

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

Bil	Berita	Media	Capaian Berita Penuh
1.	<u>We will send back plastic waste smuggled into Malaysia: Environment minister</u>	Chanel News Asia	Klik pada tajuk berita
2.	<u>24 kontena bawa plastik terpakai tercemar dikesan</u>	Sinar Harian Online	Klik pada tajuk berita
3.	<u>Kegiatan seludup sisa plastik tercemar terus berlaku</u>	Berita Harian Online	Klik pada tajuk berita
4.	<u>Fixing a broken system</u>	The Star Online	Klik pada tajuk berita
5.	<u>Ministry to adopt SOP to handle toxic chemical pollution incidents</u>	The Malaysian Insight	Klik pada tajuk berita
6.	<u>Parlimen: SOP tangani insiden pencemaran bahan toksik dibangunkan</u>	Kosmo! Online	Klik pada tajuk berita
7.	<u>Ministry to implement SOP on handling of chemical fallout</u>	Malaymail	Klik pada tajuk berita
8.	<u>Is there a silver lining on the horizon for Lynas?</u>	The Edge Markets	Klik pada tajuk berita
9.	<u>MTDC plans Industry 4.0 hub in Sabah</u>	Daily Express	Klik pada tajuk berita
10.	<u>Yeo: Plastic waste is now being smuggled into Malaysia</u>	The Star Online	Klik pada tajuk berita
11.	<u>Checks show dirty plastic still being smuggled into Malaysian ports/ Ops at</u>	New Straits Times	Klik pada tajuk berita

Bil	Berita	Media	Capaian Berita Penuh
	<u>all ports: Plastic Waste Still Being Shipped In</u>		dan Rujuk lampiran 1
12.	<u>Dirty plastics from Spain brought in through false declaration</u>	Free Malaysia Today Online	Klik pada tajuk berita
13.	<u>Joint effort foils attempt to smuggle plastic into country</u>	The Sun Daily Online	Klik pada tajuk berita
14.	<u>Malaysia minister says plastic waste is being smuggled into country</u>	The Straits Times Online	Klik pada tajuk berita
15.	<u>Climate change minister declares war on plastic waste smugglers after container-loads found in Klang</u>	Malaymail.com	Klik pada tajuk berita
16.	<u>When trash is cash / China's ban, Malaysia's bane</u>	The Star Online	Klik pada tajuk berita dan Rujuk lampiran 2
17.	<u>Company made false declaration to import dirty plastic waste into M'sia: Yeo</u>	The Sun Daily Online	Klik pada tajuk berita
18.	<u>Pengimport sampah dikenal pasti</u>	Harian Metro Online	Klik pada tajuk berita
19.	<u>Operasi kilang bateri di Jenjarom dihentikan / Pencemaran Asid, Plumbum: Kilang bateri diarah tutup serta-merta</u>	Berita Harian Online	Klik pada tajuk berita dan Rujuk lampiran 3
20.	<u>Kilang bateri diarah pindah jika ada pencemaran plumbum</u>	Sinar Harian Online	Klik pada tajuk berita
21.	<u>Kilang bateri diarah tutup sehingga siasatan selesai</u>	Kosmo! Online	Klik pada tajuk berita

Bil	Berita	Media	Capaian Berita Penuh
22.	<u>Tak semua syarikat boleh mohon projek Ladang Hutan Perak</u>	Malaysiakini.com	Klik pada tajuk berita
23.	<u>Tulang dijumpai di Gua Kandu sah tulang manusia - Polis</u>	Astro Awani	Klik pada tajuk berita
24.	<u>Serpihan dalam Gua Kandu sah tulang manusia</u>	Berita Harian Online	Klik pada tajuk berita
25.	<u>Pencarian Acap: Tulang, serpihan dijumpai disahkan milik manusia</u>	Kosmo! Online	Klik pada tajuk berita
26.	<u>Sah tulang manusia</u>	Harian Metro Online	Klik pada tajuk berita
27.	<u>Serpihan tulang di Gua Kandu sah milik manusia</u>	Malaysiakini.com	Klik pada tajuk berita
28.	<u>Serpihan tulang Gua Kandu disahkan milik manusia</u>	Utusan Malaysia Online	Klik pada tajuk berita
29.	<u>Lagi tompokan minyak dibersihkan</u>	Utusan Malaysia Online	Klik pada tajuk berita
30.	<u>Tompokan minyak baru ditemui</u>	Harian Metro Online	Klik pada tajuk berita
31.	<u>Malaysian telecom deploys energy solution furthering IR 4.0</u>	Opengovasia.com	Klik pada tajuk berita
32.	<u>Gempa bumi 6.3 skala Richter landa Samar, Filipina</u>	Kosmo! Online	Klik pada tajuk berita
33.	<u>Sah tulang manusia</u>	Sinar Harian Online	Rujuk lampiran 4
34.	<u>Ensure environmental sustainability of the ECRL</u>	The Sun Daily	Rujuk lampiran 5

Bil	Berita	Media	Capaian Berita Penuh
35.	<u>Bid to smuggle 24 containers of plastic waste foiled</u>	The Sun Daily	Rujuk lampiran 6
36.	<u>Civil servants urged to do away with single-use plastics</u>	The Star	Rujuk lampiran 7
37.	<u>Realigned ECRL needs fresh EIA</u>	The Star	Rujuk lampiran 8
38.	<u>ORANG DALAM JADI DALANG</u>	Berita Harian	Rujuk lampiran 9
39.	<u>Cabaran, reality hasilkan elektrik sendiri</u>	Utusan Malaysia	Rujuk lampiran 10
40.	<u>Dealing with marine plastic pollution</u>	New Straits Times	Rujuk lampiran 11

TEMPATAN

Bil	Berita	Media	Capaian Berita Penuh
41.	<u>Pencemaran asid dan plumbum: Kilang diarah hentikan operasi</u>	Utusan Malaysia Online	Klik pada tajuk berita
42.	<u>Modal berbayar RM200,000 syarat pembangunan ladang hutan</u>	Utusan Malaysia Online	Klik pada tajuk berita
43.	<u>Syarat mohon konsesi balak hanya perlu miliki tukul besi</u>	Sinar Harian Online	Klik pada tajuk berita
44.	<u>Safe energy practice through 'Touchpoint' programme</u>	Daily Express Online	Klik pada tajuk berita
45.	<u>Tiada laporan rakyat Malaysia terjejas gempa bumi di Pulau Luzon</u>	Berita Harian Online	Klik pada tajuk berita

46.	<u>Selam buru tapak sulaiman</u>	Harian Metro Online	Klik pada tajuk berita
47.	<u>Robotik, AI jadi focus utama bidang pekerjaan</u>	Utusan Malaysia	Rujuk lampiran 12
48.	<u>China plastic waste ban throws global recycling into chaos</u>	New Straits Times	Rujuk lampiran 13

ANTARABANGSA

Bil	Berita	Media	Capaian Berita Penuh
49.	<u>Gempa bumi 6.1 magnitud landa India</u>	Sinar Harian Online	Klik pada tajuk berita
50.	<u>Pasukan penyelamat terus mengesan mangsa gempa bumi</u>	Astro Awani	Klik pada tajuk berita
51.	<u>Ribut pasir melanda Arab Saudi</u>	Kosmo!	Rujuk Lampiran 14
52.	<u>Aurora borealis aneh bawa ancaman kepada Bumi</u>	Kosmo!	Rujuk Lampiran 15
53.	<u>Arab Saudi dilanda ribut pasir</u>	Berita Harian	Rujuk Lampiran 16
54.	<u>Second Powerful Quake Strikes The Philippines</u>	New Straits Times	Rujuk Lampiran 17
55.	<u>Gegaran kedua guncang Samar</u>	Berita Harian	Rujuk Lampiran 18

LAMPIRAN 1
NEW STRAITS TIMES (NATION / NEWS): MUKA SURAT 9
TARIKH: 24 APRIL 2019 (RABU)

OPS AT ALL PORTS

PLASTIC WASTE STILL BEING SHIPPED IN

Abuse of power at ports exposed as 24 containers found with prohibited items

KHAIRUL AZRAN HUSSIN
PORT KLANG
cnews@nstp.com.my

THE smuggling of contaminated plastic waste into the country is still ongoing, even though the government banned the import of such materials last year.

The smuggling activities were unearthed following the discovery of 24 cargo containers at West Port, containing contaminated plastic waste which could no longer be recycled.

Energy, Science, Technology, Environment and Climate Change Minister Yeo Bee Yin said the discovery had exposed elements of abuse of power among certain quarters within the nation's ports.

"All the 24 containers were de-

clared as having 'clean' waste. However, checks showed that they contained prohibited materials.

"We also received reports of containers bearing contaminated plastic waste in North Port as well as in Penang.

"This month, authorities will conduct operations at all ports nationwide. We are serious in our aim to tackle this issue. We have identified the import company.

"We are concerned as to how these containers could make its way so easily into our ports. If there is foul play involved, we will take action against those involved," she said after conducting checks at West Port here yesterday.

Yeo said preliminary checks showed that the contaminated



Energy, Science, Technology, Environment and Climate Change Minister Yeo Bee Yin (right) looking at a container filled with contaminated plastic waste in West Port, Port Klang, yesterday. With her is the ministry secretary-general Datuk Seri Dr Mohd Azhar Yahaya (left) and Department of Environment director-general Datuk Dr Ahmad Kamarulnajib Che Ibrahim. PIC BY NUR ADIBAH AHMAD IZAM

plastic waste would be sent to illegal recycling plants throughout the country.

"This is dirty, low-quality plas-

tic. This is the type of plastic which cannot be disposed off so easily. If burnt, it emits black smoke."

Asked if the government would be asking the countries of origin to take back the plastic waste seized in Malaysian ports, Yeo said the government would rely on the Basel Convention.

"Malaysia is a signatory of the Basel Convention, touching on cross-border control of the disposal of toxic and dangerous material. So, we can compel the countries of origin to take back their waste and bear the cost.

"For example, the containers detected today (yesterday) came from Spain.

"Countries like the United Kingdom, Australia, the United States and Germany also send their waste to Malaysia."

Yeo added that 148 illegal plastic recycling plants nationwide, including those which failed to comply with the Environmental Quality Act 1974, were shut down since January.

Last October, the government ended the issuance of import licences for plastic waste.

LAMPIRAN 2
THE STAR (NATION): MUKA SURAT 1
TARIKH: 24 APRIL 2019 (RABU)

China's ban, Malaysia's bane



It is a global trade in its most trashy form. China's import ban on plastic waste has forced developed countries to look elsewhere to ship this unwanted material. Malaysia is one such 'dumping ground'. It is an uphill battle stopping the international syndicates that profit hugely from smuggling plastic waste into our country, where so little of it is actually recycled. > See page 3 for report by CLARISSA CHUNG, RAHIMY RAHIM and RASHVINJEET S. BEDI

LAMPIRAN 2 (SAMB.) THE STAR (NATION): MUKA SURAT 3 TARIKH: 24 APRIL 2019 (RABU)

Reports by CLARISSA CHUNG, RAHIMY RAHIM and RASHVINJEET S. BEDI

KLANG: Anybody who doubts that trash is cash is ignoring the fact that Malaysia's plastic waste crisis is far from over despite an ongoing crackdown on the illegal processing of this waste.

It is believed that the plastic waste keeps finding its way to our shores because global syndicates are making lots of money by using our country as a junkyard.

Energy, Science, Technology, Environment and Climate Change Minister Yeo Bee Yin said the government intended to cut off illegal plastic imports at the points of entry.

"We need to stop (the waste) at the ports. We believe that there are syndicates making huge profits from importing such waste from developed countries," she said.

She added that international cooperation was needed to take down these global syndicates.

At the end of April, she said, Malaysian representatives would be sent to the Conference of the Parties to the Basel Convention to speak out against this problem.

When trash is cash

Plastic-waste crisis far from over despite crackdown on lucrative 'processing'

"These representatives will air these problems and we hope to tackle these syndicates with other countries," she added.

The Basel Convention is an international treaty aimed at reducing the movement of hazardous waste between countries.

Yeo said findings from an investigation found that plastic waste was still being smuggled into Malaysia from developed countries such as the United Kingdom, Australia, the United States and Germany.

"They are falsely declaring it as (HS Code) 3920 plastics, which doesn't need a permit and can enter the country," she said.

The HS (Harmonised System) Code is a coding system to classify products when they are declared at the customs checkpoints.

Some 111 containers with contaminated plastic until for recycling remain unclaimed at Westports in Port Klang. There are another 18 in nearby Northport.

Yeo added that her ministry would be going "full force" to clamp down on those responsible for illegal plastic waste imports over the next month.

She warned forwarding agencies to be extra careful with clients importing plastics, adding that the government had the right to revoke

the agencies' licences if their clients made false customs declarations.

The forwarding companies, she said, had the right to open up the containers should they have suspicions about the contents.

Yeo also added that to date, 148 plastic waste factories had been shut down.

In the meantime, she said, exporters of such plastic waste would be told to take back their waste in about three months' time as specified under the Basel Convention.

"Malaysia will not be the dumping ground of the world.

Exporters, forwarding companies — they have to send back (the

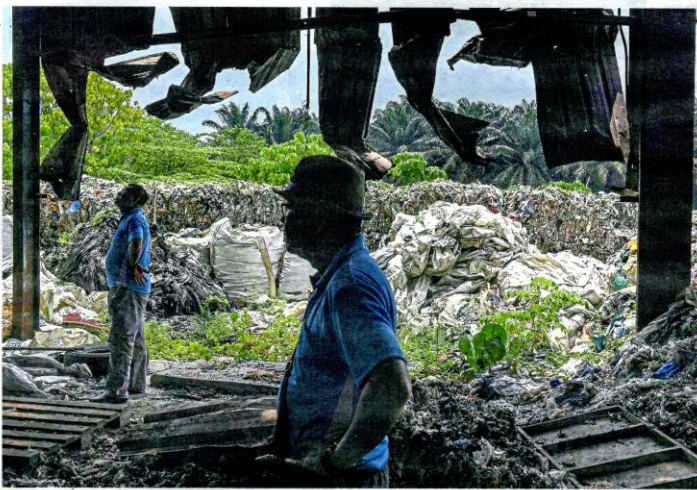
waste) to the countries of origin," she said, adding that they would be the ones bearing the cost of sending back the waste.

The authorities had aimed to shut down all illegal plastic waste recycling factories nationwide by July. This goal was set after the government surpassed the initial target of closing at least 100 such premises before the first quarter of the year.

Illegal plastic waste became a cause of concern among Malaysians when a 2018 joint investigation into plastic recycling factories in Kuala Langat by Greenpeace Malaysia and the Kuala Langat Environmental Protection Association found that Malaysia took in plastic waste from at least 19 countries.

The report said that between January and July, Malaysia imported 754,000 tonnes of plastic valued at RM483m.

According to Greenpeace, only 9% of the plastic waste are clean plastic that can be recycled.



Piling up: NGO officials standing near plastic waste at the abandoned factory in Jenjarom in this picture taken in early March. — AFP

Smugglers pay a lot to dump plastic waste

PETALING JAYA: Tonnes of plastic waste from overseas are quickly ferried to secluded areas where the trash is burnt in makeshift illegal factories, and this is big business, claimed pro-green activist Pua Lay Pheng.

The Kuala Langat Environmental Action Association secretary constantly receives information that international smugglers pay a huge amount of money to ferry plastic waste to illegal waste disposal factories, including those in her area of Jenjarom in Selangor.

She has been at the forefront of highlighting the issue for over two years.

"We found that we were surrounded by illegal plastic waste recycling factories, but initially, Port Klang, West Port and Telok Gong were the centres of this type of factories.

"They are now spreading to Kuala Langat, Meru, Kapar, Kampung Jawa, Semenyih, Nilai, Seremban, Port Dickson, Perak and Kedah. Kuantan may be their next target.

"It (the activity) is focused in coastal areas, especially near ports," she said yesterday.

She claimed that the international syndicates would pay from RM2,000 to more than RM6,000 to have the waste brought to various places.

"All their targets are near Chinese villages with industrial and plantation areas that have cheap rentals," she added.

Pua said residents had complained about the fumes emitting from these illegal factories.

"After 10pm, they start to operate and white fumes would be discharged.

"Many complained of coughs, allergic reactions, lethargy and some admitted to hospital," she said. She claimed that some of the illegal factories had their own incinerators and would simply burn the plastic waste.

She added that plastic that could not be recycled would be dumped in the rivers.

"I know it's very hard to monitor, but we need stricter enforcement.

"The real question is, who will be responsible for all this? Many of our activist friends have lodged reports with the authorities," she said.

Global recycling in chaos over China ban

JENJAROM: From grubby packaging engulfing small South-East Asian communities to waste piling up in plants from the United States to Australia, China's ban on accepting the world's used plastic has plunged global recycling into turmoil.

For many years, China received the bulk of scrap plastic from around the world, processing much of it into a higher quality material that could be used by manufacturers.

But at the start of 2018, it closed its doors to almost all foreign plastic waste, as well as many other recyclables, in a push to protect the local environment and air quality, leaving developed nations struggling to find places to send their waste.

"It was like an earthquake," Arnau Brunet, director-general of Brussels-based industry group The Bureau of International Recycling, said.

"China was the biggest market for recyclables. It created a major shock in the global market."

Instead, plastic is being redirected in huge quantities to South-East Asia, where Chinese recyclers have shifted en masse.

With a large Chinese-speaking minority, Malaysia was a top choice for Chinese recyclers looking to relocate, and official data showed plastic imports tripled from 2016 levels to 870,000 tonnes last year.

In the small town of Jenjarom, Selangor, plastic processing plants suddenly appeared in large numbers, pumping out noxious fumes day and night.

Huge mounds of plastic waste, dumped in the open, piled up as recyclers struggled to cope with the influx of packaging from everyday goods from as far afield as Germany, the United States and Brazil.

Residents soon noticed the acrid stench over the town — the kind of odour that is usual in processing plastic, but environmental campaigners believe some of the fumes also come from the incineration of plastic waste that was too low quality to recycle.

"People were attacked by toxic fumes, waking them up at night. Many were coughing a lot," said local resident Pua Lay Pheng. "I could not sleep, I could not rest, I always felt fatigued," the 47-year-

old added.

Pua and other community members began investigating and by mid-2018 had located about 40 suspected processing plants, many of which appeared to be operating secretly and without permits.

Initial complaints to authorities went nowhere but they kept up pressure and eventually the government took action.

Authorities started closing down illegal factories in Jenjarom and announced a nationwide temporary freeze on plastic import permits.

Thirty-three factories were closed down, although activists believe many have quietly moved elsewhere in the country. Residents say air quality has improved but some plastic dumps remain.

In Australia, Europe and the United States, many of those collecting plastic and other recyclables were left scrambling to find new places to send it.

They face higher costs to get it processed by recyclers at home and in some cases have resorted to sending it to landfill sites as the

scrap has piled up too quickly.

In mainland China, imports of plastic waste have dropped from 600,000 tonnes per month in 2016 to about 30,000 a month in 2018, according to data cited by a new report from Greenpeace and environmental NGO Global Alliance for Incinerator Alternatives.

Once-bustling centres of recycling have been abandoned as firms shifted to South-East Asia.

South-East Asian nations affected early by the China ban — including Malaysia, Thailand and Vietnam — have taken steps to limit plastic imports, but the waste has simply been redirected to other countries without restrictions, such as Indonesia and Turkey, according to the Greenpeace report.

With only an estimated 9% of plastics ever produced recycled, campaigners say the only long-term solution to the plastic waste crisis is for companies to make less and consumers to use less.

Greenpeace campaigner Kate Lin said: "The only solution to plastic pollution is producing less plastic."

— AFP

LAMPIRAN 3
BERITA HARIAN (SENTRAL): MUKA SURAT 64
TARIKH: 24 APRIL 2019 (RABU)

PENCEMARAN ASID, PLUMBUM

Kilang bateri diarah tutup serta-merta

➔ Syarikat turut dikenakan enam kompaun berjumlah RM12,000

Oleh Norzamira Che Noh
bhnews@bh.com.my

Shah Alam

Sebuah kilang bateri di Jenjarom, Kuala Langat di sini diarah tutup serta-merta oleh kerajaan negeri sehingga siasatan terhadap pencemaran asid dan plumbum yang didakwa berpunca daripada kilang itu selesai.

Pengerusi Jawatankuasa Tetap Alam Sekitar, Teknologi Hijau dan Hal Ehwal Pengguna, Sains, Tek-

nologi dan Inovasi negeri, Hee Loy Sian, berkata kilang bateri itu turut dikenakan enam kompaun berjumlah RM12,000.

"Kilang itu juga berkemungkinan dipindahkan ke kawasan perindustrian lain sekiranya hasil siasatan mendapati pencemaran itu berpunca dari kilang berkenaan.

"Beberapa agensi seperti Lembaga Urus Air Selangor (LUAS), Jabatan Alam Sekitar (JAS) Selangor, Jabatan Pengairan dan Saliran (JPS) dan Jabatan Kesihatan serta Jabatan Keselamatan dan Kesihatan Pekerjaan (DOSH) dipertanggungjawabkan melakukan kajian ini.

Buat ujian darah

"Ia meliputi dari segi ujian darah termasuk pekerja kilang dan penduduk sekitar kilang itu bagi menentukan punca pencemaran asid dan plumbum," katanya dalam kenyataan semalam.

Loy Sian berkata, kilang itu mula

beroperasi pada 2014 dalam aktiviti pengisian asid sebelum bangunan itu musnah dalam kebakaran pada Disember 2017 serta dibenarkan beroperasi semula pada September tahun lalu.

"Sebagai sebuah kerajaan yang adil kepada semua, kami tidak hanya bertindak berpandu kepada sesuatu pihak atau sumber.

"Saya juga meminta Presiden MCA, Datuk Seri Dr Wee Ka Siong berhenti memainkan isu kilang ini bagi meraih sokongan politik muktamad serta untuk kepentingan diri sendiri.

"Beliau tidak seharusnya hanya mengambil pandangan dan kajian daripada pihak persatuan penduduk (di kawasan itu) dan bekas pengarah Unit Keselamatan Pekerjaan, Kesihatan dan Alam Sekitar Universiti Teknologi Malaysia, Prof Maketab Mohamed tanpa merujuk hasil kajian agensi terbabit sebelum membuat tuduhan melalui laman sosial," katanya.

[FOTO ROSLIN MAT TAHIR /BH]



Loy Sian (tengah) meninjau keadaan parit di kawasan kilang bateri yang didakwa menyebabkan pencemaran di Jenjarom, Kuala Langat, baru-baru ini.

LAMPIRAN 4
SINAR HARIAN: MUKA SURAT 13
TARIKH: 24 APRIL 2019 (RABU)

Sah tulang manusia

*Ujian dibuat
ke atas serpihan
tulang yang
ditemui sekitar Gua
Kandu, Gopeng*

NOORAINONN
MOHAMED YUSOF

KAMPAR

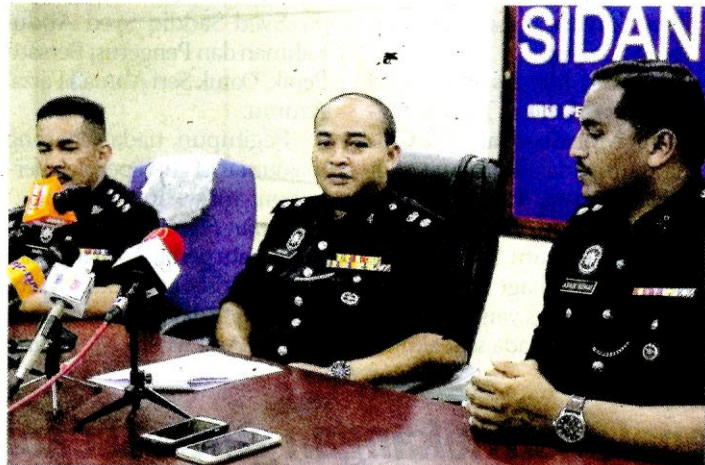
Serpihan tulang yang ditemui di sekitar Gua Kandu, Gopeng pada Sabtu lalu disahkan milik manusia.

Ketua Polis Daerah Kampar, Superintendan Hasron Nazri Hashim berkata, perkara itu disahkan oleh Jabatan Forensik Hospital Raja Permaisuri Bainun (HRPB), Ipoh menerusi bedah siasat yang dijalankan.

"Keadaan lapan serpihan tulang dan tulang femur atau paha yang ditemui adalah tulang lama dan tidak lengkap."

"Tulang berkenaan dihantar ke **Jabatan Kimia Malaysia** di Petaling Jaya, Selangor untuk ujian deoksiribonukleik (DNA)," katanya pada sidang media di Ibu Pejabat Polis Daerah (IPD) Kampar di sini, semalam.

Menurutnya, spesimen darah seorang ahli keluarga Mohammad Ashraf Hassan, 29, telah diambil di Hospital Kampar untuk padanan DNA



Hasron Nazri (tengah) pada sidang media berhubung penemuan tulang manusia di IPD Kampar, semalam.

Keadaan lapan serpihan tulang dan tulang femur atau paha yang ditemui adalah tulang lama dan tidak lengkap."

- Hasron Nazri

dengan tulang terbabit.

"Pihak kami masih menunggu laporan rasmi perkaitannya dengan peserta larian Gopeng Ultra Trail (GUT) 2019, Mohammad Ashraf yang hilang sejak 23 Mac lalu.

"Keputusan akan diperoleh dalam tempoh sebulan atau dua bulan sebelum ia boleh disahkan," katanya.

Hasron Nazri berkata, siasatan menyeluruh dijalankan bagi mengenal pasti pemilik sebenar tulang menerusi data bank DNA.

"Pihak kami telah menjalankan siasatan menyeluruh di lokasi kejadian dan tidak menemui tulang lain termasuk tengkorak.

"Justeru, kita tidak menghalang orang kampung untuk meneruskan proses pencarian, namun disarankan supaya memaklumkan pergerakan di Balai Polis Gopeng," katanya.

Sinar Harian kelmarin melaporkan, penduduk kampung yang melakukan pencarian Mohammad Ashraf menemui serpihan tulang di dalam Gua Kandu, Gopeng, kira-kira jam 1.30 tengah hari pada Sabtu lalu.

LAMPIRAN 5

THE SUN DAILY (SPEAK UP): MUKA SURAT 9

TARIKH: 24 APRIL 2019 (RABU)

LETTERS letters@thesundaily.com

Ensure environmental sustainability of the ECRL

WE refer to the announcement by the government on the renegotiated East Coast Rail Link (ECRL) project. We welcome the news that the new alignment will no longer cut through the Main Range and any possible impacts to the Klang Quartz Ridge will be avoided.

We also welcome the fact that the nation will be saving RM21.5 billion or more through the renegotiations.

In an interview published on March 31, Tun Daim Zainuddin, who led the renegotiations, was quoted as saying that projects that were deferred or cancelled post-GE14 must be restarted as decided by the Cabinet, as long as the cost is lowered but with the same specifications.

Therefore, in reducing the costs of the project, we hope that the specifications to avoid or reduce environmental impacts of the project will not be compromised.

The specifications included incorporating tunnels and elevated tracks to avoid and reduce forest fragmentation. Based on the Environmental Impact Assessment (EIA) which was carried out in 2017 for the ECRL project and information from past dialogue with the Malaysian Rail Link Sdn Bhd and consultants, we understand that apart from the tunnel through the Main Range, a total of 44 tunnels as well as 27 wildlife crossings will be needed at various stretches along the original alignment to prevent forest fragmentation, as the alignment cuts through forest reserves. As such, we hope that the tunnels, elevated tracks and wildlife crossings will still be retained as part of the

project specifications in areas where the alignment would still pass through forests. This is to ensure wildlife movement is not impeded, prevent easy accesses into the forests by poachers and to safeguard the ecosystem services provided by these forests.

It needs to be noted that large mammals such as tigers, elephants, tapirs and sun bears are found in and near some of the forested areas which the ECRL and the spur lines will cut through.

Additionally, we note that recent reports in the media indicate that the Department of Environment has not received an EIA for the new alignment. As the new alignment could also have environmental impacts, we urge the government to assess the environmental impacts of this new alignment and incorporate measures at the design stage to prevent impacts such as forest fragmentation.

We also strongly urge the government to have a dialogue with stakeholders, including environmental groups, to explain the changes to the project and obtain feedback.

We also call on the government to ensure that sufficient budget is allocated to mitigate all environmental impacts and the implementation of environmental and wildlife management and monitoring plans, which are also crucial components of the project. Forming an independent monitoring committee will also help to provide a check and balance on the implementation of these plans.

Giving priority to avoid environmental impacts such as realigning the tracks to prevent

forest loss and fragmentation, and having proper mitigation measures where environmental impacts cannot be avoided is an investment in our future.

Forests not only harbour wildlife which are already dwindling due to poaching, forest loss and fragmentation; it also supports crucial ecosystem services.

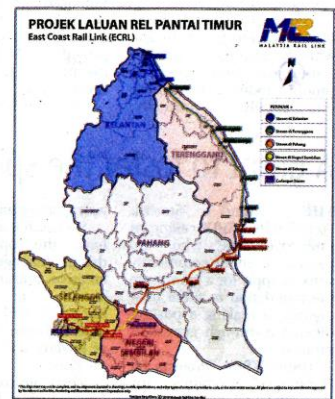
Sustainable development is about conserving environmentally sensitive areas, avoiding harm to the environment and ensuring environmental safeguards are incorporated at the design stage of any project.

It is really heartening that Prime Minister Tun Dr Mahathir Mohamad stressed the need to balance physical development with the preservation of nature and maintaining the environment in his Earth Day address.

Not only did he emphasise the need to prioritise the environment over profits, he also pointed out that preserving the environment is a collective responsibility which needs to be carried out relentlessly, whatever the circumstances. We hope that in the case of the ECRL and any other proposed projects, environmentally sensitive areas are avoided and stringent environmental safeguard measures will be incorporated where impacts are identified.

We trust that environmental sustainability will be one of the important topics discussed by the prime minister when he meets Chinese leaders in Beijing later this month.

A native American proverb beautifully captures the sentiment of protecting this planet



– “We do not inherit the Earth from our ancestors, we borrow it from our children”.

This is the only Earth we have. Let us collectively do the best we can to ensure its preservation for the current generation and those to come – let us heed the call of our prime minister.

Dr Henry Chan
Conservation Director
WWF-Malaysia

LAMPIRAN 6
THE SUN DAILY (NEWS WITHOUT BORDERS): MUKA SURAT 3
TARIKH: 24 APRIL 2019 (RABU)

Bid to smuggle 24 containers of plastic waste foiled

PETALING JAYA: A joint effort by three government agencies has foiled an attempt to smuggle 24 containers of plastic waste into the country through Port Klang.

The operation involved the Department of Environment (DOE), Royal Malaysian Customs Department and the Port Klang Authority. The waste is believed to be from Germany.

Energy, Science, Technology, Environment and Climate Change Minister Yeo Bee Yin yesterday said her ministry had been tracking the modus operandi of the plastic waste importer and had made a series of inspections around Port Klang since last month.

"These containers are declared to have clean plastic content," she told reporters after joining enforcement operations at the West Port yesterday. However, they contain contaminated, used plastic materials. In accordance with regulations, only used clean plastic can be brought into the country."



A DOE officer showing one of the containers with plastic waste seized yesterday.

LAMPIRAN 7
THE STAR (NATION): MUKA SURAT 14
TARIKH: 24 APRIL 2019 (RABU)

Civil servants urged to do away with single-use plastics



Going green: The government wants the civil service to do away with relying on single-use plastic products.

By **SARBAN SINGH**
sarbans@thestar.com.my

SEREMBAN: Forget about single-use plastic products. Bring your own food containers and cutlery to work – that's what the government is strongly encouraging the 1.7 million civil servants to do as it heads towards a zero single-use plastic nation by 2030.

In a directive issued by the Chief Secretary to the Government, all ministries and government agencies have been instructed to hold campaigns to stop the use of such products at their premises and official events.

Among a host of practical ways to achieve the goal, Datuk Seri Dr Ismail Bakar said that using plastic products such as drinking bottles for one time only and then discarding it, must be stopped and replaced with glass ones or jugs.

"Avoid plastic wrap to cover food; opt for reusable covers instead. Also avoid single-use plates, cups, bowls or any cutlery as well as plastic straws.

"Similarly, water dispensers should be made available for refills," he said in the directive which also applies to government-linked companies, statutory bodies and local councils.

Ismail said the government was committed to reducing pollution caused by plastic use, which has adversely affected the environment, public health and national economy.

He noted that Prime Minister

Tun Dr Mahathir Mohamad had voiced his concern on the matter previously and proposed that the ban on single-use products start with plastic bags and straws.

The Cabinet, said Ismail, then endorsed the Malaysia Roadmap Towards Zero Single-Use Plastics 2018-2030 initiative last October and all ministries were asked to start campaigns to ban single-use plastic products at government offices.

"The details of the roadmap were subsequently tabled at the Menteris Besar and Chief Ministers' meeting and at ministry secretaries-general and heads of services' meeting and supported by all members," he added.

To ensure the success of the campaign, government servants are also encouraged to bring their own food containers, forks and spoons for personal use.

"They can use woven or other special bags which can be used again to pack food at their cafeteria," said Ismail.

He said all ministries and government agencies could also use their communication platforms, including social media, to espouse dropping single-use plastic items.

A study by the survey agency YouGov Omnibus found that about 22% of the 1,013 Malaysians polled still used plastic straws daily while about 24% used plastic bags at least once a day.

The survey also showed that about 91% believed conserving the environment was important, with 44% saying the government had the biggest role to play.

LAMPIRAN 8
THE STAR (VIEWS): MUKA SURAT 18
TARIKH: 24 APRIL 2019 (RABU)

Realigned ECRL needs fresh EIA

WE refer to the recent announcement by the government on the renegotiated East Coast Rail Link (ECRL) project. We welcome the news that the new alignment will no longer cut through the Main Range and any possible impacts to the Klang Quartz Ridge will be avoided.

We also welcome the fact that the nation will be saving RM21.5bil or more through the renegotiations. In his recent interview with *The Star*, Tun Daim Zainuddin, who led the renegotiation talks for the ECRL project, was quoted as saying that projects that were deferred or cancelled post-GE14 must be restarted as decided by the Cabinet, as long as the cost is lowered but with the same specifications, "Eminently engaging insights" (March 31).

Therefore, in reducing the cost of the ECRL project, we hope that the specifications to prevent or reduce its environmental impacts will not be compromised.

Specifications of the original ECRL project included incorporating tunnels and elevated tracks

into the design to avoid or reduce forest fragmentation.

Based on the Environmental Impact Assessment (EIA) which was carried out in 2017 for the ECRL project and information from past dialogues with Malaysian Rail Link and consultants, we understand that apart from the tunnel through the Main Range, a total of 44 tunnels as well as 27 wildlife crossings would be needed at various stretches along the original alignment to prevent forest fragmentation, as the alignment cuts through various forest reserves.

As such, we hope the tunnels, elevated tracks and wildlife crossings will still be retained as part of the project specifications in areas where the alignment would still pass through forests.

This is to ensure wildlife movement is not impeded, prevent easy access into the forests by poachers and to safeguard the ecosystem services provided by these forests.

It needs to be noted that large mammals such as tigers, elephants, tapirs and sun bears are found in and near some of the forested

areas which the ECRL and the spur lines will cut through.

Additionally, we note from recent reports in the media that the Department of Environment has not received an EIA for the new alignment.

We strongly call on the government to assess the environmental impacts of this new alignment and incorporate measures at the design stage to address the adverse aspects such as forest fragmentation.

We also strongly urge the government to hold dialogues with stakeholders, including environmental groups, to explain the changes to the project, and obtain feedback.

We call on the government to ensure that sufficient budget is allocated to mitigate all environmental impacts and implement environmental and wildlife management and monitoring plans, which are also crucial components of the project.

Forming an independent monitoring committee would also help to provide a check and balance on

the implementation of these plans.

Putting priority on solutions to prevent the environmental impacts, such as realigning the tracks to avoid forest loss and fragmentation, and putting in place effective mitigation measures where these negative impacts cannot be avoided would be an investment in our future.

Forests not only harbour wildlife, which are already dwindling due to poaching, forest loss and fragmentation, it also supports crucial ecosystem services. Sustainable development is about conserving environmentally sensitive areas and ensuring that safeguards are incorporated at the design stage of any project.

It is really heartening that Prime Minister Tun Dr Mahathir Mohamad stressed the need to balance physical development with the preservation of nature and maintaining the existing environment in his recent Earth Day address. Not only did he emphasise the need to prioritise the environment over profits, he also pointed out that preserving the environ-

ment is a collective responsibility which needs to be carried out relentlessly, whatever the circumstances.

We hope that in the case of the ECRL and any other proposed projects, environmentally sensitive areas are avoided and stringent environmental safeguards would be incorporated where the impacts are identified. We trust that environmental sustainability will be one of the important topics discussed by Dr Mahathir when he meets with Chinese leaders in Beijing later this week.

A Native American proverb beautifully captures the sentiment of protecting this planet: "We do not inherit the Earth from our ancestors, we borrow it from our children."

This is the only earth we have. Let us collectively do the best we can to ensure its preservation for the current generation and those to come.

DR HENRY CHAN
Conservation Director
WWF-Malaysia

LAMPIRAN 9
BERITA HARIAN (SETEMPAT): MUKA SURAT 1
TARIKH: 24 APRIL 2019 (RABU)



LAMPIRAN 9 (SAMB.)
BERITA HARIAN (SETEMPAT): MUKA SURAT 2
TARIKH: 24 APRIL 2019 (RABU)

Malaysia jadi lokasi longgokan sisa plastik tercemar

➔ Salah guna kuasa punca sampah mudah masuk ke pelabuhan negara

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► Pelabuhan Klang

Penyalahgunaan kuasa dan penyelewengan pihak tertentu di pelabuhan utama negara, disyaki punca Malaysia kini menjadi lokasi pelupusan sampah dari negara maju, secara haram.

Berselindung di sebalik perisytiharan sebagai sisa pepejal bersih, hakikatnya kontena yang dibawa masuk ke negara ini, diisi dengan sisa plastik tercemar, yang tidak boleh dikitar semula.

Dalam operasi bersepadu di Pelabuhan Barat di sini semalam, 24 kontena yang dibawa dari Sepanyol, yang dikesan berisi sisa plastik tercemar.

Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, Yeo Bee Yin, berkata penemuan itu menunjukkan wujud salah guna kuasa dalam kalangan pihak tertentu di pelabuhan negara ini.

"Semua 24 kontena ini diisytiharkan mengandungi sisa pepejal bersih, namun pemeriksaan lanjut mendapati ia mengandungi bahan larangan.

Kontena belum dituntut

"Selain itu, kita turut menerima laporan kontena mengandungi sisa plastik tercemar ada di Pelabuhan Utara dan pelabuhan di Pulau Pinang," katanya selepas menyertai operasi di Pelabuhan Barat di sini semalam.

Operasi penguatkuasaan terhadap kontena yang disyaki mengandungi barang dagangan sisa plastik tercemar itu disertai oleh Jabatan Alam Sekitar (JAS), Jabatan Kastam Diraja Malaysia (JKDM), Lembaga Pelabuhan Klang, Syarikat Westports Malaysia Sdn Bhd selaku pengendali perkhidmatan Pelabuhan Barat.

Sehingga kini, ada 111 kontena di Pelabuhan Barat dan 18 kontena di Pelabuhan Utara yang mempunyai kandungan plastik terpakai, belum dituntut kerana pihak berkenaan belum melakukan perisytiharan penuh kepada JKDM.

Bee Yin berkata, siasatan awal mendapati semua sisa plastik tercemar itu mahu diantar ke kilang kitar semula yang beroperasi secara haram di seluruh negara.

"Plastik ini jenis yang kotor dan tidak berkualiti serta sukar dilupuskan. Jika dibakar, ia akan mengeluarkan asap hitam.

Dalam tempoh sebulan ini, pihak berkuasa akan melakukan

operasi di pelabuhan seluruh negara.

"Kita serius dalam isu ini dan sudah kenal pasti syarikat pengimport. Kita juga ambil serius bagaimana kontena ini dengan mudah masuk ke pelabuhan negara. Jika wujud salah laku, kita akan ambil tindakan terhadap semua pihak terbabit," katanya.

Beliau berkata, kerajaan juga akan mengguna pakai Konvensyen Basel bagi menuntut negara asal bahan berkenaan mengambil balik sisa plastik yang ditahan di pelabuhan negara ini.

"Malaysia menandatangani Konvensyen Basel mengenai kawalan merentas sempadan buangan toksik dan berbahaya serta pelupusannya. Jadi, kita boleh memanggil negara asal untuk mengambil semula sisa buangan ini serta menanggung semua kos.

"Contohnya, kontena yang dikesan hari ini datang dari Sepanyol dan kita akan gunakan Konvensyen Basel. Negara seperti United Kingdom, Australia, Amerika Syarikat dan Jerman pun dikesan hantar sisa buangan ke Malaysia," katanya.

Kilang haram diarah tutup

Mengulas lanjut, beliau berkata, setakat 11 April lalu, sebanyak 300 kilang sudah diperiksa di seluruh negara dengan 148 diarah tutup kerana beroperasi secara haram serta tidak mematuhi Akta Kualiti Alam Sekeliling 1974.

Pada 26 Oktober tahun lalu, Menteri Perumahan dan Kerajaan

NEGARA DAN JUMLAH SYARIKAT PENGEKSPORT SISA PLASTIK KE MALAYSIA

	JERMAN	30		AUSTRALIA	14
	HONG KONG	27		SEpanyol	10
	SINGAPURA	26		CHINA	9
	AMERIKA SYARIKAT	23		INDONESIA	6
	JEPUN	23		THAILAND	2
	UNITED KINGDOM	21		VIETNAM	1

JUMLAH TAN SISA PLASTIK DIIMPORT MALAYSIA



Jumlah keseluruhan sisa sampah 1,842,132 tan

Sumber: Jabatan Pengurusan Sisa Pepejal Negara (JPSPN)



Fakta

Kementerian Perumahan dan Kerajaan Tempatan (KPKT) tidak meluluskan sebarang lesen import (AP) bagi sisa plastik kepada mana-mana syarikat sejak ia dibekukan pada Julai tahun lalu.

Tempatan, Zuraida Kamaruddin, mengumumkan kerajaan menghentikan sepenuhnya pengeluaran lesen import (AP) sampah plastik.

Mengikut statistik dikeluarkan Jabatan Pengurusan Sisa Pepejal Negara (JPSPN), lebih 1.8 juta tan sisa plastik dari 33 negara diantar ke Malaysia sejak 2015 hingga

Julai 2018.

Minggu lalu, program televisyen 60 Minutes terbitan Nine Network, Australia, mendedahkan aktiviti kitar semula di negara itu, menjadi sia-sia apabila sisa plastik yang diasingkan penduduknya apabila bahan berkenaan sebenarnya di-eksport dan dilupuskan di negara lain, terutama Malaysia.

GRAFIK

LAMPIRAN 9 (SAMB.) BERITA HARIAN (SETEMPAT): MUKA SURAT 32 TARIKH: 24 APRIL 2019 (RABU)

Khairul Azran Hussin
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Pelabuhan Klang

Kegiatan penyeludupan sisa plastik tercemar ke negara ini yang didalangi pihak tertentu masih berlaku meskipun kerajaan sudah mengharamkan kemasukan bahan buangan itu sejak tahun lalu.

Perkara itu terbongkar susulan penemuan 24 kontena di Pelabuhan Barat, mengandungi sisa plastik tercemar tidak boleh dikitar semula.

Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim Yeo Bee Yin berkata, penemuan itu menunjukkan wujud salah guna kuasa membabitkan pihak tertentu di pelabuhan negara ini.

"Semua 24 kontena ini diisytiharkan mengandungi sisa pepejal bersih namun pemeriksaan lanjut mendapati ia mengandungi bahan larangan. Selain itu, kita turut menerima laporan kontena mengandungi sisa plastik tercemar di Pelabuhan Utara dan pelabuhan di Pulau Pinang.

"Dalam tempoh sebulan ini, pihak berkuasa akan melakukan operasi di pelabuhan seluruh negara. Kita serius dalam isu ini. Kita sudah kenal pasti syarikat mengimport bahan ini.

"Kita juga ambil serius bagaimana kontena ini dengan mudah masuk ke pelabuhan negara. Jika wujud salah laku, kita akan ambil tindakan kepada semua pihak terbabit," katanya ditemui selepas melakukan tinjauan di Pelabuhan Barat di sini, semalam.

Yeo berkata, siasatan awal mendapati semua sisa plastik tercemar ditemui akan dihantar ke kilang kitar semula yang beroperasi secara haram di seluruh negara.

"Plastik ini ialah jenis yang kotor dan tidak ber-



FOTO: ADIBAH AHMAD IZAM

PENOLONG Pegawai Kawalan Alam Sekitar Jabatan Alam Sekitar (JAS), Muhd Redzuan Muhd Tain memeriksa sisa plastik yang dibawa masuk secara haram ketika operasi penguatkuasaan di Pelabuhan Barat.

24 kontena penuh sisa plastik tercemar

■ Menteri turun padang lihat sendiri penyeludupan di Pelabuhan Barat



“Dalam tempoh sebulan ini, pihak berkuasa akan melakukan operasi di pelabuhan seluruh negara. Kita serius dalam isu ini. Kita sudah kenal pasti syarikat mengimport bahan ini”
Yeo Bee Yin

kualiti serta sukar dilupuskan. Jika dibakar ia akan mengeluarkan asap hitam,” katanya.

Ditanya sama ada kerajaan akan meminta negara asal mengambil semula sisa plastik berkenaan beliau berkata,

kerajaan akan menguna pakai Konvensyen Basel berhubung perkara itu.

"Malaysia menandatangani Konvensyen Basel mengenai kawalan merentasi sempadan buangan toksik dan berbahaya serta pelupusannya. Jadi, kita boleh memanggil negara asal untuk mengambil semula sisa buangan ini serta menangguhkan semua kos.

"Contoh kontena yang di kesan datang dari Sepanyol dan kita akan gunakan Konvensyen Basel. Negara seperti United Kingdom, Australia, Amerika Syarikat dan

Jerman pun hantar sisa buangan ke Malaysia," katanya.

Mengulas lanjut, beliau berkata, 148 kilang kitar semula sisa plastik haram dan tidak mematuhi Akta Kualiti Alam Sekeliling 1974 yang beroperasi di seluruh negara sudah ditutup sejak Januari hingga bulan ini.

Pada Oktober tahun lalu, kerajaan menghentikan sepenuhnya pengeluaran lesen import (AP) sampah plastik.

Media sebelum ini melaporkan gesaan dari pertubuhan bukan kerajaan (NGO) dan ahli akademik

supaya kerajaan mengharamkan sepenuhnya import sampah plastik untuk dikitar semula di negara ini bagi mengelak kesan buruk kepada kesihatan awam dan alam sekitar.

Harian Metro menerusi pendedahan sebelum ini melaporkan ada syarikat menipu borang deklarasi import sampah.

Pengarah Jabatan Kastam Diraja Malaysia (JKDM) Pulau Pinang Datuk Saidi Ismail dipetik berkata, 130 kontena berisi sampah plastik terpakai tersadai di Pelabuhan Pulau Pinang.

Kilang bateri di Jenjarom diarah tutup serta-merta

Shah Alam: Kerajaan Selangor mengarahkan sebuah kilang bateri di Jenjarom, Kuala Langat, ditutup serta-merta bagi membantu siasatan berkaitan pencemaran asid dan plumbum.

Selain itu, operasi kilang berkenaan akan dipindahkan ke kawasan perindustrian lain sekiranya hasil siasatan mendapati pencemaran berpunca daripada premis terbabit.

Pengerusi Jawatankuasa Tetap Alam Sekitar, Teknologi Hijau dan Hal Ehwal Pengguna, Sains, Teknologi dan Inovasi negeri Hee Loy Sian berkata, Lembaga Urus Air Selangor (LUAS), Jabatan Alam Sekitar (JAS) Selangor diarahkan melakukan kajian berhubung pencemaran itu.

Beliau berkata, agensi lain turut terbabit adalah Jabatan Pengairan dan Saliran (JPS),

Jabatan Kesihatan dan Jabatan Keselamatan dan Kesihatan Pekerjaan (DOSH).

"Kajian turut membabitkan sampel darah pekerja kilang dan penduduk setempat bagi menentukan punca pencemaran asid serta plumbum.

"Justeru, kerajaan negeri mengarahkan operasi kilang itu dihentikan sementara menunggu hasil siasatan dan keputusan muktamad me-

ngenainya," katanya dalam satu kenyataan di sini, semalam.

Hee berkata, pemeriksaan awal mendapati kilang itu mula beroperasi pada 2014 dan melakukan aktiviti pengisian asid.

Menurutnya, bangunan itu musnah dalam kebakaran dan dibenarkan kembali beroperasi, September tahun lalu.

"Kilang itu pernah dike-

nakan tindakan atas empat kesalahan mengikut Akta Kualiti Alam Sekeliling 1974 selain enam kompaun kerana gagal mematuhi pengurusan buangan terdajual di bawah akta sama," katanya.

Sehubungan itu, beliau meminta Presiden MCA Datuk Seri Dr Wee Ka Siong menghentikan isu kilang berkenaan bagi meraih sokongan politik murahan.



**Kilang bateri
diberi tempoh
baiki rekahan**
Pengerusi Jawatankuasa Tetap Alam Sekitar, Teknologi Hijau dan Hal Ehwal Pengguna, Sains, Teknologi dan Inovasi negeri Hee Loy Sian berkata, Lembaga Urus Air Selangor (LUAS), Jabatan Alam Sekitar (JAS) Selangor diarahkan melakukan kajian berhubung pencemaran itu.

LAMPIRAN 10 UTUSAN MALAYSIA (RENCANA): MUKA SURAT 17 TARIKH: 24 APRIL 2019 (RABU)

MUKADIMAH

HASRATNYA hanya satu, mahu menjana ekonomi dan pada masa sama alam sekitar tidak terjejas. Solusi difikirkan untuk menghasilkan tenaga lebih baik dengan menggunakan segala sumber boleh diperbaharui.

Berpegang kepada prinsip asas tersebut, Pancore Power Sdn. Bhd. mengambil langkah berani mula membangunkan beberapa projek hidro mini. Alasannya, itu merupakan teknologi masa depan yang lebih lestari.

Pun begitu, pelbagai cabaran perlu dihadapi pemain-pemain utama dalam industri tersebut termasuklah Pancore Power Sdn. Bhd. sendiri.

Kepada wartawan *Utusan Malaysia*, **ASHRIQ FAHMY AHMAD**, Pengarah Urusannya, **DATUK AHMAD SUFIAN ABDUL MAJID** berkongsi pengalaman beliau mengendalikan projek sulung mereka, Stesen Janakuasa Hidro Kecil Sungai Slim, Daerah Muallim, Perak yang disempurnakan perasmianya semalam.



Cabaran, realiti hasilkan elektrik sendiri

TEKNOLOGI RE

APABILA menyebut teknologi berkaitan tenaga boleh diperbaharui (RE), tidak boleh tidak kita akan memperkatakan bagaimana proses mengeksploitasi sumber tenaga seperti cahaya matahari, angin dan air untuk ditukar kepada tenaga lain seperti elektrik.

Di Malaysia, penjana sumber tenaga elektrik sinonim dengan penggunaan stesen penjaan hidro atau empangan hidro. Jika kita melihat kepada projek-projek pembekalan kuasa elektrik secara besar-besaran, ia merupakan salah satu teknologi yang berkesan.

Hidroelektrik menerusi tenaga larian arus sungai (*run off river*) merupakan konsep yang hanya menggunakan 10% air sungai dialihkan tanpa perlu menyimpan (empangan), oleh yang demikian ia amat mesra alam.

Teknologi hidroelektrik mempunyai kesan yang sangat minimum terhadap ekosistem berbanding kaedah lain bagi mendapatkan sumber tenaga elektrik.

Pun begitu, pembangunan projek-projek penjaan tenaga elektrik menggunakan kaedah ini memerlukan proses penyusunan lebih teratur dan sistematik bagi membolehkan semua pihak memahaminya.

Hal ini kerana ramai dalam kalangan pemegang taruh, agensi-agensi yang terlibat serta badan-badan kewangan masih tidak yakin ia teknologi yang akan membawa kehidupan kita lebih baik di masa hadapan.



AHMAD SUFIAN bersama Timbalan Presiden Pancore Power Sdn. Bhd., **Zuhaimi Abdul Hamid** (kanan) dan Ketua Pegawai Kewangan, **Manjeet Kaur**.

● CABARAN BESAR

Membangunkan projek-projek penjaan kuasa menerusi RE sememangnya amat mencabar. Bagi mereka yang tiada 'jiwa' dan tidak mampu berdaya tahan, ini bukanlah bidangnya yang boleh dibuat secara membuta tuli.

Cabaran pertama adalah faktor geografi yang terhad kerana stesen-stesen janakuasa ini bukan boleh dibina sembarangan. Ia perlukan kawasan tinggi, ada aliran air sungai yang baik serta mencukupi.

Pemilihan kawasan di negeri terlibat perlu mendapat kelulusan Jabatan Perhutanan. Setelah segala proses dokumentasi selesai, proses pembinaan pula memerlukan pekerja dan bahan binaan masuk ke kawasan terpencil.

Cuma cabaran terbesar bagi industri ini adalah pembiayaan. Amat sukar meyakinkan institusi-institusi kewangan untuk

membiayai projek-projek sedemikian kerana kurangnya pengetahuan teknikal yang diperlukan untuk mengkaji risiko dan faedah industri ini.

Antara lain kerana satu-satunya pasaran (pembeli) adalah Tenaga Nasional Berhad (TNB). Walaupun TNB boleh dianggap pembeli yang tiada berisiko namun institusi-institusi kewangan tetap berasa kurang yakin.

● BANTUAN SEDA

Dalam mendepani cabaran tersebut, Pihak Berkuasa Pembangunan Tenaga Lestari (SEDA) sebagai sebuah pusat sehati dilihat banyak membantu pemain-pemain industri ini. Begitupun fungsi agensi ini perlu terus dipertingkatkan, sekali gus memainkan peranan besar dalam mendapatkan perjanjian konsesi contohnya. SEDA juga boleh bertindak sebagai orang tengah untuk selesaikan isu-isu berkaitan pihak industri dan agensi-

agensi kerajaan terlibat.

Sebagai contoh, apabila kami menandatangani perjanjian pinjaman untuk sesuatu projek RE, kami tetapkan tempoh masa tertentu untuk membayar semula pinjaman. Jika sebarang pelaksanaan projek dilambatkan akibat kerenah birokrasi, kosnya akan meningkat.

SEDA juga perlu bekerjasama rapat dengan kerajaan-kerajaan negeri untuk memastikan integriti sumber air sentiasa kukuh. Maknanya sungai yang dipilih perlu dipelihara agar airnya sentiasa ada.

Tiada makna jika kita bina stesen hidroelektrik, 10-15 tahun akan datang sungai itu kering akibat pembalakan atau pembukaan hutan secara berleluasa. Oleh itu kawasan hutan tadahan air perlu digazetkan.

Mereka juga perlu mendesak Bank Negara agar mengambil serius sektor ini

dan mainkan peranan lebih berkesan dalam mempromosi pembiayaan terhadap sebarang projek berkaitan RE. Usaha ini sedikit sebanyak membantu bank-bank perdagangan untuk melangkah ke hadapan dalam membantu industri ini.

● MENGAPA HARUS HIDRO

Kuasa hidro dalam penjaan kuasa elektrik merupakan industri yang ideal kerana hampir bebas pencemaran, tiada produk buangan serta tidak memusnahkan alam sekitar.

Air yang digunakan (kuasa arus) akan dilepaskan kembali ke aliran sungai, tiada sebarang pembaziran berlaku.

Sehingga kini penguasaan sektor hidroelektrik dalam negara hanya sekitar 11%. Berbeza jika kita lihat penjaan tenaga elektrik di seluruh dunia yang menguasai hampir 71% berbanding kaedah penjaan elektrik menerusi RE lain seperti solar dan angin.

Hidroelektrik boleh menjadi sumber tenaga domestik yang membolehkan setiap negeri menghasilkan tenaga elektrik sendiri tanpa bergantung kepada penggunaan bahan api fosil.

Melestarikan alam sekitar juga keutamaan pihak kami. Jika tidak, ia tidak selari dengan teknologi hidroelektrik yang kami bawa dan perjuangkan.

Ini termasuk mengehadkan pemotongan pokok-pokok yang tidak perlu semasa membina stesen-stesen hidroelektrik ini. Jika terpaksa ditebang, ia akan diganti semula melebihi jumlah pokok yang ditebang. Ia komitmen kami.

LAMPIRAN 11

NEW STRAITS TIMES (HIGHERED / RESEARCH): MUKA SURAT 52

TARIKH: 24 APRIL 2019 (RABU)

Dealing with marine plastic pollution

ROZANA SANI
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MICROPLASTICS are small fragments of plastic that pollute the environment.

Defined as less than five millimetres in size and derived from plastic materials, they enter natural ecosystems as runoffs of cleaning and personal care products or the result of weathering and photo-degradation as well as various mechanical forces of products like fishing nets, household items and other discarded plastic items.

According to Dr Yusof Shuaib Ibrahim, senior lecturer at Universiti Malaysia Terengganu's School of Marine and Environmental Sciences, microplastics have a high surface to volume ratio and hydrophobic characteristic which make them an excellent vector in transporting various types of environmental chemicals into the marine food web.

"The chemicals absorbed on the microplastics have carcinogenic and mutagenic effects on organisms. As the size of microplastics is very small, it can easily be ingested by marine organisms, enter the food chain through predation, and eventually reach the human bodies," he said.

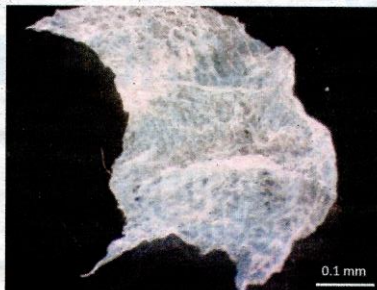
Aquatic ecosystems in Malaysia are also part of this emerging global issue, Yusof highlighted.

"Scientific knowledge on microplastics distribution and its concentration in our environment is vital as part of the national effort to develop effective management and mitigation measures," he said.

For this purpose, in 2017 a group of scientists from UMT established the Microplastics Research Interest Group (MRIG) consisting of experts from various field of studies like marine biology, environmental chemistry, physical chemistry, chemometrics, metagenomics, ocean dynamics, analytical chemistry, entomology, and food microbiology.

The MRIG focuses on quantitation, characterisation and method development for microplastics (MPs) analysis and marine debris in order to identify the path and fate as well as to increase the understanding of this emerging pollutants in the food web.

Yusof, who heads MRIG, said the research on microplastics in UMT actually started from 2014 focusing on occurrence of microplastics in marine organisms such as polychaete (marine worms), bivalves, sea cucumber, and commercial fishes



Microplastics are less than five millimetres in size.



The chemicals absorbed on the microplastics have carcinogenic and mutagenic effects on organisms.

DR YUSOF SHUAIB IBRAHIM
Universiti Malaysia Terengganu's School of Marine and Environmental Sciences senior lecturer

among others. The research later expanded to water, sediment and airborne contamination. Using the baseline data, the MRIG group is now furthering its study on the impact of microplastics to human health.

"The study has been conducted specifically in the east coast of Peninsular Malaysia. However, the expansion of the research area will be widened to compare the pristine, moderate and polluted areas in Malaysia depending on fund availability. The data on this research will be beneficial to the government, industry and public," said Yusof.

On top of the research, the group is also working on the solution to microplastics pollution such as the development of bioplastics derived from renewable biomass sources as well as the development of biomaterials that can be used for microplastics clean up.

"In recent years, marine plastic pollution has been attracting increased attention from researchers, policy makers, and the public. In the year 2018, Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC) has introduced Malaysia's Roadmap towards Zero Single-Use Plastics 2018-2030. The vision of this roadmap is to promote Malaysia's sustainable development, balancing the economic growth and environmental protection, simultaneously. The use of single-use plastic will be abolished, and replaced with alternative eco-friendly products such as bioplastics and reusable straws," Yusof elaborated.

He said UMT's development of biodegradable polymer is still at its initial stage.

"However, we can foresee the commercial potential of the findings. In this study, we explore the use of palm oil and other edible oils in collaboration with our foreign counterpart.

"The development of biomaterials for microplastics removal has also been conducted in our lab. We utilize the potential of using polysaccharides as a precursor for production of biomaterials. The findings of this study is planned to be published by end of this year," he said.

The MRIG team is also actively sharing their knowledge and recent findings on microplastic pollution with the private and public sectors through seminars and conferences.

It has also embarked on corporate social responsibility programmes since 2017 targeted at school children to create awareness about their roles to protect the environment in reducing plastic pollution. Thus far it has involved more than five schools and one orphanage, with the total number of students involved numbering at more than 2,000.

"The public awareness programme has been carried out by researchers and students of MRIG, with support from the student academic clubs and professional bodies in Terengganu. We hope the campaign can inspire the younger generation and raise awareness about microplastic pollution and its danger to our future," he said.

The MRIG group has recently received a grant through UMT's Centre of Knowledge Transfer and Industrial Networks (PLJI), focusing on a knowledge transfer programme involving coastal area communities related to issues of global sustainability.

"Our proposal, 'Small hands change the world: Raising Awareness of Plastic Pollution', has been awarded this grant by the university for 2019. The proposed programme is an initiative to enhance environmental health awareness, especially among primary school students. This programme aims to educate the younger generation particularly primary school students in Kuala Nerus on the importance of protecting marine environment for the future. We also highlight the negative impact of marine debris," said Yusof. Through this grant, he said the researchers involved in the project will analyse how these primary school students perceive this knowledge and their attitude towards reducing the plastic pollution.

"This effort is hoped to produce youngsters who love their environment," said Yusof.



Researchers from the MRIG group collecting samples in the beach sediment.



Primary school students using the microscope to look at microplastics.

LAMPIRAN 12
UTUSAN MALAYSIA (DALAM NEGERI): MUKA SURAT 43
TARIKH: 24 APRIL 2019 (RABU)

Robotik, AI jadi fokus utama bidang pekerjaan

ARAU 23 April - Sebahagian besar bidang pekerjaan yang dijangka menjadi perhatian majikan menjelang 2030 adalah berkisar tentang teknologi maklumat (IT) yang berfokus kepada teknologi robotik serta kecerdasan buatan (AI), dron dan hologram.

Naib Canselor Universiti Malaysia Perlis (Unimap), Prof. Datuk Dr. Zul Azhar Zahid Jamal berkata, ini seperti mana kerjaya masa depan yang disenaraikan gergasi perisian dunia, Autodesk yang dijangka mendapat permintaan tinggi nanti.

Beliau berkata, antaranya ialah kurator berpengalaman teknologi augmentasi realiti (AR) atau realiti maya (VR), pelatih robot, penyepadu sistem sensor dan pakar pencetak 3D.

“Walaupun kebanyakan aplikasi AR atau VR dicipta untuk permainan dan hiburan, namun ia berkembang untuk kegunaan lebih serius seperti kejuruteraan, pembangunan dan termasuk di sekolah. Ini memerlukan kawalan pakar AR atau VR untuk memastikan ia berfungsi seperti yang diinginkan.

“Begitu juga pada masa depan, apabila semakin banyak robot bertugas di sam-

ping manusia tetapi masih memerlukan pakar untuk menetapkan tugasannya (robot).

“Sensor pula banyak digunakan di dalam produk moden dan ia perlu berhubung antara satu sama lain dengan tepat. Adalah penting untuk mendapatkan pakar yang boleh menghubungkan semua sensor ini menjadi peralatan *Internet of Things* (IoT) yang berguna,” katanya sempena Seminar Pembangunan Profesionalisme Guru Bimbingan dan Kaunseling Sekolah Berasrama Penuh (SBP), Bahagian Pengurusan SBP dan Sekolah

Kecemerlangan di Kampus Tetap Unimap di Pauh Putra di sini hari ini.

Zul Azhar berkata, berikutan perkembangan pencetak 3D yang semakin meluas kegunaannya sehingga ke bidang aeroangkasa, ia bakal memerlukan tugas pakar dan dijangka menjadi kategori pekerjaan paling dicari majikan pada masa depan.

Mengenai isu pengangguran, katanya, Unimap mencapai tahap kebolehpasaran graduan antara 80 sehingga 90 peratus setiap tahun iaitu dalam tempoh enam bulan selepas tamat pengajian, bergantungan kepada sesuatu program.



**ZUL AZHAR
ZAHID JAMAL**

LAMPIRAN 13 NEW STRAITS TIMES (WORLD): MUKA SURAT 71 TARIKH: 24 APRIL 2019 (RABU)

ENVIRONMENT

China plastic waste ban throws global recycling into chaos

JENJAROM. From grubby packaging engulfing small Southeast Asian communities to waste piling up in plants from the United States to Australia, China's ban on accepting the world's used plastic has plunged global recycling into turmoil.

For many years, China received the bulk of scrap plastic from around the world, processing much of it into a higher quality material that could be used by manufacturers.

But at the start of last year, it closed its doors to almost all foreign plastic waste, as well as many other recyclables, in a push to protect the local environment and air quality, leaving developed nations struggling to find places to send their waste.

Instead, plastic is being redirected in huge quantities to Southeast Asia, where Chinese recyclers have shifted en masse.

With a large Chinese-speaking minority, Malaysia was a top choice for Chinese recyclers looking to relocate, and official data showed plastic imports tripled to 870,000 tonnes last year.

In the small town here, not far from Kuala Lumpur, plastic processing plants suddenly appeared in large numbers, pumping out noxious fumes day and night.

Huge mounds of plastic waste, dumped in the open, piled up as recyclers struggled to cope with the influx of packaging from everyday goods, such as foods and laundry detergents, from as far as Germany, the US and Brazil.

Residents soon noticed the acrid stench over the town, the kind of odour that is usual in processing plastic, but environmental campaigners believe some of the fumes also come from the incineration of plastic waste that was too low quality to recycle.

"People were attacked by toxic fumes, waking them up at night. Many were coughing a lot," resident Pua Lay Peng, 47, said.

"I could not sleep, I could not rest, I always felt fatigued."

Pua and other community members began investigating and by the middle of last year had located about 40 suspected processing plants, many of which appeared to be operating secretly



Plastic waste piling up near oil palm trees at an abandoned factory in Jenjarom, near Kuala Lumpur, recently. AFP PIC

and without proper permits.

Complaints to the authorities went nowhere, but they kept up pressure, and, eventually, the government took action. Authorities closed down illegal factories here, and announced a temporary freeze on plastic import permits.

Thirty-three factories were shut down, although activists believe many have moved elsewhere.

In Australia, Europe and the US, many of those collecting plastic and other recyclables were left scrambling to find new places to send it.

They face higher costs to get it processed by recyclers at home and, in some cases, have resorted to sending it to landfill sites as the scrap has piled up too quickly.

"Twelve months on, we are feeling the effects but we have not moved to the solutions yet," said Garth Lamb, president of industry body Waste Management and Resource Recovery Association of Australia.

Some have been quicker to adapt to the new environment, such as some local authority-run centres that collect recyclables in

Adelaide, southern Australia.

The centres used to send nearly everything, ranging from plastic to paper and glass, to China but now 80 per cent is processed by local companies, with most of the rest shipped to India.

"We moved quickly and looked to domestic markets," Adam Faulkner, chief executive of the Northern Adelaide Waste Management Authority, said.

"We've found that by supporting local manufacturers, we've been able to get back to pre-China ban prices." **AFP**

LAMPIRAN 14
KOSMO! (DUNIA): MUKA SURAT 43
TARIKH: 24 APRIL 2019 (RABU)

Ribut pasir melanda Arab Saudi

RIYADH - Pihak berkuasa Arab Saudi mengeluarkan amaran cuaca berikutan ribut pasir berskala besar yang berterusan melanda negara tersebut.

Menurut portal *Arab News*, angin selaju 31 kilometer sejam melanda ibu negara Arab Saudi, Riyadh kelmarin dan menyebabkan gangguan trafik ekoran jarak

penglihatan terhad.

Ribut pasir itu turut menyebabkan masalah di Al-Jouf, sempadan utara, Wilayah Qassim dan Wilayah Timur serta Najran.

Pihak Berkuasa Meteorologi dan Perlindungan Alam Sekitar menyatakan, keadaan tersebut akan berterusan di Wilayah Timur, Najran dan bahagian

selatan Riyadh.

Bahagian timur dan sebilangan kawasan di kota suci Mekah serta Madinah juga menerima amaran mengenai angin kuat dan ribut pasir.

Selain itu, ribut petir juga diramalkan berlaku di Jazan, Asir, Baha dan Taif.

Dalam pada itu, pihak berkuasa Riyadh menasihati orang

ramai agar memandu perlahan dan menyalakan lampu kenderaan. Warga kota Riyadh juga diminta untuk berada di rumah dan di dalam bangunan sepanjang ribut melanda.

Suhu maksimum direkodkan ketika ribut pasir di Riyadh adalah 28 darjah Celsius, manakala suhu terendah adalah 14 Celsius.

- Agensi



RIBUT pasir yang melanda Riyadh sejak kelmarin menyebabkan jarak penglihatan pemandu terhad.

ARAB NEWS

LAMPIRAN 15
KOSMO! (DUNIA): MUKA SURAT 41
TARIKH: 24 APRIL 2019 (RABU)



LAMPIRAN 16
BERITA HARIAN (DUNIA): MUKA SURAT 73
TARIKH: 24 APRIL 2019 (RABU)



Ribut pasir melanda Riyadh kelmarin menjejaskan penglihatan dan mengakibatkan gangguan lalu lintas.

Arab Saudi dilanda ribut pasir

➔ Gangguan lalu-lintas meluas akibat tahap penglihatan rendah

► **Riyadh/Makkah**

Pihak berkuasa Arab Saudi mengeluarkan amaran cuaca ketika ribut pasir besar-besaran melanda negara pentadbiran diraja itu.

Angin berkecambah 31 kilometer sejam membadaai ibu kota itu kelmarin, menyebabkan gangguan lalu-lintas meluas

akibat tahap penglihatan rendah.

Ribut pasir juga mencetuskan masalah di rantau Al-Jouf, Sempadan Udara dan Qassim serta Wilayah Timur dan Najran.

Pihak Berkuasa Meteorologi dan Perlindungan Alam Sekitar meramalkan, keadaan cuaca itu berterusan di Wilayah Timur, Najran dan bahagian selatan ibu kota ini.

Bahagian timur di kawasan tanah tinggi selatan serta rantau Makkah dan Madinah juga diberi amaran untuk jangkakan angin kencang menerbangkan partikel pasir. Ribut petir turut diramalkan di kawasan tanah tinggi Jazan, Asir, Baha dan Taif.

Pegawai lalu-lintas di sini menasihatkan pemandu supaya memandu perlahan serta

menggunakan lampu kenderaan, manakala Direktorat Umum Pertahanan Awam menggesa penduduk di ibu kota supaya tidak keluar rumah.

Pakar kesihatan memberi amaran, pendedahan kepada ribut pasir mungkin menyebabkan kesukaran bernafas terutama individu yang mengalami masalah pernafasan.

Suhu maksimum dirakamkan ketika ribut pasir di sini adalah 28 darjah Celsius hingga menurun ke 14 darjah Celsius.

Siap sedia sambut Ramadan

Dalam perkembangan lain, kawasan perbandaran Makkah, Arab Saudi kini bersiap sedia mengaktifkan pelan dan program sempena sambutan Ra-

madan bulan depan.

Ia sudah menggerakkan semua potensi pelan yang bakal dilaksanakan dengan menyediakan perkhidmatan perbandaran terbaik kepada penduduk, jemaah dan pelawat ke bandar suci itu.

Laporan *Arab News* menyebutkan, usaha itu termasuk mengekalkan kebersihan awam, kawalan pembuangan sampah dan makhluk perosak serta pemeriksaan susulan ke atas kedai berkaitan kesihatan awam selain memeriksa barangan makanan untuk pengesahan.

Pegawai perbandaran, Mohammed bin Abdullah Al-Quwaimi berkata: "Pihak kami melaksanakan pelan untuk memantapkan usaha di semua jabatan pusat dan perbandaran kecil mengikut tugas khusus bagi setiap sektor." **AGENCI**

LAMPIRAN 17
NEW STRAITS TIMES (WORLD): MUKA SURAT 69
TARIKH: 24 APRIL 2019 (RABU)

6.3 MAGNITUDE

SECOND POWERFUL QUAKE STRIKES THE PHILIPPINES

Fear of aftershocks
as rescuers hunt
for survivors after
Monday's quake

PORAC (Philippines)

PHILIPPINE rescuers were scrambling yesterday to reach some two dozen people feared buried under a building near Manila that collapsed a day earlier in a strong earthquake, as a powerful new tremor hit the nation.

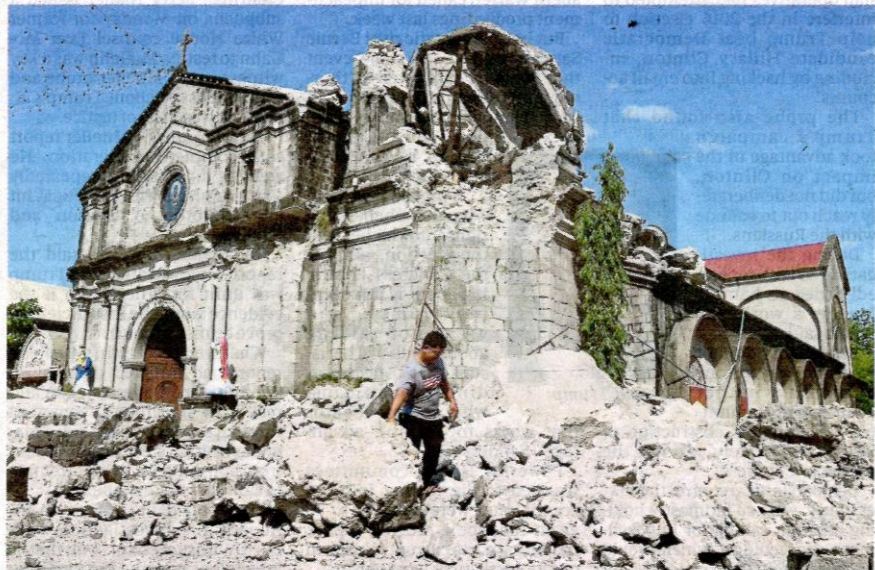
The US Geological Survey put the fresh quake on the central island of Samar at 6.3 magnitude, which is stronger than the one that hit close to the capital in the north on Monday.

Authorities were assessing possible damage from the latest quake, which struck at a depth of 70km, but warned that residents should expect aftershocks.

The worst of Monday's damage was in the province of Pampanga, which was the site of most of the 11 fatalities, disaster officials said.

More than 100 others were injured by falling rubble, including in Manila, according to police.

The toll could rise as crews fanned out across the mostly rural region to assess damage in isolated hamlets that lost power and communications in one of



A man walking past the rubble of the 18th century St Catherine of Alexandria Church after its bell tower was destroyed following a 6.3-magnitude earthquake that struck Porac yesterday. AFP PIC

the area's strongest tremors in years.

More than 400 aftershocks have been registered since the initial quake, Philippine seismologists said.

Scores of rescuers here were using cranes and jackhammers to peel back the pancaked concrete structure of a four-storey market building where the Red Cross

said 24 people were unaccounted for.

"Every minute, every second is critical in this rescue," Cris Palcis, a volunteer sniffer dog handler, said.

"Time is short for the people under the rubble so we have to be quick."

Pampanga Governor Lilia Pineda told journalists that rescuers

could still hear at least one person trapped beneath the rubble, but the digging was proceeding delicately to avoid accidentally crushing the survivor.

The quake also damaged several centuries-old churches, which were crowded with worshippers in recent days as the majority-Catholic Philippines marked the Easter holiday. **AFP**

LAMPIRAN 18
BERITA HARIAN (DUNIA): MUKA SURAT 71
TARIKH: 24 APRIL 2019 (RABU)

[FOTO AFP]



BH DUNIA

Petugas penyelamat berjaya membawa keluar mangsa yang terselamat daripada runtuhan bangunan di pusat beli belah Chuzon di Porco, wilayah Pampanga, semalam.

GEMPA KEDUA LANDA FILIPINA

GEMPA BUMI DI FILIPINA

Gegaran kedua goncang Samar

➡ Angka korban kini 16, ramai dikhuatiri masih terperangkap

Gempa kedua berukuran 6.3 magnitud di selatan Pulau Samar, dekat sini, dilaporkan lebih kuat berbanding gegaran yang berlaku di wilayah Pampanga, kelmarin, menurut Pusat Tinjauan Geologi Amerika Syarikat (USGS), semalam.

Pada ketika sama, angka korban gempa tempoh hari kini sudah meningkat kepada 16 dengan majoriti mangsa maut terabit sekitar bandar Porco, menurut pegawai agensi bencana kebangsaan.

Sementara itu, polis berkata, lebih 100 lagi dilaporkan cedera selepas ditimpa serpihan yang jatuh daripada bangunan yang runtuh, kelmarin.

Penduduk cemas
Gempa yang berlaku semalam memaksa ramai penduduk tempatan cemas dan lari ke jalan menyelamatkan diri.

"Tiada siapa menangis tetapi ada yang panik kerana gegaran itu terlalu kuat," kata Rey Estrobo, seorang penyelia hotel di bandar Borongan.

Pihak berkuasa menjangkakan jumlah kematian mungkin meningkat sebaik saja pasukan penyelamat sampai di kawasan luar bandar yang dikatakan terputus bekalan elektrik dan perhubungan di kawasan gegaran paling kuat sejak beberapa tahun kebelakangan.

Pakar seismologi Filipina menganggarkan terdapat lebih 400 gempa susulan dirakamkan sejak gempa pertama berlaku di negara itu.

Fakta nombor

100 MANGSA	400 GEMPA
dilaporkan	susulan
cedera di Wilayah	berlaku
Pampanga	sejak kelmarin

MANILA

FILIPINA

Samar

Gempa bumi magnitud 6.3 23 April

Sumber: USGS

100 km