teknologi MARA (UiTM) untuk mengharumkan nama negara apabila mencatatkan kejayaan dalam rekod Malaysia dan Asia Tenggara.

Dengan strategi dan kemahiran mantap dimiliki 24 ahlinya, pasukan dikenali sebagai UiTM Eco Photon itu berjaya menangkan cabaran untuk menggerakkan kenderaan berkuasa solar sehingga tiba di garisan penamat pada masa dan jarak ditetapkan.

Penyarah Kanan Fakulti Kejuruteraan Mekanikal UiTM, Dr Azli Abd Razak, berkata WSC ialah pertandingan inovasi peringkat antarabangsa yang menyaksikan pasukan dari seluruh dunia, berentap menghasilkan kenderaan elektrik berkuasa solar paling mampan untuk menggalakkan bidang teknologi penciptaan dan meletakkan nama mereka di persada dunia.

Kos hampir RM1 juta

Katanya, UiTM diwakili 24 mahasiswa daripada Fakulti Kejuruteraan Mekanikal (FKM), Fakulti Kejuruteraan Elektrik (FKE), Fakulti Kejuruteraan Awam (FKA), Fakulti Kejuruteraan Sivil (FKS), Fakulti Komunikasi dan Pengajian Media (FKM) serta Fakulti Sains Gunaan (FSG), bergabung kemahiran membangunkan inovasi kereta solar dinamakan Tuah.

"Inovasi ini dibangunkan sepenuhnya oleh mahasiswa bermula daripada cetusan idea, rekaan dan acuan sehingga penciptaan produk. Ini memberi kelebihan kepada pasukan untuk mengenal pasti dan memperbaiki masalah dengan kadar segera ketika pertandingan," katanya yang

juga penyarah pembimbing UiTM Eco Photon.

Azli berkata, penyertaan mahasiswa pada WSC memberi pelbagai nilai tambah kepada mereka, termasuk memperoleh ilmu tambahan di luar kelas, mengaplikasikan teori dipelajari, menonjolkan idea, mempromosikan diri ke peringkat antarabangsa dan menjadi graduan berkemahiran tinggi.

Sebelum layak ke pertandingan itu, katanya, pasukan berkenaan memperoleh pendedahan awal apabila perlu menghasilkan kertas kerja memaparkan perincian inovasi dibangunkan, seperti aspek rekaan dan keselamatan.

Beliau berkata, pembangunan inovasi selama setahun setengah dengan peruntukan kos hampir RM1 juta hasil tajaan universiti dan organisasi korporat itu turut memberi manfaat jangka panjang kepada masyarakat, terutama generasi muda untuk mengetahui teknologi diguna pakai.

"UiTM akan membawa Tuah ke pameran inovasi dan teknologi bagi membolehkan pengunjung menyaksikannya secara dekat, selain mendapatkan pendedahan serta memupuk minat bidang ini," katanya.

Sementara itu, ketua pasukan UiTM Eco Photon, Muhammad Syazwan Johari, 23, berkata sepanjang membangunkan dan mengetengahkan inovasi, kumpulan terbabit berdepan banyak cabaran, antaranya kekeangan masa antara kuliah dengan tugas terbabit, menyebabkan mereka sering berkumpul pada hujung minggu atau waktu malam untuk

Tuah kereta solar yang dihasilkan UiTM Eco Photon.

Ahli pasukan bersedia menguji kereta solar.

membincangkan perkembangannya.

Katanya, selain itu, sepanjang pertandingan lima hari itu, mereka perlu menggunakan cahaya solar untuk menggerakkan kenderaan pada waktu siang, manakala ketika malam atau cuaca mendung dan hujan, kuasa bateri harus diaktifkan.

Semangat berpasukan

Dalam memastikan kereta solar dihasilkan berjaya menamatkan persaingan pada jarak 3,000 kilometer seperti

ditetapkan, katanya, pasukan itu mengutamakan semangat berpasukan, tidak berputus asa dan memastikan kuasa bersesuaian dengan kelajuan disasarkan.

Rakan sepasukan, Muadz Sheafi, 22, berkata bagi melancarkan proses penghasilan projek inovasi terbabit, setiap ahli pasukan diberikan skop tugas mengikut pengetahuan bidang dipelajari supaya perancangan dapat diselesaikan secara teliti dan sebaik mungkin.

Mahasiswa FKM yang me-

megang jawatan sebagai Pengurus Strategi dan Projek itu berkata, penyertaan dalam WSC memberi peluang untuk berkongsi idea bersama rakan lain serta menambah pengetahuan berhubung bidang inovasi, selain dapat mempelajari ilmu berharga daripada produk dihasilkan pasukan dari negara lain.

"Penyertaan saya ini kerana minat mendalam terhadap bidang inovasi. Bidang berkenaan cukup menarik kerana dapat membantu manusia menyelesaikan masalah atau



Dr Azli Abd Razak



Muadz Sheafi



Muhammad Syazwan Johari

kekurangan sedia ada melalui penghasilan produk unik serta lebih baik.

"Komitmen UiTM menyediakan platform ini kepada mahasiswa cukup bagus kerana mampu meningkatkan kemahiran dimiliki kami, sekali gus menonjolkan produk berteknologi tinggi dihasilkan anak tempatan," katanya yang bertanggungjawab memantau pengurusan projek mengikut masa dan bajet ditetapkan, selain membantu merangka strategi UiTM Eco Photon.

LAMPIRAN 5
BERITA HARIAN (BISNES): MUKA SURAT 23
TARIKH: 4 OKTOBER 2018 (KHAMIS)

MAIA, Inacom jalin kerjasama sektor aeroangkasa

➔ Usahasama babitkan pembangunan modal insan bagi raih kontrak gergasi industri

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Pengeluar komponen pesawat Malaysia dan Indonesia menjalin kerjasama untuk meningkatkan pembangunan modal insan dalam usaha memperoleh lebih banyak kontrak daripada gergasi industri seperti Airbus, Boeing dan Rolls Royce.

Presiden Persatuan Industri Aeroangkasa Malaysia (MAIA), Naguib Mohd Nor, berkata usaha sama itu dilaksanakan selepas MAIA dan Persatuan Pembuatan Komponen Pesawat Indonesia (Inacom) menandatangani satu memorandum persefahaman (MoU), di Kuala Lumpur, semalam.

Pengeluar utama

"Malaysia dan Indonesia kini meneroka pembangunan program pesawat di samping men-



Naguib (kanan) dan Presiden Inacom, Andi Alisjahbana selepas menandatangani MoU, di Kuala Lumpur, semalam.

jadi pengeluar komponen utama untuk syarikat pesawat komersial seperti Airbus dan Boeing," katanya kepada pemberita pada majlis berkenaan.

Majlis menandatangani MoU yang disaksikan oleh wakil Perbadanan Pembangunan Perdagangan Luar Malaysia (MATRADE), diadakan sempena penganjuran Konvensyen Perniagaan Aeroangkasa Antarabangsa Kuala Lumpur (KLIABC) edisi ketiga.

Eksport meningkat

Sementara itu, eksport pembuatan aeroangkasa Malaysia diunjur meningkat kepada RM9 bilion untuk tahun ini berbanding RM8.49 bilion yang direkodkan tahun lalu.

"Kami jangka pertumbuhan eksport sekurang-kurangnya lima peratus daripada tahun lalu berikutan tempahan pembuatan komponen pesawat tahun ini meningkat," kata Naguib.

Pada 2017, eksport aeroangkasa Malaysia melonjak 54 peratus kepada RM8.51 bilion daripada 2016, dengan eksport utama terdiri daripada komponen dan bahagian pesawat seperti sayap, ekor dan badan utama.

KLIABC 2018 selama tiga hari dianjurkan oleh MATRADE dengan kerjasama MAIA dan ABE France. Ia turut menerima penyertaan 150 organisasi industri aeroangkasa dari 21 negara.

LAMPIRAN 6

BERITA HARIAN (LAPORAN KHAS): MUKA SURAT 20

TARIKH: 4 OKTOBER 2018 (KHAMIS)

Pencemaran laut ancam spesies hidupan marin

Muar: Pembuangan sisa pepejal, terutama berasaskan plastik hanyut di laut dilihat menjadi antara faktor penyebab kematian haiwan akuatik, khususnya membabitkan spesies penyu dan mamalia marin seperti paus, lumba-lumba dan dugong.

Kesan pencemaran laut itu turut mengancam spesies hidupan laut yang lebih kecil, termasuk pelbagai spesies ikan dan kerang yang menjadi antara sumber protein utama dalam rantai makanan kepada manusia.

Pensyarah Institut Oseanografi dan Sekitaran, Universiti Malaysia Terengganu (UMT), Dr Mohd Uzair Rusli, berkata plastik sama ada dalam bentuk fizikal atau partikel yang lebih kecil atau dipanggil sebagai mikro plastik sering menjadi sasaran spesies hidupan air yang disangkakan makanan.

"Mengikut laporan Petugas Kebangsaan Rangkaian Kedamparan Mamalia Marin Malaysia, Institut Penyelidikan Perikanan (FRI), kebanyakan hasil autopsi terhadap haiwan marin akan menemui kesan plastik di dalam perutnya.

"Lebih membimbangkan, autopsi itu juga menemui plastik terbitan dalam bentuk fizikal dan bukan dalam keadaan mikro plastik di dalam perut haiwan terbitan. Ia juga menjadi penyebab kematian haiwan berkenaan," katanya ketika dihubungi NSTP.

Dr Mohd Uzair yang juga Ketua Unit Penyelidikan dan Pemuliharaan Penyu (SE-ATRU) UMT berkata, ancaman plastik hanyut ini sebenarnya memberi ancaman besar kepada penyu yang menjadikan obor-obor sebagai makanan mereka.

Haiwan keliru

"Haiwan marin ini akan keliru dan menganggap plastik ini adalah makanan mereka. Daripada rekod kematian, kita juga mendapati haiwan marin ini mengalami gangguan sistem pencernaan, seterusnya menyebabkan ia kehilangan selera makan.

"Ia juga turut menjadi penyebab terhadap kekurangan nutrisi di dalam badan haiwan terbitan, seterusnya membawa kepada kematiannya.

"Kesan plastik ini juga didapati boleh memberi kesan kepada sistem pernafasan haiwan marin ini khususnya penyu apabila terdapat kes plastik ini menghalang mereka daripada bernafas dan menyebabkan kematian," katanya.

Ditanya mengenai pencemaran ini juga boleh menjejaskan anak penyu, beliau berkata, pihaknya tidak menolak kemungkinan perkara itu boleh berlaku gaman memerlukan kajian lebih lanjut.

"Sifat anak penyu, mereka akan berenang sebaik masuk ke pantai. Anak penyu ini akan berenang secara tidak berhenti selama dua hari dan dalam tempoh dua hari itu pun, mereka tidak akan makan.

"Kemudian, selepas tempoh dua hari, mereka akan mula mencari makanan bersumberkan tumbuhan marin seperti rumput laut, plankton dan apa sahaja khususnya yang berada dalam keadaan terapung di dalam air dan kemungkinan turut menerima kesan daripada mikro plastik ini," katanya.



Ahmad meninjau kawasan pencemaran dan pembuangan plastik sekitar Parit Jawa dan Pantai Seri Menanti, Muar, baru-baru ini.



Haiwan akuatik seperti ikan dan penyu terdedah dengan ancaman plastik hanyut ini, terutama penyedut minuman kerana ia sering disalah sangka sebagai sumber makanan mereka"

Ahmad Ismail,
Pensyarah Jabatan Biologi
Fakulti Sains UPM

Pembuangan sisa pepejal ancaman terbesar dunia

➔ Bahan plastik tidak mudah terurai mudaratkan manusia, haiwan akuatik

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Muar

Pembuangan bahan sisa buangan pepejal, khususnya bahan yang diperbuat daripada plastik dilihat akan menjadi ancaman alam sekitar terbesar dunia, khususnya di negara yang dikelilingi lautan termasuk Malaysia.

Bahan plastik yang tidak mudah terurai berbanding sisa pepejal lain menyebabkan bahan buangan itu kekal lama, seterusnya memudaratkan bukan sahaja haiwan akuatik, tetapi juga manusia.

Pensyarah Jabatan Biologi Fakulti Sains Universiti Putra Malaysia (UPM), Prof Dr Ahmad Ismail, berkata haiwan akuatik seperti ikan dan penyu sememangnya terdedah dengan ancaman plastik hanyut ini, terutama penyedut minuman ke-

rana ia sering disalah sangka sebagai sumber makanan mereka.

"Plastik, khususnya dalam bentuk botol atau penyedut minuman yang hanyut di lautan ini lama kelamaan akan pecah menjadi partikel yang lebih kecil dan partikel itu juga akan dimakan oleh haiwan marin kerana menyangkakan ia makanan mereka.

Tindak balas kimia

"Lebih membimbangkan, kesan plastik yang dimakan oleh ikan umpamanya boleh menyebabkan berlakunya tindak balas kimia di dalam badan ikan itu yang kemudian diserap ke dalam tisu ikan dan ia pula dimakan pula oleh manusia itu sendiri," katanya.

Beliau yang juga Presiden Persatuan Pencinta Alam Malaysia (MNS) berkata demikian kepada NSTP ketika melakukan pemerhatian mengenai tahap di beberapa kawasan pesisir pantai di daerah ini, baru-baru ini.

Tinjauan NSTP di lokasi pantai terbitan juga mendapati banyak kesan sisa buangan plastik ditemui dengan mudah di kawasan pantai dengan kebanyakannya terlekat pada ranting dan di celah akar pokok bakau yang menunjukkan ancaman ini semakin membimbangkan.

Ia sekali gus menjadi bukti setiap sisa buangan yang dibuang ke dalam laut akan kembali ke daratan dan pada masa

sama boleh memberi kesan kepada ekosistem alam yang lain.

Lebih membimbangkan, pencemaran laut berkenaan juga secara tidak langsung boleh memberi ancaman besar kepada industri perikanan negara kerana ia juga berupaya merosakkan imbangan ekosistem di laut hingga menyebabkan populasi ikan berkurangan.

Dr Ahmad berkata, lebih membimbangkan, sisa buangan plastik ini boleh berlaku dan memberi kesan kepada mana-mana tempat sahaja kerana sifatnya yang akan mengikut arus laut.

"Sisa buangan plastik ini boleh jadi dibuang dari negara kita sendiri atau mungkin dari negara lain. Setiap plastik yang dibuang ke dalam laut akan mengikut arus laut sebelum sampai ke tepi pantai.

"Tetapi harus diingat, ketika perjalanan sampah plastik ke tepi pantai ini, ia akan memberi kesan kepada hidupan marin seperti ikan paus, penyu, ikan lumba-lumba, burung camar dan ikan biasa yang kita makan," katanya.

Beliau berkata, sebagai sebuah negara yang dikelilingi lautan, Malaysia juga tidak akan terlepas daripada berdepan isu yang kini dianggap sebagai masalah global yang perlu ditangani secara bersama.

Urus sisa buangan

"Apa yang patut kita tekankan

sekarang ialah mengenai bagaimana kita menguruskan plastik dan sisa buangan. Ini kerana kita tidak dapat lari daripada plastik kerana ia adalah antara satu bahan yang sangat cekap dalam kegunaan manusia seharian.

"Kecekapan itulah yang menyebabkan plastik digunakan di merata-rata tempat sama ada sebagai pembungkusan sesuatu produk seperti makanan atau sebagai alat untuk membawa sesuatu barang," katanya.

Dr Ahmad berkata, pihak berwajib perlu melihat semula bagaimana untuk menguruskan sisa buangan plastik itu sendiri termasuk memperluaskan program kitar semula ke seluruh negara.

Katanya, perkara ini perlu dilakukan dengan serius termasuk memberi kesedaran kepada seluruh lapisan masyarakat mengenai isu ini kerana ia turut memberi risiko kepada kesihatan manusia pada akhirnya.

"Kita kena membudayakan amalan kitar semula ini dan bersama menjaga alam sekitar termasuk tidak membuang mana-mana sisa buangan ke dalam laut.

"Sebab benda ini juga bercun. Apabila ia (plastik) masuk ke dalam air dan kita pula yang makan ikan itu, maka racun itu boleh berpindah kepada manusia. Akhirnya kita akan terdedah kepada jerat yang kita sendiri buat," katanya.

LAMPIRAN 7
BERITA HARIAN (DARI KACA MATA): MUKA SURAT 10
TARIKH: 4 OKTOBER 2018 (KHAMIS)

3 komponen utama capai kelestarian alam sekitar



Pada masa ini negara masih memiliki sekitar 48 peratus hutan simpan kekal dan sebahagian besarnya berada di kawasan pergunungan. Ini adalah jumlah yang sangat luas berbanding dengan kebanyakan negara maju"

Rakyat terharu mendengar ucapan Perdana Menteri, Tun Dr Mahathir Mohamad, pada Perhimpunan Agung Pertubuhan Bangsa-Bangsa Bersatu (UNGA) di New York, Jumat lalu. Beliau menyentuh hampir semua isu besar yang sedang mengancam kesejahteraan dunia, khususnya kegawatan ekonomi, sosial dan politik.

Begitupun, beliau tidak lupa menyentuh isu alam sekitar dan kelestarian. Beliau menjelaskan tidak adil bagi kebanyakan negara maju menuduh Malaysia tidak menghormati alam sekitar dan memulihara kepelbagaian biologi hanya kerana kita mempelopori industri kelapa sawit secara besar-besaran.

Beliau menjelaskan, "Di Malaysia, kami amat mengambil berat perihal alam sekitar. Sekitar 48 peratus daripada negara kami ialah hutan dara. Mampukah penentang kami membuat dakwaan sama mengenai negara mereka?"

Kenyataan ini membawa mak-

sud, sementara kebanyakan negara maju sudah memusnahkan hutan mereka untuk laluan pertanian, industri dan penempatan puluhan dekad yang lalu, apakah negara yang sedang membangun seperti Malaysia tidak dibenarkan membuka sebahagian daripada hutan bagi tujuan yang sama?

Saya melihat kenyataan Dr Mahathir mengenai alam sekitar dan kelapa sawit, inti pati kepada wawasan pembangunan lestari negara. Guna tanah untuk pertanian komoditi, dahulunya getah dan kini kelapa sawit perlu diberikan tempat kepada maksud kelestarian alam sekitar.

Manfaatkan sumber asli

Apa maknanya pemuliharaan hutan yang luas untuk integriti alam sekitar, jika negara dan masyarakat tidak boleh memanfaatkan tanah (sumber asli) untuk kesejahteraan komuniti?

Sebagai pelaksana dasar, kita perlu menafsirkan kenyataan ini secara terintegrasi dan menterje-

mahkan kepada dasar dan pelan tindakan pelaksanaan. Dari perspektif kelestarian, saya melihat ada tiga komponen utama yang perlu diberikan perhatian bagi melaksanakan wawasan baharu ini.

Pertama, industri kelapa sawit sebagai industri strategik menghasilkan pendapatan utama negara. Ada dua isu yang perlu diberikan pertimbangan dasar, iaitu kelestarian industri kelapa sawit dan sumber komoditi alternatif yang lebih produktif dan mesra alam sekitar.

Dr Mahathir memberikan komitmen yang jelas mengenai kelestarian industri kelapa sawit. Beliau menegaskan, "Menjelang Disember 2019, Piawaian Minyak Sawit Lestari Malaysia (MSPO) akan menjadi mandatori, dan kami akan memastikan setiap titisan minyak sawit keluaran Malaysia akan diperakui lestari menjelang 2020."

Pada masa sama, saya yakin kerajaan akan memberikan perhatian yang wajar kepada memperluas kepelbagaian komoditi yang bersifat lebih lestari, produktif dan menguntungkan.

Anjakan paradigma daripada komoditi berasaskan sumber asli dan buruh, kepada produk berteknologi tinggi dan mesra alam seharusnya dijadikan wawasan masa depan negara.

Kesesuaian guna tanah

Komponen kedua ialah isu kesesuaian guna tanah. Negara perlu memberikan perhatian yang tinggi kepada kesesuaian landskap dan kesuburan tanah untuk industri pertanian, sama ada pertanian komoditi atau keselamatan makanan.

Pembangunan perlu bersandarkan kepada perancangan guna tanah, bukannya dikawal oleh peluang dan permintaan semamata.

Hanya kawasan yang guna tanahnya sesuai dibenarkan untuk membangun komoditi kelapa sawit atau pertanian komoditi lain. Jika tidak, ia bakal menimbulkan pelbagai masalah berkaitan dengan produktiviti, pencemaran, kepupusan warisan alam dan konflik dengan masyarakat setempat.

Komponen ketiga yang tidak kurang pentingnya juga ialah hubungan antara kepentingan pembangunan wilayah dan komitmen memulihara hutan simpan kekal.

Pada masa ini negara masih memiliki sekitar 48 peratus hutan

simpan kekal dan sebahagian besarnya berada di kawasan pergunungan. Ini adalah jumlah yang sangat luas berbanding dengan kebanyakan negara maju.

Kita sedia maklum, pewujudan konsep hutan simpan kekal sejak sebelum merdeka berhasrat mengekalkan guna tanah hutan sambil membenarkan pengeluaran kayu balak sebagai bahan komoditi. Lebih daripada separuh hutan simpan kekal ialah hutan pengeluaran atau kelas hutan yang boleh dibalak.

Ragui pendekatan

Walaupun pelbagai usaha telah dilaksanakan kerajaan, masyarakat antarabangsa masih meragui pendekatan kita dalam menangani isu ancaman terhadap integriti kepelbagaian biologi.

Dasar pemuliharaan hutan berasaskan konsep hutan simpan kekal ditafsirkan kurang telus dan belum menjamin kelestarian ekosistem hutan tropika. Isu pemuliharaan warisan tabii, perkhidmatan ekosistem dan penggunaan lestari sumber hutan perlu dilihat dari perspektif baharu.

Saya berpendapat konsep pemuliharaan berasaskan taman negara atau kawasan terpelihara, pengurusan perkhidmatan ekosistem dan pertanian perhutanan perlu diperkenalkan dan dihebahkan.

Rakyat dan masyarakat antarabangsa ingin melihat walaupun kita mempunyai jumlah keluasan hutan yang lebih kecil daripada sekarang, tetapi ia dilindungi dengan perundangan jelas.

Pendekatan mewartakan ekosistem istimewa sebagai landskap berpandangan indah, kawasan terpelihara, santuari kehidupan liar atau taman negara sebagai khazanah negara perlu mendapat perhatian serius.

Pada masa sama, hutan bagi tujuan menyediakan perkhidmatan ekosistem, khususnya sebagai kawasan bekalan air dan udara bersih, serta zon penampungan bencana dan pencemaran diurus dengan rapi untuk kesejahteraan masyarakat. Ringkasnya, pengurusan hutan simpan kekal juga perlu menjalani proses transformasi.

Dr Mahathir menyatakan komitmen jelas kerajaan mengenai usaha ke arah menghormati warisan tabii dan kelestarian alam sekitar. Terpujang kepada keberanian pelaksana dasar dan iltizam politik kerajaan negeri untuk merealisasikan.

LAMPIRAN 8
UTUSAN MALAYSIA (DALAM NEGERI): MUKA SURAT 10
TARIKH: 4 OKTOBER 2018 (KHAMIS)

Selat Melaka berisiko tsunami

Oleh **SITI NORHAWA MOHD. ALI**
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■ **KUALA LUMPUR 3 OKT.**

KESAN gempa bumi di Sumatera, Indonesia berisiko kepada Semenanjung khususnya Selat Melaka untuk menerima tsunami pada masa hadapan.

Pengarah Pusat Kajian Bencana Alam Universiti Malaysia

Sabah (UMS), Profesor Dr. Felix Tongkul berkata, oleh itu, Malaysia perlu bersiap sedia bagi memastikan sebarang kemungkinan yang menimpa pada tahap minimum.

“Kita perlu melengkapkan pengetahuan mengenai tahap bencana ini serta membuat persediaan yang sepatutnya.

“Sementara itu kemungkinan tsunami dari Sulawesi dan

Filipina boleh juga sampai ke pantai timur Sabah, tetapi pada ketinggian yang kecil,” katanya ketika dihubungi *Utusan Malaysia* di sini hari ini.

Tambah Felix, meskipun risiko gempa bumi dan tsunami pada umumnya di Malaysia adalah jauh lebih rendah berbanding Indonesia, langkah berjaga-jaga tetap perlu diambil.

Katanya, hanya Sabah yang

mempunyai risiko gempa bumi yang secara relatifnya tinggi di Malaysia.

“Nasib Indonesia pula akan tetap menerima ancaman gempa bumi dan tsunami yang tinggi.

“Saya fikir negara kita lebih bersedia berbanding 10 tahun lalu. Masih banyak kerja yang perlu dibuat, tetapi memang ada peningkatan,” katanya.

LAMPIRAN 9

NEW STRAITS TIMES (GOVT & POLICY/ NEWS): MUKA SURAT 11
TARIKH: 4 OKTOBER 2018 (KHAMIS)

LYNAS OPERATIONS

Fuziah: PH govt is environment-friendly

KUALA LUMPUR: Deputy Minister in the Prime Minister's Department Fuziah Salleh has given an assurance of the government's commitment in carrying out a review to ensure an environment-friendly operation by Lynas Malaysia.

Fuziah, in an open letter addressed to Australia Lynas Corporation Ltd chief executive officer Amanda Lacaze, said a review of operations at Lynas' plant would be guided by a sustainable development framework and investment.

She said the government had expressed its commitment through its manifesto to make sustainability a part of its administrative policies.

"Through the Pakatan Harapan manifesto's 39 promises, under 'Balancing the Economic Growth with Environmental Protection', we promised to govern the country based on a sustainable development principle.

"In short, it (PH) will be an environment-friendly government," said Fuziah, who is Lynas Executive Review Committee chairman.

"The committee was formed to review the safety aspects of operations at Lynas Advanced Materials Plant.

"The chairman and members, who were appointed by the respective minister, would represent the government in the review."

She said the review centred on Radioactive Waste Management Plan.

"The committee would look into safety aspects, such as health, social and environmental effects."

She said reports from previous reviews, like the Parliament committee, and suggestions by the International Atomic Energy Agency would be taken into consideration.

She said the committee welcomed suggestions by Lynas as the hearing would be open to the public.

"The committee is aware that the views of Lynas and its staff as stakeholders must be weighed in. The review process would be carried out in an open and transparent manner."

A think tank warned that any review of investment in Malaysia must be industry-specific.

Firdaus Rosli from the Institute of Strategic and International Studies said the government should not be seen as selective of companies or projects when carrying out reviews.

He said it was paramount to maintain investor confidence as several planned and ongoing mega projects had gone through prior scrutiny.

Lacaze yesterday sought a fair and objective review of the project, saying Lynas had yet to be informed of the scope of the review or its terms of reference.



Fuziah Salleh

LAMPIRAN 10 NEW STRAITS TIMES (NATION/ NEWS): MUKA SURAT 7 TARIKH: 4 OKTOBER 2018 (KHAMIS)

SOLID WASTE

PLASTIC DANGER IN EATING FISH

Fish and turtles mistake drifting plastic for food

BADRUL KAMAL ZAKARIA
MUAR
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DISPOSAL of solid waste, in particular materials made from plastic, is seen to be the biggest environmental threat to the world, especially for countries surrounded by oceans, including Malaysia.

Plastic material, which does not easily decompose, has adverse effects, not only on aquatic animals, but also on humans.

Universiti Putra Malaysia's Faculty of Science lecturer at its department of Biology, Professor Dr Ahmad Ismail, said aquatic animals, such as fishes and turtles, were especially in danger because they mistook drifting plastic for food.

"Even more worrying is the fact that plastic material consumed by fishes can cause a chemical reaction in their body, and is absorbed into their tissue. And these fishes are eventually eaten by humans," he told the New Straits Times Press (NSTP), while conducting research in coastal areas here recently.

Observations by the NSTP team at beachfront locations showed that plastic waste was found on tree branches and in mangrove areas. An increasing amount of plastic waste in beachfronts is alarming.

Experts said waste dumped into the sea would return to land, and this affected other ecosystems.

Marine pollution also posed a threat to the fishery industry as it caused an imbalance in the ecosystem, and affected the fish population.

Ahmad said plastic waste pollution could happen anywhere at any time, due to the ocean's tide.

"These plastic wastes could have originated from our country or a foreign country. We will never know because every plastic thrown into the ocean will find its way to a beach.

"We need to keep in mind that when plastic trash travels through this coastline, it will affect our marine life, such as whales, turtles, dolphins, seagulls, and even the fish we eat."

He said, as a country surrounded by oceans, Malaysia was part of this global issue, which should be jointly addressed.

"First and foremost, we need to emphasise the importance of managing plastic waste because we cannot run away from the fact that the usage of plastic as a household material is here to stay."



TOP 10 PLASTIC WASTE-PRODUCING COUNTRIES IN 2018



Source: earthday.org

INFOGRAPHIC NST

He recommended that the authorities review ways of managing plastic waste, including promoting recycling.

He said the issue should be taken seriously, and urged for awareness to be raised as the issue posed a health risk to people.

"We have to cultivate recycling, and with the conservation of the environment, make an effort not to throw waste into the sea. Eventually, we will get caught in our own trap because we eat marine life, and this can transfer the poison in them to our bodies."

POLLUTION

Plastic thrown into oceans causing deaths of aquatic mammals

MUAR: Disposal of plastic-based solid waste into the oceans is causing the death of aquatic animals, particularly turtles and marine mammals, such as whales, dolphins and dugong.

The effects of marine pollution is threatening smaller species of marine life, including fish and clams, which are among sources of protein in the human food chain.

Universiti Malaysia Terengganu (UMT) Institute for Oceanography and Environment lecturer, Dr Mohd Uzair Rusli, said plastic waste usually drifted out into sea, either in physical form or smaller particles called micro plastic.

These plastic-based waste was then consumed by aquatic life.

"If we look at the report from the Malaysian Marine Fisheries Mammals Network's National Task Force, under the Fisheries Research Institute, we will find that most autopsy conducted on marine animals found plastic in their abdomen.

"More worrying is the fact that the autopsies revealed plastics in physical form and not in micro plastic conditions.

"These plastics were found in the stomach of the animals, and it had caused their deaths," he said when contacted by the New Straits Times Press recently.

Uzair, who is head of the UMT Turtle Research and Conservation Unit (Seatru), said that drifting plastic presented a huge threat to turtles, which mistook them as food.

"There marine animals (turtles) confuse the plastic with jellyfish, their food, and eat it.

"From the records of death, we found that these marine animals will experience digestive system disorders and lose their appetite.

"It also causes a lack of nutrition in their bodies and leads to their deaths.

"In addition, plastic impacts the marine animals' respiratory system, especially turtles.

"The plastic blocks their breathing and causes death via suffocation."

Asked about whether this pollution could endanger newly-hatched turtles, Uzair said he did not rule out the possibility, but added that further research needed to be done on it.

"The nature of turtles is that after they enter the sea, they will swim for two days without feeding.

"After the two days, they will begin to search for seagrass, plankton and anything floating in the water, including possibly, the floating micro plastic."

He said that although there were no reports on the matter, there were scientists finding out if the micro plastic could affect newly-hatched turtles.

"It's just a challenge for us. Scientists do not know where these turtles are, because we classify the first two years in their lifespan as 'lost years'.

"As a start, my team has been using research funds from the

Fundamental Research Grant Scheme to measure the amount of energy in the bodies of newly-hatched turtles.

"This is to build a mathematical model involving sea currents to find areas where turtles gravitate to in its first two years.

"This needs to be established before we can study the effect of plastic on turtles."

He did not rule out the possibility that turtle hatchlings may be vulnerable to micro plastic.

He said newly-hatched turtles had limited vision, and no scientist could say with certainty that these marine creatures used their sense of smell to distinguish their food.

"The probability that these turtles eat micro-plastics is high because their underdeveloped body limits all their senses."

He said his colleagues, who study marine pollution, had found that micro plastic were also evident in corals and sea worms.

"What we are worried about is that this pollution can affect the fish, which is a major source of protein for humans.

"There is a hypothesis that shows that chemicals found in these micro-microorganisms can cause them to contaminate the tissues in the bodies of the fish that eat them.

"The situation causes things, such as cancer.

"But efforts are being made to address this problem.

"Scientists from the School of Marine and Environmental Sciences at UTM are working to find marine organisms that can act as a dispersing agent for micro plastic in the bodies of marine creatures."

He said he and his students were working on implementing an anti-straw usage campaign to reduce the usage of plastic materials being dumped into the sea.

He said doing this may improve the underwater environment for marine life.

LAMPIRAN 11
THE STAR (NEWS): MUKA SURAT 1
TARIKH: 4 OKTOBER 2018 (KHAMIS)

Sniffing out fakes

Enforcement officers in the Federal Territories are using touch and smell to tell the difference between 100% biodegradable plastic bags and substandard ones.>2&3



**LAMPIRAN 11 (SAMBUNGAN)
THE STAR (NEWS): MUKA SURAT 2
TARIKH: 4 OKTOBER 2018 (KHAMIS)**



(From left) Euro SME Sdn Bhd sales and marketing director Imelda Tan, Aranyav, Zaizalnazam and YWP property and asset management unit executive Noraini Abdullah looking at some samples of plastic bags and food containers available in the market.

'Abide by ruling or face the music'

FT Ministry warns business owners as it steps up enforcement to check use of fake biodegradable plastic bags and regular ones

By VIJENTHI NAIR
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UNKNOWN to many, fake and substandard biodegradable plastic bags are being widely used in the Federal Territories.

In determining the real from the fake, Federal Territories Ministry enforcement officers will use their sense of smell and touch to determine.

Federal Territories Ministry secretary-general Danuk Seri Adnan Mohd Ikhsan said local authorities' enforcement officers were trained to differentiate between the 100% biodegradable plastic bags from the rest.

"The 100% biodegradable plastic bags have a silky feel and sweet smell.

The enforcement officers, he said, would use their senses to judge and issue a compound if they suspect the plastic bags did not fulfill the requirement.

"If the business owner does not agree, they can bring the matter to court," he said, adding that they were also aware of many ways plastic bag manufacturers could fool the ministry and consumers.

A year after the use of 100% biodegradable plastic bags and food containers were made compulsory, many businesses using the eco-friendly alternative decided to make a U-turn.

Those who took a step back opted for the much cheaper and regular hydrocarbon plastic bags, photodegradable or oxo-degradable plastic bags, as well as substandard biodegradable plastic bags.



Adnan says the Federal Territories Ministry's enforcement team will focus on hypermarkets to check on whether plastic bags are still being used.



Zaizalnazam says small traders can get their supply of biodegradable plastic bags and food containers from YWP stores, or from Wisma YWP in Kampung Baru.

Adnan said unscrupulous plastic bag manufacturers were passing off fake biobased plastic bags as 100% biodegradable.

"The plastic bags also have the ministry's "biodegradable" stamp as well as the "eco-label stamp" by Sirim, complete with the certification number.

"These manufacturers are not only breaking the law but are also forging the Sirim certification.

"Sirim has yet to take action, so many manufacturers are taking advantage of this," he said.

Adnan said it was time to come down hard on business owners who used fake biodegradable bags, to put an end to its demand and distribution.

"The initiative was kicked off in

2016 and we have given ample time for the businesses to adapt to the new requirements.

"By right, the businesses should have depleted their old stocks of non-biodegradable plastic bags and food containers," said Adnan, adding that the requirement to use biodegradable plastic bags and food containers was stipulated in the business licence.

He said 1,025 notices and 90 compounds were issued in the last one year.

"We were focused on creating awareness that explained the high number of notices compared to compounds. The compounds were only issued to business owners with multiple notices.

"From now onwards, repeat



Samples of 100% biodegradable plastic bags and food containers sold at YWP shops.

LAMPIRAN 11 (SAMBUNGAN) THE STAR (NEWS): MUKA SURAT 3 TARIKH: 4 OKTOBER 2018 (KHAMIS)



Adnan (pale blue shirt) went to the ground to check on the type of plastics being used at check-out counters.

An example of a biodegradable burger box.

An example of a 100% biodegradable disposable plate.



offenders will immediately be compounded. People will resist change unless there is enforcement.

"I agree that there has been a lack of enforcement and many people are using hydrocarbon plastic bags in hope that we will turn back on the ruling. We will not," he warned.

Adnan said some supermarkets were using fake or substandard plastic bags.

"I urge the management not to think about saving cost but focus on the greater good of the environment," he said.

"It is not fair to other traders who are observing the ruling. It is the same for those in the plastic bag industry."

"Caring for the environment is a shared responsibility," he added.

The ministry, he said, kicked off enforcement efforts in September to check on supermarkets and would move on to night markets in the next phase.

The ban applied to plastic bags used at the check-out counters, Adnan explained.

"Business owners who fail to abide by the ruling can be fined, lose their deposit, have their trading items confiscated, risk termination of their business licence or may even be imprisoned."

"We will only be lenient with the use of plastic straws until the end of next year. Full enforcement on the plastic straw ban will start on Jan 1, 2020," he added.

Adnan said he was aware of complaints about biodegradable plastic bags being flimsy.



Enforcement officers are trained to differentiate 100% biodegradable plastic bags from the rest.

"Bioproducts are not very strong, as they are supposed to degrade easily. It is about 40% less strength of the hydrocarbon bag of the same thickness."

"There are bioproducts to fit every need. If the plastic bag was made to carry a maximum of 3kg, it will not be able to take more than that."

"Business owners need to make sure they are using the right type of plastic bags and food containers suitable for the nature of their business."

"They can also get creative and use paper or banana leaf to line the base," he added.

Adnan said 14 manufacturers, nine distributors and 42 suppliers were registered with the ministry, adding that the business owners would be provided with the list to ensure that they are getting the real product.

One of the manufacturer in the list is Euro SME Sdn Bhd.

Its business development manager Aranyav Ganguly said his company had a huge stock of 100% biodegradable plastic bags as many business operators refused to buy them as they claimed the prices were too high.

"The price of 100% biodegradable plastic bags is four times more than hydrocarbon plastic bags (ones that are now banned)."

"Some business operators who placed orders with us in the past got new suppliers claiming to sell biodegradable plastic bags, but sold oxo-degradable or photodegradable plastic bags."

"These plastic bags even come with the Sirim and Federal Territories Ministry stamps."

He gave assurance that there was no problem with supply of such bags. "We have the capacity to supply, but the demand is not consistent. We have 100 machines lying idle without order."

"There will always be issues in the initial stages, but once the demand stabilises, there will not be a problem," he said.

Yayasan Wilayah Persekutuan (YWP), the ministry's welfare arm, has taken the onus to stabilise the market for 100% biodegradable plastic bags and food containers.

YWP chief executive officer Zaizalnim Zaim said small traders could buy 100% biodegradable plastic bags and food containers from their stores

in Persiaran MPAJ, Pandan Indah and Pasar Awam Presint 9, Putrajaya.

"We are now selling four types of plastic bags of different sizes that can take up to 5kg, and food containers like lunch box, burger box, plates and bowl."

"We are also in the process of getting more products," he said.

The two outlets are open from Monday to Friday, from 8.30am to 5.30pm and Saturday from 8.30am to 1pm. It is closed on Sunday.

"We also have stock at Wisma YWP in Kampung Baru. We are open on weekdays from 8.30am until 5.30pm."

"We also provide delivery service. Our prices are regulated. To ensure its success in penetrating fully into the market, we are making it as convenient as possible for business operators."

"This is our corporate social responsibility to make sure the transition is a success," he said.

Adnan said the ultimate goal was to stop the use of plastic bags altogether and only use reusable bags.

"We need to make gradual changes. There will be objections but slowly people will accept."

LAMPIRAN 12
NEW STRAITS TIMES (WORLD): MUKA SURAT 78
TARIKH: 4 OKTOBER 2018 (KHAMIS)

RYUGU

Japan space probe lands new robot on asteroid

TOKYO: A Japanese probe landed a new observation robot on an asteroid yesterday as it pursues a mission to shed light on the origins of the solar system.

The French-German Mobile Asteroid Surface Scout, or MASCOT, launched from the Hayabusa2 probe, landed safely on Ryugu and was in contact with its team, the lander's official Twitter account said.

"And then I found myself in a place like no place on Earth. A land full of wonder, mystery and danger!," the @MASCOT2018 account tweeted.

"I landed on asteroid Ryugu!"

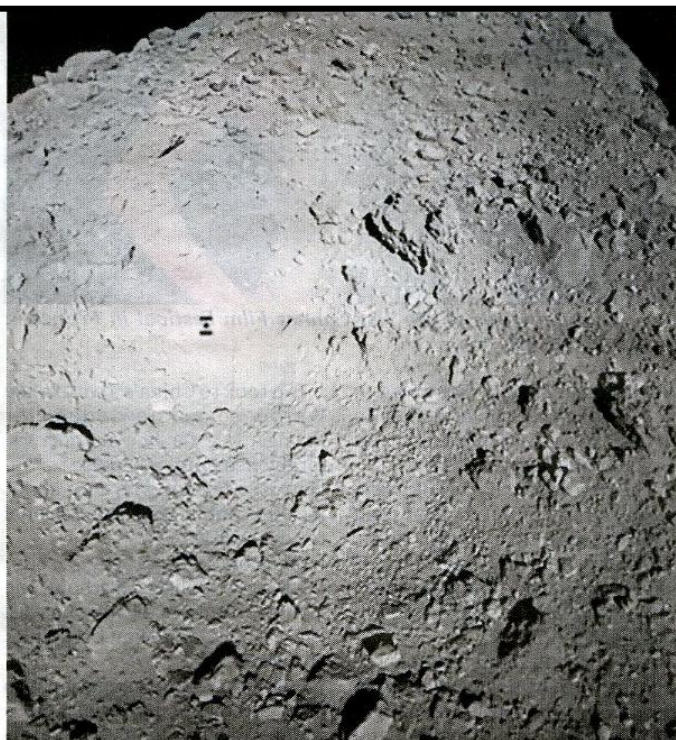
MASCOT is expected to collect a wide range of data on the as-

teroid, some 300 million kilometres from Earth.

"It is hugely significant to take data from the surface of an asteroid, we have high expectations for the scientific data," Hayabusa2 mission manager Makoto Yoshikawa said.

MASCOT's launch comes 10 days after the Hayabusa2 dropped a pair of MINERVA-II micro-rovers on the Ryugu asteroid.

The rovers will take advantage of Ryugu's low gravity to jump around on the surface — travelling as far as 15m and staying above the surface for as long as 15 minutes — to survey the asteroid's physical features with cameras and sensors. **AFP**



Picture showing the shadow of Japanese spacecraft Hayabusa2 (left) over the asteroid Ryugu yesterday. AFP PIC

LAMPIRAN 13
KOSMO (DUNIA): MUKA SURAT 48
TARIKH: 4 OKTOBER 2018 (KHAMIS)

Gunung Soputan meletus, hambur abu vulkanik setinggi 4,000 meter

Sulawesi terus ditimpa bencana

JAKARTA – Pulau Sulawesi terus diancam bencana alam apabila Gunung Berapi Soputan yang terletak di daerah Minahasa, wilayah Sulawesi Utara meletus pagi semalam.

Gunung itu meletus pada pukul 8.47 pagi (waktu tempatan) dan menghamburkan abu vulkanik berwarna kelabu setinggi 4,000 meter ke udara.

Kepulan awan vulkanik itu bergerak menghala ke arah barat laut, namun setakat semalam ia tidak menjejaskan aktiviti penduduk atau mengganggu operasi pener-

bangsan pesawat.

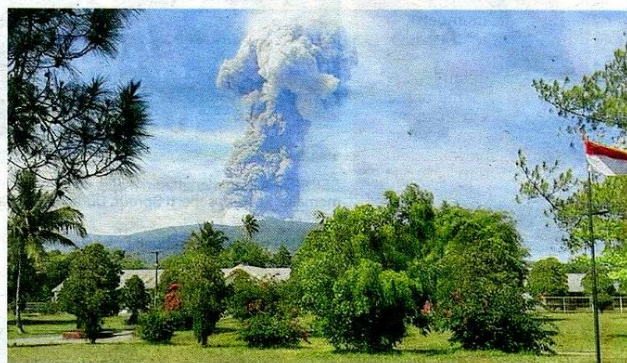
Ketua Pusat Data Informasi dan Hubungan Masyarakat Badan Nasional Pengurusan Bencana (BNPB), Sutopo Purwo Nugroho (**gambar kecil**) berkata, pihak berkuasa Indonesia telah mengeluarkan arahan melarang penduduk melakukan kegiatan dalam lingkungan 4 kilometer(km) dari gunung berapi berkenaan.

“Buat masa ini, BNPB serta Badan Meteorologi, Klimatologi dan Geofisika (BMKG) sedang memantau perkembangan letusan gunung berapi itu” katanya.

Gunung Soputan terletak sekitar 1,000 kilometer dari bandar Palu, Sulawesi Tengah di mana gempa bumi kuat bermagnitud 7.5 menceuskan tsunami yang mengorbankan lebih 1,400 orang pada Jumaat lepas.

Bencana berkembar itu turut menyebabkan puluhan ribu kediaman dan bangunan musnah atau rosak teruk.

Gempa bumi pada minggu lalu itu juga menceuskan lebih 250 gempa susulan sehingga kini. Kali terakhir gunung berapi setinggi 1,784 meter yang terletak kira-kira 56 km dari Bandar Manado itu meletus ialah pada tahun 2015. – Bernama/AFP



GAMBAR yang dirakam oleh BNPB dari Pinabentengen, Sulawesi Utara semalam menunjukkan Gunung Soputan menghamburkan abu vulkanik setinggi 4,000 meter ke udara.

AFF

LAMPIRAN 14

THE STAR (WORLD): MUKA SURAT 22

TARIKH: 4 OKTOBER 2018 (KHAMIS)

Mount Soputan erupts on tsunami-hit island

JAKARTA: Indonesia's Mount Soputan volcano on the quake- and tsunami-hit island of Sulawesi has erupted, spewing volcanic ash 4,000m into the air.

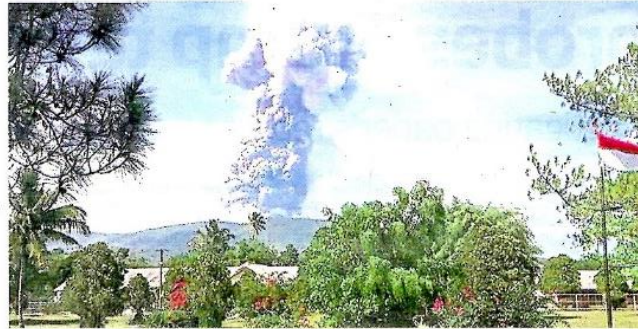
The state disaster agency yesterday warned people to stay at least 4km away, but added that there was no need to evacuate for the time being.

Images showed an eruption visible for miles around, with a cloud of ash climbing in a large vertical

column with a mushroom-shaped top.

Soputan is around 1,000km from the town of Palu, where a 7.5-magnitude earthquake triggered a tsunami that lashed the coastline killing almost 1,400 people.

Indonesia is situated on the Pacific Ring of Fire, a vast zone of geological instability where the collision of tectonic plates causes frequent earthquakes and major volcanic activity. — AFP



Looming danger: Mount Soputan spewing volcanic ash, as seen from Pinabetengan in Southeast Sulawesi province. — AFP

Disaster death toll climbs to 1,407

Indonesia police get tough on looters

PALU: About 1,407 people are now known to have died in the quake-tsunami that smashed into Sulawesi, Indonesia said, as police pledged to clamp down on looting by survivors taking advantage of the chaos.

There were reports on Tuesday of officers firing warning shots and tear gas to ward off people ransacking shops in Palu, a coastal city ravaged by a 7.5-magnitude quake and the tsunami it spawned.

Almost 200,000 people were in need of urgent help, the United Nations said, among them tens of thousands of children.

Survivors were battling thirst and hunger, with food and clean water in short supply, and local hospitals were overwhelmed by the number of injured.

Police said on Tuesday that they had previously tolerated desperate survivors taking food and water from closed shops, but had now arrested dozens of people for stealing computers and cash.

"On the first and second day, clearly no shops were open. People were hungry and in dire need. That's not a problem," said deputy national police chief Ari Dono Sukmanto.

"But after day two, the food supply started to come in, it only needed to be distributed. We are now re-enforcing the law."

Despite official assurances, desperation was evident on the streets of Palu, where survivors clambered through wreckage hunting for anything salvageable.

Others crowded around daisy-chained power strips at the few buildings that still had electricity, or queued for water, cash or petrol brought in via armed police convoy.

Queues to get a few litres of petrol lasted over 24 hours in some places.

Sanitation is also a problem. "People everywhere want to go to the toilet, but there's no toilet, so we do it along the road at night," said 50-year-old Arnawati Yarmim.

Rescue efforts have been hampered by a lack of heavy machinery, severed transport links, the scale of the damage and the Indonesian government's initial reluctance to accept foreign help.

Along the road to Donggala, a large town close to the epicentre of the quake, there were more scenes of destruction. The town itself appeared relatively unscathed, but in the worst affected areas it was hard to find a single vertical surface.



Colours of ruin: A ferris wheel standing amid debris at an amusement park in northern Palu. — AFP



Not giving up: Rescue personnel searching for survivors at a collapsed home in Balaroa, West Palu. — AFP

Donggala resident Farid, 48, pleaded for help: "Don't centre all the aid on Palu. We in Donggala have nothing."

As if to remind the world of the tectonic fragility of Indonesia, a series of quakes hit the island of Sumba on Tuesday, albeit hundreds of kilometres from Palu.

The official death toll from the tragedy in central Sulawesi stood at 1,407, according to the government.

The United Nations Office for the Coordination of Humanitarian

Affairs said it expected the toll to rise further as rescuers made contact with previously cut off areas.

The Indonesian military is leading the rescue effort, but following a reluctant acceptance of help by President Joko Widodo, international NGOs also have teams on the ground in Palu.

Among the dead were dozens of students whose bodies were pulled out from their landslide-swamped church in Sulawesi.

The dead — many yet uncounted,

their bodies still trapped in the rubble of collapsed buildings — are also a source of concern for authorities.

The Indonesia-based Asean Coordinating Centre for Humanitarian Assistance said more body bags were "urgently" needed as fears grew that the decomposing corpses could provide a breeding ground for deadly diseases.

There were glimmers of hope among the countless tragedies.

Two people were plucked from the rubble of the Roa-Roa Hotel,

Indonesia's search and rescue agency said, and more could still be alive.

And for civil servant Azwan, there was joy when he was reunited with his wife, Dewi after 48 hours of fearing the worst after she was swept away by the tsunami.

"I was so emotional — thank God I could see her again," he said.

But for some, the search yields only sorrow as they trudge around open-air morgues, where the dead lay in the sun, waiting to be claimed and named. — AFP



Desperate times: A quake-affected family riding with their belongings through a devastated area in Palu. — AFP