

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

| Bil | Berita                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Media       | Capaian Berita Penuh   |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------|
| 1.  | <p><a href="#"><u>Mestecc disallows unlimited accumulation of residual waste at Lynas plant</u></a></p> <p>The Ministry of Energy, Science, Technology, Environment and Climate Change (Mestecc) has decided not to allow unlimited accumulation of waste residue at the Lynas Advanced Materials Plant (LAMP) amid fears over the increased risks it poses to the wellbeing of the community.</p>                                                        | Bernamea    | Klik pada tajuk berita |
| 2.  | <p><a href="#"><u>MESTECC disallows unlimited accumulation of residual waste at Lynas plant</u></a></p> <p>The Ministry of Energy, Science, Technology, Environment and Climate Change (Mestecc) has decided not to allow unlimited accumulation of waste residue at the Lynas Advanced Materials Plant (LAMP) amid fears over the increased risks it poses to the wellbeing of the community.</p>                                                        | The Sun     | Klik pada tajuk berita |
| 3.  | <p><a href="#"><u>'Lynas must meet two conditions'</u></a></p> <p>The Environment, Science, Technology and Climate Change Ministry, which announced the decision, said the government will allow Lynas to renew its future licence and permission if the company complies with two pre-conditions for the management of its wastes.</p>                                                                                                                   | The Star    | Klik pada tajuk berita |
| 4.  | <p><a href="#"><u>Malaysia tells Lynas to remove radioactive waste for licence renewal</u></a></p> <p>Among the conditions set by the country's Energy and Environment Ministry, the miner must also submit an action plan for non-radioactive waste disposal for future licences or permission renewals.</p> <p>The "management of the waste residue from the Lynas Advanced Materials Plant (LAMP) should be given priority to ensure the wellbeing</p> | Mining. Com | Klik pada tajuk berita |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                        |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------|
|    | of the community and the environment", the ministry said in a statement.                                                                                                                                                                                                                                                                                                                                                                                                                     |                           |                        |
| 5. | <p><a href="#"><u>Lynas review recommends permanent disposal facility, Ministry says residue must be removed from Malaysia</u></a></p> <p>Despite that, the Energy, Science, Technology, Environment and Climate Change Ministry is putting its foot down, saying that it will not allow the unlimited accumulation of residue at the Lynas Advanced Materials Plant (LAMP).</p>                                                                                                             | The Star                  | Klik pada tajuk berita |
| 6. | <p><a href="#"><u>Aussie miner sinks after Malaysia call on radioactive waste</u></a></p> <p>"The Ministry is concerned with the increasing risk arising from the continued accumulation of residue without a viable solution to manage its accumulation in the near-term. For this reason, the Ministry will not allow the unlimited accumulation of residue at Lynas Advanced Materials Plant (LAMP)," said the report from Science, Technology and Environment Minister, Yeo Bee Yin.</p> | The Sydney Morning Herald | Klik pada tajuk berita |
| 7. | <p><a href="#"><u>Secara amnya, operasi Lynas penuhi kriteria ditetapkan - Jawatankuasa penilaian</u></a></p> <p>Dalam laporan setebal 203 muka surat yang diterbitkan hari ini, jawatankuasa berkenaan yang diwujudkan di bawah Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim itu turut merumuskan pelaburan LAMP memenuhi kriteria pelaburan yang berkualiti.</p>                                                                                                 | Astro Awani               | Klik pada tajuk berita |
| 8. | <p><a href="#"><u>No unlimited storage of waste for Lynas, says ministry</u></a></p> <p>A statement by the Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC), in expressing the government's concerns over the increasing amount of residue produced by the company, said the decision was due to the continued accumulation of waste without a viable solution to manage it at hand.</p>                                                                    | Malay Mail                | Klik pada tajuk berita |
| 9. | <p><a href="#"><u>MALAYSIA Starting 2019, Those Who Own Luxury Homes Must Pay Electricity Bill Even</u></a></p>                                                                                                                                                                                                                                                                                                                                                                              | World of Buzz             | Klik pada tajuk        |

|     |                                                                                                                                                                                                                                                                                                                                                                                |               |                        |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------------|
|     | <p><a href="#"><u>if it's Under RM20</u></a></p> <p>Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC), Yeo Bee Yin said the government is currently looking for ways to expand its subsidy mechanism for electricity bills, specifically for the poor.</p>                                                                                     |               | berita                 |
| 10. | <p><a href="#"><u>Isu Lynas: Jangan jadikan rakyat Malaysia tikus makmal - Fuziah</u></a></p> <p>Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar, Yeo Bee Yin, dalam kenyataan dikeluarkan hari ini, tidak akan membenarkan pengumpulan sisa tanpa had di Lynas Advanced Materials Plant (LAMP).</p>                                                        | Berita Harian | Klik pada tajuk berita |
| 11. | <p><a href="#"><u>JK penilaian operasi: Lynas perlu bawa keluar sisa buangan jika...</u></a></p> <p>Penubuhan jawatankuasa eksekutif itu diumumkan Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim Yeo Bee Yin pada 15 Okt lalu.</p>                                                                                                                        | Malaysia Kini | Klik pada tajuk berita |
| 12. | <p><a href="#"><u>Malaysia tells Lynas to remove rare earths radioactive waste</u></a></p> <p>The "management of the waste residue from the Lynas Advanced Materials Plant (LAMP) should be given priority to ensure the wellbeing of the community and the environment", the Ministry of Energy, Science, Technology, Environment and Climate Change said in a statement.</p> | Aljazeera.com | Klik pada tajuk berita |
| 13. | <p><a href="#"><u>FOMCA, PPIM sokong golongan isi rumah mewah perlu bayar bil elektrik</u></a></p> <p>Sebelum ini media melaporkan Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar, Yeo Bee Yin berkata, golongan isi rumah mewah yang mempunyai bil elektrik bulanan RM20 ke bawah perlu membayar bil berkenaan mulai bulan depan.</p>                     | Berita Harian | Klik pada tajuk berita |
| 14. | <p><a href="#"><u>Hantar keluar bahan radioaktif</u></a></p> <p>Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim berkata, ia sebagai</p>                                                                                                                                                                                                                 | Harian Metro  | Rujuk lampiran 1       |

|     |                                                                                                                                                                                                                                                                                                         |                   |                  |
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|     | prasyarat pembaharuan Lesen kepada LAMP untuk terus beroperasi di negara ini.                                                                                                                                                                                                                           |                   |                  |
| 15. | <b><u>Ministry sets pre-conditions for Lynas to operate in Malaysia</u></b><br><br>The Energy, Technology, Science, Climate Change and Environment Ministry yesterday sets out pre-conditions for the Lynas Advanced Material Plant to continue operating in the country.                               | New Straits Times | Rujuk lampiran 2 |
| 16. | <b><u>Exco reports shows Lynas Complied with regulations</u></b><br><br>The executive committee report on the operation of the Lynas Advanced Materials Plant(LAMP) finds that's the rare earth refinery has generally complied with regulation and has recommended further action to rectify the flaws | The Star          | Rujuk lampiran 3 |
| 17. | <b><u>Lynas perlu hantar sisa radioaktif ke luar negara</u></b><br><br>Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, berkata ia adalah sebagai prasyarat pembaharuan lesen kepada LAMP untuk terus beroperasi di negara ini.                                                  | Berita Harian     | Rujuk lampiran 4 |
| 18. | <b><u>Waspada hadapi musim tengkujuh</u></b><br><br>Malah, Jabatan Meteorologi menunjukkan, sepanjang minggu ini yang juga merupakan hujung tahun akan berlaku penurunan hujan dikebanyakan tempat diseluruh negara.                                                                                    | Kosmo!            | Rujuk lampiran 5 |
| 19. | <b><u>Teknologi kultur tisu rumpai laut tingkatkan hasil</u></b><br><br>Majlis tersebut disempurnakan oleh Timbalan Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, Isnaraisah Munirah Majilis.                                                                                     | Utusan Malaysia   | Rujuk lampiran 6 |

## TEMPATAN

| Bil | Berita                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Media                 | Capaian Berita Penuh   |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 20. | <p><a href="#"><u>Tempah fon telinga tanpa wayar AI di 11street</u></a></p> <p>11street menjalin kerjasama dengan Soul Electronics bagi memperkenalkan fon telinga tanpa wayar kecerdasan buatan (AI), Run Free Pro Bio pertama di dunia dilengkapi BiomechEngine.</p>                                                                                                                                                                                                                                        | Harian Metro          | Klik pada tajuk berita |
| 21. | <p><a href="#"><u>On Industry 4.0 and the Humanities — Wong Soak Koon</u></a></p> <p>In recent months, we have heard time and again that the 4.0 tech revolution is here to stay and that Malaysia must be alert, even proactive, in capitalising on this. Ministers heading different ministries have spoken of this need with fervour and determination.</p>                                                                                                                                                | Malay Mail            | Klik pada tajuk berita |
| 22. | <p><a href="#"><u>Malaysian Automotive Institute unveils blockchain technology to advance automotive industry</u></a></p> <p>Malaysia Automotive Institute (MAI), an agency under the Ministry of International Trade and Industry (MITI), has signed a Memorandum of Agreement (MoA) with Crypto Valley Malaysia (CVM), a Hybrid Exponential Technologies research and innovation center, to roll out blockchain technologies and initiatives aimed at pushing forward the national Industry4WRD policy.</p> | Enterprise Innovation | Klik pada tajuk berita |
| 23. | <p><a href="#"><u>Govt aims e-commerce to achieve 20% growth in 2020</u></a></p> <p>The e-commerce industry is set to achieve an annual growth rate of 20% in 2020, an increase from 14.3% growth in 2017, with the support of the country's investment on the fourth industrial revolution (Industry 4.0). Deputy International Trade and Industry Minister Dr Ong Kian Ming said the industry contributed RM85.8 billion to the country's GDP last year, a figure measured for a period of seven years.</p> | Malaysian Reserve     | Klik pada tajuk berita |

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|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------|
| 24. | <p><b><u>Make the First move</u></b></p> <p>First City University College is recognised as an institution of higher learning that offers programmes across vast fields of studies through quality and holistic education. With the emergence of IR 4.0, so has the demand for expertise in the engineering and computing industries. With that, the Faculty of Engineering &amp; Computing at First City University College offers Foundation, Diploma, Degree and Post-graduate programmes, specially-crafted for the fast-changing and challenging industries.</p> | The Sun      | Klik pada tajuk berita |
| 24. | <p><b><u>Pahang dijangka berdepan risiko banjir</u></b></p> <p>Pahang khususnya daerah Kuantan, Rompin dan Pekan dijangka berdepan tempoh lima hari yang 'kritikal' risiko banjir susulan ramalan hujan lebat dan air pasang besar sepanjang tempoh berkenaan.</p>                                                                                                                                                                                                                                                                                                   | Kosmo!       | Klik pada tajuk berita |
| 26. | <p><b><u>100,000 smart meters installed in Melaka</u></b></p> <p>In a media statement issued on Friday, TNB said consumers who received a notice pertaining to the installation of smart meters were encouraged to make an appointment early to facilitate the installation process at their respective homes.</p>                                                                                                                                                                                                                                                   | The Star     | Klik pada tajuk berita |
| 27. | <p><b><u>Selangor haram beg plastik 2030</u></b></p> <p>Penggunaan beg plastik akan diharamkan sepenuhnya di Selangor pada 2030 apabila kerajaan negeri menguatkuasakan larangan penggunaannya itu sepenuhnya.</p> <p>Exco Alam Sekitar, Teknologi Hijau, Hal Ehwal Pengguna, Sains, Teknologi dan Inovasi Hee Loy Sian berkata, proses pengharaman penggunaan itu akan dilaksanakan dengan kerjasama semua pihak berkuasa tempatan (PBT) secara berperingkat.</p>                                                                                                   | Sinar Harian | Klik pada tajuk berita |
| 28. | <p><b><u>Selangor larang beri penyedut minuman plastik bermula 2019</u></b></p> <p>Bermula tahun depan, penyedut minuman plastik tidak akan diberi secara automatik di Selangor, sebaliknya hanya atas permintaan pelanggan.</p>                                                                                                                                                                                                                                                                                                                                     | Kosmo!       | Klik pada tajuk berita |

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|     | Pengerusi Jawatankuasa Tetap Alam Sekitar, Teknologi Hijau, Sains, Teknologi dan Inovasi dan Hal Ehwal Pengguna negeri, Hee Loy Sian berkata, bagaimanapun tiada caj akan dikenakan ke atas penggunaan penyedut minuman plastik itu.                                                                                                                                                                                                                                                                                             |          |                        |
| 29. | <a href="#"><u>Meeting no-plastic bag target earlier</u></a><br><br>THE Selangor government aims for a total ban of plastic bags by 2030, says Environment, Green Technology, Consumer, and Non-Islamic Affairs Committee chairman Hee Loy Sian.                                                                                                                                                                                                                                                                                 | The Star | Klik pada tajuk berita |
| 30. | <a href="#"><u>Straws will only be issued upon request beginning 2019, says S'gor exco</u></a><br><br>Plastic straws will no longer be given by default to consumers in eateries in Selangor beginning next year, and will only be provided upon request.<br>State Environment, Green Technology and Consumer committee chairman Hee Loy Sian ( <i>pix</i> ) said this was among the Selangor government's efforts to reduce the use of plastic in the state, following its previous move to charge 20 sen for each plastic bag. | The Sun  | Klik pada tajuk berita |
| 31. | <a href="#"><u>Budayakan amalan pembuangan sampah</u></a><br><br>Ia jelas dibuktikan apabila Kementerian Perumahan dan Kerajaan Tempatan (KPKT) mendedahkan 60 peratus rakyat di negara ini masih tidak tahu membuang sampah dengan betul ke dalam tong sampah.                                                                                                                                                                                                                                                                  | Kosmo!   | Klik pada tajuk berita |
| 32. | <a href="#"><u>Straw only on request starting next year</u></a><br><br>Plastic straw will no longer be given to consumer in eateries in Selangor beginning next year, and only will provided upon request                                                                                                                                                                                                                                                                                                                        | The Sun  | Rujuk lampiran 7       |
| 33. | <a href="#"><u>Use less plastic to save environs, says exco man</u></a><br><br>People need to change their mindset and use less plastic to preserve the environment, said Perak Environment Commitie Chairman Dr Abdul Aziz Bari.                                                                                                                                                                                                                                                                                                | The Star | Rujuk lampiran 8       |

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| 34. | <p><b><u>Meeting no-plastic bag target earlier</u></b></p> <p>The Selangor Government aims for a total ban of plastic by 2030, says Environment, Green Technology, Consumer, and Non-Islamic Affairs Committee Chairmain.</p>                          | The Star           | Rujuk lampiran 9  |
| 35. | <p><b><u>Protecting our Mangroves and coastal wetlands</u></b></p> <p>The prospect of the environment is looking great for Malaysia with the recent announcement by the government during the mid-term review of the 11<sup>th</sup> Malaysia Plan</p> | News Straits Times | Rujuk lampiran 10 |

## ANTARABANGSA

| Bil | Berita                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Media                                    | Capaian Berita Penuh   |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|------------------------|
| 36. | <p><b><u><a href="#">Iran Pioneer of Stem Cell Technology in Middle East: VP</a></u></b></p> <p>Iranian Vice-President for Science and Technology Sorena Sattari says Iranian knowledge-based companies have turned Iran into a regional forerunner in the field of stem cells and regenerative medicines. Sattari on Saturday said the development and advancement of stem cells knowledge is one of the key opportunities provided for knowledge-based companies.</p> | Malaysia Sun                             | Klik pada tajuk berita |
| 37. | <p><b><u><a href="#">Major Indian Business School Issues Blockchain Certs to Combat Fake Degrees</a></u></b></p> <p>India's top ten business school, SP Jain School of Global Management, has issued 1,189 blockchain-based certificates to graduands who recently obtained degrees and professional certifications.</p>                                                                                                                                                | Cryptocurrency News and Breaking Updates | Klik pada tajuk berita |
| 38. | <p><b><u>Thailands takes action against single-use plastic bags</u></b></p> <p>Thailand Ministry of Natural Resources and Environment called on people nationwide to refrain from using single-use plastic bags to mark the Thailand Enviroment Day.</p>                                                                                                                                                                                                                | The Star                                 | Rujuk lampiran 11      |

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| 39. | <b><u>Nasa spacecraft arrives at ancient asteroid after two years</u></b><br>After two years chase, a Nasa spacecraft arrived at the ancient asteroid Bennu, its first visitor in billions of years,                                                            | The Star          | Rujuk lampiran 12 |
| 40. | <b><u>SpaceX Launches 64 satellites at once</u></b><br>SpaceX launched its Falcon 9 rocket on Monday, sending an unusual payload into space – 64 satellites at the same time, a united States record.                                                           | New Straits Times | Rujuk lampiran 13 |
| 41. | <b><u>SpaceX lancer 64 satelit serentak</u></b><br>Syarikat Aeroangkasa Amerika Syarikat(AS), SpaceX melancarkan roket Falcon 9 semalam dengan membawa sebanyak 64 satelit ke angkasa, terbanyak dalam sejarah negara ini.                                      | Utusan Malaysia   | Rujuk lampiran 14 |
| 42. | <b><u>U.N Climate Summit Kicks Off</u></b><br>Nation Facing imminent environmental disaster on Monday called on rich polluters to help them back from the brink, as the United Nation warned the worlds plan to avoid climate catastrophehe was "way of course" | New Straits Times | Rujuk lampiran 15 |

**LAMPIRAN 1**  
**HARIAN METRO (TENGAH): MUKA SURAT 35**  
**TARIKH: 5 DISEMBER 2018 (RABU)**

**Kuala Lumpur**

**Hantar keluar bahan radioaktif**

Lynas Advanced Materials Plant (LAMP) perlu memastikan sisa Water Leached Purification Residue (WLP) terkumpul mengandungi bahan radioaktif dihantar keluar dari Malaysia.

Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim berkata, ia sebagai prasyarat pembaharuan lesen kepada LAMP untuk terus beroperasi di negara ini.

Katanya, kementerian maklum pihak Lynas Corporation Ltd, Australia dan Lynas Malaysia Sdn Bhd, mengemukakan surat aku janji bertarikh

23 Februari 2012 dan 6 Mac 2012 yang masing-masing memaklumkan komitmen menghantar keluar sisa LAMP dari Malaysia, jika perlu.

Namun bagi sisa buangan terjadual bukan radioaktif, LAMP perlu mengemukakan pelan tindakan bagi pelupusan buangan terkumpul, sebelum ia boleh dipertimbangkan bagi permohonan kelulusan di bawah Peraturan 9 (6) dan 9 (7), Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005.

**LAMPIRAN 2**  
**NEWS STRAIT TIMES (NATION): MUKA SURAT 11**  
**TARIKH: 5 DISEMBER 2018 (RABU)**

## Ministry sets pre-conditions for Lynas to operate in Malaysia

**KUALA LUMPUR:** The Energy, Technology, Science, Climate Change and Environment Ministry yesterday set out pre-conditions for the Lynas Advanced Materials Plant to continue operating in the country.

The ministry said the accumulated water leached purification (WLP) residue, which contained radioactive materials, must be removed from the country, and Lynas must submit an action plan on the disposal of its accumulated non-radioactive neutralisation underflow (NUF) residue.

The accumulation of WLP and NUF residues at its rare earth plant in Gebeng, Pahang, stood at 451,564 metric tonnes and 1.113 million metric tonnes, respectively. The residue had been accumulating for six years since the beginning of Lynas' operations in 2012 and were being stored at its temporary storage facility.

Lynas' temporary storage licence for WLP residue expires on Sept 2 next year, while the NUF residue licence is valid until Feb 15.

"The ministry is concerned about the increasing risk from

the continued accumulation of residue without a viable solution to manage its accumulation in the near term.

"The ministry is concerned about the increasing amount of accumulated residue at Lynas' temporary open landfill site as it is exposed to the threat of natural disasters, such as major flooding.

"The risks to surrounding communities and environment will increase as the amount of accumulated residue grows.

"For this reason, the ministry will not allow the unlimited ac-

cumulation of residue at the plant. The ministry is confident that the pre-conditions set will ensure the wellbeing of the community and environment."

The pre-conditions were set following the detailed report by the Operations Evaluation Executive Committee, which was set up on Oct 16 to review Lynas' operations and ensure that Malaysia did not become a dumping ground for toxic waste.

The ministry also noted that Lynas Malaysia Sdn Bhd (Lynas Malaysia) was conducting re-

search to recycle WLP and NUF residue as a soil conditioner called Condisoil.

"However, having received expert opinion, the committee reported that the duration of the studies was insufficient to conclude on the safety of using Condisoil. Therefore, the ministry agrees with the committee's recommendation that long-term studies can be conducted without the use of WLP residue."

The committee's report can be obtained at <https://tinyurl.com/laporanlamp>.

LAMPIRAN 3  
THE STAR (NATION): MUKA SURAT 4  
TARIKH: 5 DISEMBER 2018 (RABU)

## Exco report shows Lynas complied with regulations

**PETALING JAYA:** The executive committee report on the operations of the Lynas Advanced Materials Plant (LAMP) finds that the rare earth refinery has generally complied with regulations and has recommended further action to rectify the flaws.

It said that LAMP followed regulations under the Atomic Energy Licensing Act 1984 (Act 304), Environmental Quality Act 1974 (Act 127), Factories and Machinery Act 1967 (Act 92, 139), Occupational Safety and Health Act 1994 (Act 514) and Industrial Co-ordination Act 1975 (Act 156).

The committee said LAMP had also taken proactive initiatives to comply with other standards and international practices on its own accord.

It said the Health Ministry's observations on diseases at the LAMP site found that there was no significant increase in cancer since LAMP started operating there.

It added that the Health Ministry had also found no significant increase in diseases monitored such as conjunctivitis, asthma, upper respiratory tract infection, congenital malformation, spontaneous abortion and contact dermatitis.

It found that radiation levels of 16 was too low to be a health risk to people who lived near the Gebeng industrial site.

Despite the low health risk at the Lynas site, the executive committee found an increase of heavy metal concentration such as nickel, chromium, lead and mercury in ground water, adding that nickel and chromium were carcinogenic substances.

It called for a special study to be done to identify the presence of the heavy metal.

It said ground water monitoring must be carried out at Sungai Ular and Sungai Balok as 12.5% of households used the same ground water for daily use.



Operations to continue: The Lynas Advanced Materials Plant in Gebeng, Kuantan.

## 'Lynas must meet two conditions'

Ministry: Follow rules to ensure future licence

**PETALING JAYA:** The Lynas rare earth refinery in Gebeng, Kuantan, will be allowed to continue operating provided it removes and disposes its processing by-products from the country, particularly the controversial water leach purification residue.

The Environment, Science, Technology and Climate Change Ministry, which announced the decision, said the government will allow Lynas to renew its future licence and permission if the company complies with two pre-conditions for the management of its wastes.

"The ministry is concerned with the increasing risk arising from the continued accumulation of residue without a viable solution to manage the accumulation in the near term," it said.

It said Lynas must remove the accumulated 451,564 metric tonnes of "water leach purification residue" (WLP), which contains radioactive materials, from Malaysia.

Secondly, Lynas must submit an action plan on the disposal of its non-radioactive "neutralisation underflow residue" (NUF) scheduled waste totalling 1.113 million metric tonnes.

The ministry said the action plan must be submitted before it will be considered for future applications under the Environmental Quality Regulations (Scheduled Waste) 2005.

Lynas' current permission to store the NUF onsite is valid until Feb 15 next year.

The full operating stage licence for the Australian rare earth miner, which started operating amid protests in 2012, will expire next September.

"The ministry is confident that this decision will ensure the well-being of the community and the environment," it said.

The executive committee report on the operations of the Lynas Advanced Materials Plant recommended that an independent research and development committee be set up to coordinate, evaluate, manage and monitor further research to ensure it is free from any conflict of interest on the part of Lynas.

On public engagement, the committee recommended that Lynas arrange a more effective communication strategy to tackle the issue of conflict regarding risks.

It said the executive committee found that a high technology industry that uses naturally occurring radioactive material can grow rapidly in the future.

"Thus, the committee suggests the government look into the industry's growth holistically to create a suitable ecosystem that meets the latest international standards," it said.

Lynas opponents welcomed the ministry's directive.

Kuantan PKR MP Fuziah Salleh is relieved that Lynas must remove its "hazardous waste" from Malaysia.

"A responsible corporation would have ensured a realistic and safe disposal mechanism of its waste before commencing its operations," she said in a statement yesterday.

Fuziah, who is Deputy Minister in the Prime Minister's Department, said Lynas had persistently refused to acknowledge that its waste was hazardous.

Save Malaysia, Stop Lynas chairman Tan Bun Teet is relieved that the WLP waste will no longer be part of the recycling effort.

"We were initially worried that the radioactive material will be dispersed all over the country if the WLP is mixed with the NUF residue to be recycled," he said.

LAMPIRAN 4  
BERITA HARIAN (ISU): MUKA SURAT 9  
TARIKH: 5 DISEMBER 2018 (RABU)

## PENGURUSAN SISA WLP

# Lynas perlu hantar sisa radioaktif ke luar negara

➔ Prasyarat terhadap syarikat untuk terus operasi

Oleh Nor Afzan Mohamad Yusof  
cnews@nstp.com.my

► Kuala Lumpur

Lynas Advanced Materials Plant (LAMP) perlu memastikan sisa Water Leached Purification Residue (WLP) terkumpul yang mengandungi bahan radioaktif, dihantar keluar dari Malaysia.

Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, berkata ia adalah sebagai prasyarat pembaharuan lesen kepada LAMP untuk terus beroperasi di negara ini.

Katanya, kementerian maklum bahawa pihak Lynas Corporation Ltd, Australia dan Lynas Malaysia Sdn Bhd, mengemukakan surat aku janji bertarikh 23 Februari 2012 dan 6 Mac 2012, yang masing-masing memaklumkan komit-

men menghantar keluar sisa LAMP dari Malaysia, jika perlu.

Namun, bagi sisa buangan terjadual yang bukan radioaktif, LAMP perlu mengemukakan suatu pelan tindakan bagi pelupusan buangan terkumpul, sebelum ia boleh dipertimbangkan bagi permohonan kelulusan di bawah Peraturan 9 (6) dan 9 (7), Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005.

## Kementerian pandang serius

"Kementerian memandang serius pengumpulan terkini dua sisa utama di tapak LAMP, iaitu WLP berjumlah 451,564 tan metrik dan Neutralization Underflow Residue (NUF) berjumlah 1.113 juta tan metrik.

"Apatah lagi sisa di tapak itu, terkumpul sejak ia memulakan operasi pada 2012 dan distorkan di kemudahan penstoran residu sementara di LAMP," kata kenyataan itu.

Keputusan kerajaan itu dibuat berdasarkan Laporan Jawatankuasa Eksekutif Penilaian Mengenai Operasi LAMP di Gebeng, Pahang.

WLP adalah sisa pepejal mengandungi bahan radioaktif semula jadi (NORM), manakala

NUF dikategorikan sebagai buangan terjadual (scheduled waste).

Pengurusan residu itu, dikawal selia oleh Jabatan Alam Sekitar (JAS) menerusi Akta Kualiti Alam Sekeliling 1974 di bawah Peraturan 9, Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005.

Kenyataan itu turut menjelaskan pihaknya memandang serius jumlah sisa terkumpul di tapak sementara pelupusan terbuka kerana pendedahannya memberi kepada alam sekitar dan penduduk sekitar.

"Kami maklum bahawa pihak Lynas Malaysia Sdn Bhd (Lynas Malaysia) sedang menjalankan kajian terhadap kitar semula sisa WLP dan NUF yang berpotensi sebagai bahan kondisioner tanah yang dinamakan Condisoil.

"Bagaimanapun, selepas mendapat pandangan pakar, Jawatankuasa Penilaian melaporkan bahawa berdasarkan jangka masa bagi kajian berkenaan, ia tidak mencukupi untuk membuat kesimpulan sama ada Condisoil selamat atau tidak untuk digunakan," katanya.

Dalam perkara itu, kementerian membuat perbandingan

bagaimana pengurusan buangan LYNAS dikawal selia di Malaysia, berbanding syarikat lain.

"Bagi penstoran sementara NORM menggunakan sistem penstoran tapak pelupusan terbuka, rekod Lembaga Pelesenan Tenaga Atom (LPTA) menunjukkan syarikat lain menstorkan sisa NORM jauh lebih rendah dan bagi tempoh penstoran jauh lebih pendek daripada LAMP.

## Patuhi peraturan alam sekitar

"Bagi penstoran sementara buangan terjadual, syarikat dikawal selia oleh JAS perlu mematuhi Peraturan 9 (5) Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005, yang menyatakan bahawa kuantiti buangan terjadual yang terkumpul di tapak hendaklah tidak melebihi 20 tan metrik dan tidak boleh distorkan di tapak melebihi 180 hari," katanya.

Dalam kenyataan itu, kementerian turut mengucapkan penghargaan kepada Jawatankuasa Eksekutif Penilaian Operasi mengenai LAMP, yang menyiapkan laporan terperinci secara saintifik, objektif dan telus.

## 'Usah jadikan rakyat tikus makmal'

**Kuantan:** Lynas Corporation Ltd (Lynas) perlu meneruskan permohonan mereka dengan pihak berkuasa berkaitan di Australia untuk menghantar balik semua sisanya sebelum tempoh lesen penstoran untuk sisa itu tamat pada September 2019.

Ahli Parlimen Kuantan, Fuziah Salleh, berkata ini kerana Australia adalah negara yang besar dan luas sementara keperluan guna tanah di negara ini semakin terhad kerana pertambahan penduduk.

"Lombong Lynas di Gunung Weld di Western Australia terletak di kawasan hampir gurun yang jarang penduduknya. Lubang lombong Lynas yang besar di sana wajib diisi," katanya dalam kenyataan media, di sini, semalam.

## Dua syarat pembaharuan lesen

Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, dalam kenyataan dikeluarkan semalam, mengenakan dua syarat untuk pembaharuan lesen Lynas Advanced Materials Plant (LAMP), antaranya menghantar sisa mengandungi bahan radioaktif keluar dari negara ini.

Fuziah yang juga Timbalan Menteri Di Jabatan Perdana Menteri (Agama) turut menegaskan pendirian kerajaan Pakatan Harapan (PH) adalah jelas untuk tidak membenarkan Lynas menjadikan rakyat di negara ini sebagai tikus makmal.

"Tanah air kita yang indah tidak harus dijadikan medan percubaan Lynas untuk menguji produk sampingan yang tercemar. "Ini adalah langkah permulaan yang baik untuk memastikan Lynas mengambil langkah proaktif bagi membersihkan sisanya secara berterusan...kita perlu memerhatikannya," katanya.

Fuziah berkata, sebuah syarikat yang bertanggungjawab tidak akan membiarkan jumlah sisanya terkumpul begitu banyak seperti yang dilakukan oleh Lynas.

LAMPIRAN 5  
KOSMO! (ISU): MUKA SURAT 26  
TARIKH: 5 DISEMBER 2018 (RABU)

# Waspada hadapi musim tengkujuh

JIKA negara empat musim merayakan kedatangan musim bunga, luruh, sejuk dan panas, negara kita pula mempunyai musim tersendiri iaitu musim tengkujuh yang lebih sinonim dengan bencana banjir. Kebiasaannya, musim tengkujuh berlaku pada penghujung tahun akibat penurunan hujan yang lebih banyak berbanding biasa. Malah, ramalan **Jabatan Meteorologi** menunjukkan, sepanjang minggu ini yang juga merupakan hujung tahun akan berlaku penurunan hujan di kebanyakan tempat di seluruh negara.

Bagi menghadapi musim tengkujuh pula, kebanyakan jabatan dan agensi kerajaan seperti Jabatan Bomba dan Penyelamat Malaysia (JBPM), Polis Diraja Malaysia (PDRM), Angkatan Tentera Malaysia (ATM), Angkatan Pertahanan Awam Malaysia (APM) dan pihak-pihak lain sudah bersiap siaga bukan sahaja dari segi fizikal dan mental, malah kelengkapan dan aset yang sesuai digunakan ketika menghadapi banjir.

Pengerusi Pusat Sains Bumi dan Alam Sekitar dari Fakulti Sains dan Teknologi di Universiti Kebangsaan Malaysia (UKM), **Prof. Fredolin Tangang** berkata, Malaysia berada di kawasan yang dipengaruhi oleh sistem monsun Asian-Australia. Perubahan musim sejuk dan panas di Hemisfera Utara menyebabkan perbezaan tekanan udara di benua Australia dan di kawasan Siberia. Ini menajana tiupan Monsun Timur Laut dan juga Monsun Barat Daya.

Beliau menjelaskan, setiap tahun dari penghujung Oktober atau awal November hingga Februari tahun berikutnya, Malaysia akan mengalami musim Monsun Timur Laut.

Pada ketika ini tiupan angin timur laut dan juga luluran sejuk membawa lembapan ke kawasan Malaysia. Ini menjadikan kawasan Semenanjung Malaysia terutamanya negeri-negeri di Pantai Timur akan mengalami curahan hujan yang tinggi.

Bagaimanapun, mengikut kajian yang dijalankan bersama kumpulan penyelidik di UKM mendapati, beberapa faktor boleh mempengaruhi berlakunya cuaca ekstrem dengan yang utama adalah berpunca daripada kewujudan lembapan



FREDOLIN

MOHAMMAD  
HAMDAN

IBU bapa perlu mengawasi keselamatan anak-anak terutama ketika musim banjir.  
- Gambar hiasan



ORANG ramai dinasihatkan untuk mengikut arahan sekiranya diarahkan berpindah pada musim banjir ini. - Gambar hiasan

tinggi yang menajana sistem perolakan yang kuat.

"Semasa musim Monsun Timur Laut, tiupan angin kencang akibat pengukuhan sistem tekanan tinggi yang berpusat di Siberia akan mengangkut kelembapan udara di atas Laut China Selatan menuju ke arah Semenanjung Malaysia hingga menyebabkan perolakan yang kuat berlaku," katanya ketika dihubungi menerusi e-mel semalam.

Seiring dengan pergerakan palung monsun ke arah selatan, beliau berkata, kebarangkalian berlakunya banjir adalah tinggi di bahagian utara pada awal monsun dan sebaliknya, di bahagian selatan pada Januari.

## Salur maklumat

Sementara itu, **Ketua Pengarah JBPM, Datuk Mohammad Hamdan Wahid** menasihati orang ramai terutamanya mereka yang tinggal di kawasan berisiko seperti di tempat bercerun agar sentiasa berwaspada.

Malah, nasihat yang sama turut diberikan kepada mereka yang merancang untuk keluar bercuti bersama keluarga pada waktu cuti sekolah ini agar mengelak daripada mengunjungi kawasan yang berisiko tinggi.

"Kita juga mahu ketua masyarakat dan orang ramai untuk membantu agensi-agensi kecemasan termasuk menyalurkan

maklumat sekiranya berlaku perubahan paras air dan limpahan hujan di kawasan masing-masing," katanya ketika dihubungi *Kosmo!* kelmarin.

Sebagai langkah bersedia, beliau menambah, semua cuti rehat kakitangan operasi JBPM di negeri-negeri seluruh negara sudah dibekukan terutamanya mereka yang bertugas di negeri-negeri Pantai Timur seperti Pahang, Terengganu dan Kelantan serta di sebelah utara iaitu Kedah dan Pulau Pinang.

Katanya, pada masa sama, anggotanya juga bersiap siaga memastikan lokasi berisiko di Pantai Barat dan Selatan serta Sabah dan Sarawak diberi perhatian sehingga awal tahun 2019.

"JBPM turut bersedia dari segi logistik apabila menyediakan lebih kurang 450 unit logistik terdiri daripada peralatan marin dan pengangkutan pemindahan seperti lori dan bot amfibia selain memastikan pangkalan udara di Miri, Subang dan Bertam dalam keadaan berjaga-jaga."

"Semua 16 pusat gerakan operasi (PGO) banjir negeri-negeri dan pusat pengurusan operasi utama di Putrajaya juga sudah dibuka dan diletakkan pegawai kanan untuk bertugas pada setiap syif," ujarnya.

JBPM turut bekerjasama dengan **Jabatan Meteorologi** dan Agensi Pengurusan Bencana Negara (Nadma) dalam menjalankan tugas sepanjang tempoh berjaga-jaga itu.

## LAMPIRAN 6

### UTUSAN MALAYSIA (MEGA SAINS): MUKA SURAT 32

#### TARIKH: 5 DISEMBER 2018 (RABU)



ISNARAISAH Munirah Majlis (tengah) menyempurnakan majlis Latihan dan Pemindahan Teknologi Bagi Penghasilan Benih Kultur Tisu Rumpai Laut di Serdang baru-baru ini.

# Teknologi kultur tisurumpai laut tingkatkan hasil

**S**EKIAN lama rumpai laut dianggap *super food* Malaysia berikutan kandungan nutrisinya yang tinggi dan pelbagai khasiat terhadap kesihatan fizikal dan penjagaan kulit.

Industri ini mempunyai potensi yang besar untuk dimajukan dan dikembangkan kerana serbuk dan karaginan daripada rumpai laut mempunyai aplikasi yang luas dalam industri pemprosesan makanan dan minuman, kosmetik serta farmaseutikal.

Bukan itu sahaja, jika diusahakan dengan gigih serta mengaplikasikan kelebihan teknologi, industri ini dilihat mampu memberikan pulangan lumayan kepada pengusahanya.

Peka dengan potensi itu, penyelidik dari Institut Bioteknologi Kebangsaan Malaysia (NIBM) memperkenalkan teknik penghasilan benih rumpai laut melalui teknologi kultur tisurumpai laut.

Pengarah Eksekutif ABI, Prof. Madya Dr. Norhan Mohd Salleh berkata, penyelidikan itu merupakan penyelesaian kepada permasalahan yang sering dihadapi pengusaha rumpai laut seperti kesukaran untuk mendapatkan bekalan benih secara konsisten, kemerosotan kualiti benih dan ancaman penyakit.

Hal ini kerana rumpai laut yang ditanam secara konvensional atau menggunakan teknik potongan menunjukkan penurunan kandungan

Oleh **INTAN SUHANA**  
intansuhanaomar@gmail.com

karaginan, kadar pertumbuhan dan daya rintang terhadap penyakit dan perubahan cuaca dari semasa ke semasa.

"Bagi mengatasi masalah itu, di bawah Kancangan Malaysia Kesembilan (RMK-9), ABI telah mengambil inisiatif membangunkan teknik penghasilan benih rumpai laut (*Kappaphycus alvarezii* var. *Tambalang*) melalui kaedah kultur tisurumpai laut."

"Berdasarkan pemerhatian dan kajian yang dijalankan, teknik tersebut berjaya menghasilkan kualiti rumpai laut yang lebih baik berbanding rumpai laut liar terutama dari aspek kadar pertumbuhan dan kandungan karaginan," katanya. Beliau berkata demikian pada majlis penyempurnaan Latihan dan Pemindahan Teknologi bagi Penghasilan Benih Kultur Tisu Rumpai Laut di Serdang, Selangor baru-baru ini.

Majlis tersebut disempurnakan oleh Timbalan Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim (MESTECC), Isnaraissa Munirah Majlis.

Yang turut hadir Timbalan Ketua Setiausaha MESTECC, Dr. Ramzah Dambul dan penyelidik Universiti Malaya yang juga pakar alga, Prof. Dr. Phang Siew Moi. Tambahnya, kesinambungan daripada kejayaan tersebut, ABI menerima pembiayaan

dana di bawah Projek RMK-11 bagi 2018 hingga 2019 melalui Program Pembangunan Mapan Benih Rumpai Laut Bagi Industri Akuakultur.

ABI juga bertanggungjawab memindahkan teknologi kultur tisurumpai laut ini kepada kakitangan Jabatan Perikanan dan Institut Penyelidikan Perikanan (FRI) di Langkawi.

"Program ini dilihat dapat melatih kakitangan Jabatan Perikanan khususnya FRI

Langkawi dan pengusaha-pengusaha rumpai laut tentang kaedah penghasilan benih, pembibakan, penanaman dan penjagaan benih di samping mempromosikan teknologi kultur tisurumpai laut kepada masyarakat, khususnya pengusaha industri rumpai laut," katanya.

Menerusi sesi latihan dan pemindahan teknologi yang berlangsung dari 30 Oktober hingga 31 Oktober 2018, peserta-peserta didedahkan dengan teori

dan kemahiran teknikal seperti kaedah pengadaptasian rumpai laut ke persekitaran makmal, penyediaan media, proses penghasilan benih kultur tisurumpai laut dan penyelenggaraannya.

Sementara itu, Isnaraissa berkata, Kementerian Sentiasa komited dan memberi sokongan padu terhadap segala usaha yang dijalankan oleh NIBM yang merupakan salah satu agensi pelaksana dasar.

Katanya, rumpai laut

**INDUSTRI** rumpai laut mampu menjana keuntungan terutama bagi membantu meningkatkan pendapatan masyarakat luar bandar. - Gambar hiasan.

merupakan tumbuhan yang mempunyai pelbagai khasiat dan manfaat dalam aspek kesihatan manusia.

"Saya turut dimaklumkan bahawa pasaran global rumpai laut makin meningkat dari tahun ke tahun dan dijangka lebih RM1 bilion pada 2024," katanya.

Berdasarkan data yang diperoleh dari Jabatan Perikanan, Malaysia menyasarkan penghasilan 150 ribu tan metrik rumpai laut menjelang 2020.

"Saya yakin, melalui inisiatif baru NIBM yang mengetengahkan teknik penghasilan benih rumpai laut menggunakan kultur tisurumpai laut, komuniti pengusaha rumpai laut akan dapat meningkatkan margin keuntungan mereka" ujarnya.

Penyelidikan itu merupakan penyelesaian kepada permasalahan yang sering dihadapi oleh pengusaha rumpai laut seperti kesukaran untuk mendapatkan bekalan benih rumpai laut secara konsisten, kemerosotan kualiti benih dan ancaman penyakit."



ISNARAISAH (dua dari kanan) tertarik dengan kultur tisurumpai laut selepas merasmikan Latihan dan Pemindahan Teknologi Bagi Penghasilan Benih Kultur Tisu Rumpai Laut di Serdang baru-baru ini. Turut kelihatan (dari kiri) Dr. Phang Siew Moi, Dr. Norhan Mohd. Salleh dan Dr. Ramzah Dambul.

LAMPIRAN 7  
THE SUN (NEWS WITHOUT BORDERS): MUKA SURAT 4  
TARIKH: 5 DISEMBER 2018 (RABU)

## Straws only on request starting next year

■ BY AMAR SHAH MOHSEN  
*newsdesk@thesundaily.com*

**SHAH ALAM:** Plastic straws will no longer be given to consumers in eateries in Selangor beginning next year, and will only be provided upon request.

State Environment, Green Technology and Consumer Committee chairman Hee Loy Sian said this was among the Selangor government's efforts to reduce the use of plastics in the state, following its previous move to charge 20 sen for each plastic bags given to consumers at retail outlets.

While there are no plans to charge consumers for plastic straws, the state might eventually impose a fee some time in future.

"From next year, plastic straws will not be given automatically, but upon request from customers. Restaurants will also no longer place the straws on their counters.

"If you want a straw, you will have to ask for it. But we won't charge for them, we just won't be giving them (as usual). Which is

why we are encouraging people to bring their own stainless steel straws," he told the state legislative assembly yesterday.

"But in future, we will campaign more aggressively, where eventually, we will compound or charge those who use plastic straws," he added.

Hee was responding to questions from Leong Tuck Chee (PH-Pandamaran) and Shatiri Mansor (PH-Kota Damansara) on whether the state government intends to charge consumers for the use of plastic straws.

On a separate question on whether Selangor has any plans to ban the use of plastic bags altogether in the state, Hee said the move would be implemented by 2030, in line with Malaysia's Roadmap Towards Zero Single-Use Plastic 2018-2030.

He said while the plan was to initially implement it by 2025, it was impossible to do so as long as the state government is unable to find alternatives that can be produced in large volumes and cost as low as plastic bags.

LAMPIRAN 8  
THE STAR (NEWS): MUKA SURAT 6  
TARIKH: 5 DISEMBER 2018 (RABU)

## Use less plastic to save environs, says exco man

By ILI AQILAH

iliaqilah@thestar.com.my

PEOPLE need to change their mindset and use less plastic to preserve the environment, said Perak Environment Committee chairman Dr Abdul Aziz Bari.

Shoppers, he said, should bring their own grocery bags and food containers to reduce the usage of plastic.

"The state also hopes that factories will use cleaner technology to reduce pollution that contributes to global warming," he said after opening the state-level Environmental Day at Aeon Klebang Mall.

Dr Abdul Aziz also said more Malaysians should recycle their rubbish.

On proposals to ban plastic straws, Dr Abdul Aziz said they would need to discuss the matter with the local councils and small-scale businesses first.

"We need to ensure the ban will not adversely affect small vendors.

"Any decision should be business-friendly too," he said.

Federal Territories Ministry secretary-general Datuk Seri Adnan Mohd Ikhsan earlier announced that plastic straw would be banned in Kuala Lumpur, Putrajaya and Labuan from Jan 1 next year.

He said this would be a requirement to issue business licences next year, while the full enforcement will start Jan 1, 2020.



Dr Abdul Aziz Bari (second right) disposing of electrical items during the Environment Day celebration held by the Perak Environment Department.

LAMPIRAN 9  
THE STAR (NEWS MUKA SURAT 6  
TARIKH: 5 DISEMBER 2018 (RABU)

# Meeting no-plastic bag target earlier

Selangor govt hopes to implement move five years before 2030 deadline

THE Selangor government aims for a total ban of plastic bags by 2030, says Environment, Green Technology, Consumer, and Non-Islamic Affairs Committee chairman Hee Loy Sian.

He said this was in line with Phase 1 of the Federal Government's Roadmap Towards Zero Single-use Plastics 2018-2030 that was launched in October.

Though the target was 2030, Hee said the state hoped to implement the move five years earlier.

He said this in response to Elizabeth Wong's (PH-Bukit Lanjan) query on whether the move could be implemented earlier.

Hee agreed that 11 years was a long period but said time was needed for suppliers to come up with alternatives to replace plastic bags.

"There have been suggestions such as



paper, biodegradable or recyclable bags, but if we are not prepared, then plastic bags will still be people's first choice," he said.

Hee added that the state government would also implement a no-straw policy next

The Selangor government would also implement a no-straw policy next year but there will be no charges for those who ask for plastic straws.



Hee Loy Sian

year but there would be no extra charges for those who ask for plastic straws.

He encouraged people to bring their own stainless steel straws instead of using plastic straws.

Hee also said that the state would look into Wong Siew Ki's (PH-Balakong) suggestion to reward restaurants that provide stainless steel straws to customers.

"This is something we can look at. It has been implemented overseas but we will have to discuss with the local councils first," he said.

LAMPIRAN 10  
NEWS STRAITS TIMES (OPINION): MUKA SURAT 14  
TARIKH: 5 DISEMBER 2018 (RABU)

# PROTECTING OUR MANGROVES AND COASTAL WETLANDS

A waste disposal and management system must be implemented to control plastic litter and marine pollution from affecting mangroves and coastal habitats, writes **DR A. ALDRIE AMIR**

**T**HE prospect of the environment is looking great for Malaysia with the recent announcement by the government during the mid-term review of the 11th Malaysia Plan.

In the review, primary focus was given on environmental sustainability (Thrust 5) to be strategised through:

**ENHANCEMENT** of governance system;

**CONSERVATION** of habitats and natural resources; and,

**MITIGATING** impacts and risks of climate change and disasters.

All targets and strategies have been aligned to the United Nations' Sustainable Development Goals, and one of the key new targets announced was the introduction of a new environmental protection law to give more teeth to enforcers and pool resources across agencies. We've never actually had any powerful law to protect the environment and natural resources in a holistic integrated manner. There are existing piecemeal laws and regulations, but with too many gaps and loopholes in the enforcement.

Due to the lack in integrated legal protection, the most affected (and neglected) habitats and ecosystems are our wetlands – both on the terrestrial and coastal zones. This is clearly reflected in the quality of our rivers, lakes and peat swamps, as well as the declining state of our mangroves, seagrasses and other coastal and marine wetlands.

The key impacts on our wetlands were driven by land-use change, and the polluting effluence that came mainly from agriculture, mining, logging, industry and urban developments. All of these mentioned activities and drivers were monitored, controlled and enforced by different departments or agencies with a different set of legal tools and

priorities. Thus, holistic conservation objectives were hard to achieve.

Naturally, mangroves and all other wetlands play an important function as kidneys in the natural landscapes. Mangroves, in particular, are able to filter nutrient and sediment transported from the upstream through the rivers and channels before being flushed into the sea. They also act as a sponge to absorb water that otherwise, in excess, would cause floods. These are the key ecological points that need to be understood by managers when tackling coastal land-use and municipality issues.

The occurrence of mangroves in the intertidal zones is significant to minimise the impacts from tides, waves and winds to the land. The tall, dense and steady trees of the forested coastal wetlands naturally form a barrier or a buffer to protect coastal villages and communities, in addition to providing other vital ecosystem services.

There are minimum requirements for mangroves as an ecosystem to perform these various functions, and there are also limits from disturbances that mangroves can tolerate, and this is the classic negligence – a complicating scenario induced by human interference on the natural systems. The impacts from anthropogenic disturbances usually exceed the threshold limits implicating not only the ecosystem, but also the surrounding landscapes and communities. Compounding effects from anthropogenic disturbances with extreme disasters would cause the impacts to be amplified.

Marine debris (particularly plastic litter) is an essential example of an issue to be tackled by this proposed comprehensive environmental law.

During my recent field trips to various mangrove forests and is-



Marine litter in a mangrove forest along Sungai Kelang. PIC COURTESY OF WRITER

lands on the west coast of Peninsular Malaysia, there were sightings of plastic litter in the mangroves and on the shores throughout the coast. Accumulated plastic litter can have major negative consequences on mangroves. For instance, they occupy ground space and create unnecessary competition – deterring seedlings to establish and grow, while suffocating and choking the faunal organisms. Plastic litter also affect tidal flushing, causing stress on the ecosystem with increased salinity and chemical deposits.

Furthermore, plastic litter could also promote the spread of mosquito- and other pest- and water-related diseases, among others.

Marine debris issue is, of course, not a simple one to resolve as it involves trans-boundary movement of litter, but locally, poor management of solid waste especially in coastal villages and towns is found to be the prominent root cause. Some fishing villages are not equipped with a proper refuse centre and a proper waste collection system, while some are without a proper sewerage system.

Many mangrove forests are still perceived as the most convenient dumping sites, while some mangrove estuaries are suppressed by the impacts of leachate and overflow garbage from the nearby illegal landfills.

It is crucial to note that coastal villages are directly affected by

the daily flood and ebb tides. Critically, during spring tides (new moon and full moon), all low lying villages are flooded and the tides will wash away unmanaged litter when ebbing, and contribute further to the marine debris issue.

Therefore, a proper waste disposal and management system must be implemented and enforced especially in coastal villages and islands to control plastic litter and marine pollution from affecting the mangroves and other marine and coastal habitats.

A good governance system with comprehensive measures and actions involving various authorities and stakeholders must be carried out to address cross-sectoral environmental issues, like the impacts of marine debris on mangroves and other coastal wetlands. These measures and actions should be laid out as clearly as possible in the desired environmental protection law with hefty penalties to be imposed on any offense.

This proposed act offers a ray of light for total environmental protection in Malaysia, and it is very much hoped that it would soon materialise.

The writer is senior lecturer and research fellow at the Institute for Environment and Development, Universiti Kebangsaan Malaysia. He is also the coordinator of My-Mangrove, the Malaysian Mangrove Research Alliance and Network

**During my recent field trips to various mangrove forests and islands on the west coast of Peninsular Malaysia, there were sightings of plastic litter in the mangroves and on the shores throughout the coast.**

**LAMPIRAN 11**  
**THE STAR (WORLD): MUKA SURAT 35**  
**TARIKH: 5 DISEMBER 2018 (RABU)**

## **Thailand takes action against single-use plastic bags**

**BANGKOK:** Thailand's Ministry of Natural Resources and Environment called on people nationwide to refrain from using single-use plastic bags to mark the Thai Environment Day, which was observed yesterday.

Convenience stores and shopping malls have also agreed to tuck away single-use plastic bags to shoppers on the Environment Day, according to the ministry.

"The Ministry of Natural Resources and Environment has signed memorandum of understanding (MoU) with major operators of convenience stores and shopping malls to reduce the use of single-use plastic bags on Tuesday (yesterday) as the launch date for the campaign," according to a statement of the ministry.

Hospitals are also being asked to dispense medicine in cloth bags rather than plastic bags.

After the plastic bag-free day on Dec 4, all stores and malls will work out their own measures to reduce the use of plastic bags, such as designating a day or a few days of a week that no plastic bags will be provided to shoppers.

Earlier, several Thai universities have launched their own campaigns by asking convenience stores on campus to stop providing single-use plastic bags to shoppers and urging them to bring their own cloth bags to carry goods with incentives provided.

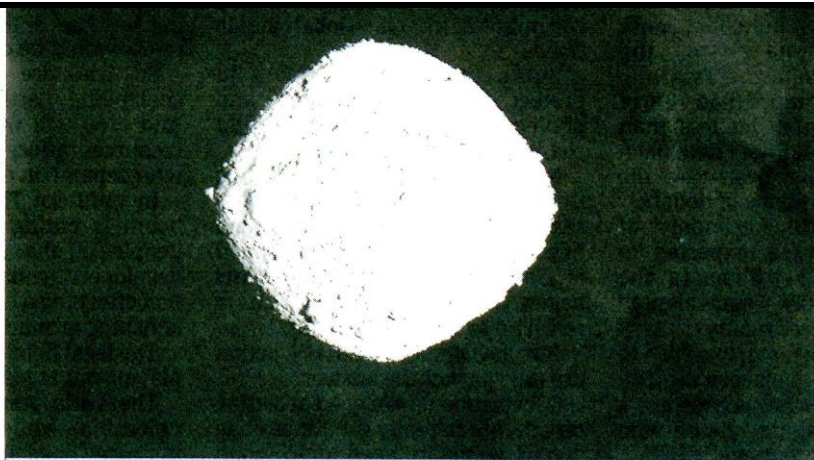
Cloth bags are also available at stores to be loaned to shoppers for their convenience.

The Marine National Park Operation Centre disclosed last month that the centre has recorded more than 25 deaths of sea turtles on the northern Andaman coast, due to the problems of plastic pollution in the sea.

Thai Environment Day has been observed annually since 1991, but constant reports of plastic wastes in sea leading to deaths of marine animals have triggered state agencies to introduce measures to wean consumers off plastic bags.

— Xinhua

LAMPIRAN 12  
THE STAR (WORLD): MUKA SURAT 34  
TARIKH: 5 DISEMBER 2018 (RABU)



**Space wonder:** An image taken by the PolyCam camera shows Bennu at 300 pixels and has been stretched to increase contrast between highlights and shadows. — AP

## Nasa spacecraft arrives at ancient asteroid after two years

**CAPE CANAVERAL:** After a two-year chase, a Nasa spacecraft arrived at the ancient asteroid Bennu, its first visitor in billions of years.

The robotic explorer Osiris-Rex pulled within 19km of the diamond-shaped space rock.

It will get even closer in the days ahead and go into orbit around Bennu on Dec 31. No spacecraft has ever orbited such a small cosmic body.

It is the first US attempt to gather asteroid samples for return to Earth, something only Japan has accomplished so far.

Flight controllers applauded and exchanged high-fives once confirmation came through that Osiris-Rex made it to Bennu – exactly one week after Nasa landed a spacecraft on Mars.

“Relieved, proud, and anxious to start exploring!” tweeted lead scientist Dante Lauretta of the University of Arizona. “To Bennu and back!”

With Bennu some 122 million kilometres away, it took seven minutes for word to get from the spacecraft to flight controllers at Lockheed Martin in Littleton, Colorado. The company built the spacecraft there.

Bennu is estimated to be just over 500m across. Researchers will provide a more precise description at a scientific meeting next Monday in Washington.

About the size of an SUV, the spacecraft will shadow the asteroid for a year, before scooping up some gravel for return to Earth in 2023.

Scientists are eager to study material from a carbon-rich asteroid like dark Bennu, which could hold evidence dating back to the beginning of our solar system 4.5 billion years ago. As such, it’s an astronomical time capsule.

A Japanese spacecraft, meanwhile, has been hanging out at another near-Earth asteroid since June, also for samples.

It is Japan’s second asteroid mission. This latest rock is named Ryugu and about double the size of Bennu.

Ryugu’s specks should be here by December 2020, but will be far less than Osiris-Rex’s promised booty.

Osiris-Rex aims to collect at least 60g of dust and gravel. The spacecraft won’t land, but rather use a 3m mechanical arm in 2020 to momentarily touch down and vacuum up particles.

The sample container would break loose and head towards Earth in 2021.

The collection – parachuting down to Utah – would represent the biggest cosmic haul since the Apollo astronauts hand-delivered moon rocks to Earth in the late 1960s and early 1970s. — AP

**LAMPIRAN 13**  
**NEWS STRAIT TIMES (WORLD): MUKA SURAT 79**  
**TARIKH: 5 DISEMBER 2018 (RABU)**

**UNUSUAL PAYLOAD**

## SpaceX launches 64 satellites at once

**WASHINGTON, DC:** SpaceX launched its Falcon 9 rocket on Monday, sending an unusual payload into space — 64 satellites at the same time, a United States record.

And the company headed by US tech billionaire Elon Musk marked another milestone in its bid to make rockets more re-usable, like airplanes: the blast-off used a recycled booster for the third time.

California-based SpaceX has landed more than 30 of these boosters back on Earth, and has begun re-using them on subsequent missions.

In the past, companies have typically allowed rocket parts



*The Falcon 9 rocket lifting off at Vandenberg Air Force Base in California on Monday. EPA PIC*

costing many millions of dollars to fall like junk into the ocean.

Monday's landing of the first stage was flawless, like many before it.

The launch was chartered by a company called Spaceflight, which specialises in space "rideshares", or putting multiple satellites on the same rocket.

Microsatellites weigh a few dozen kilogrammes and CubeSats are even smaller. **AFP**

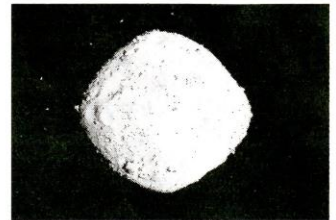
**POTENTIAL THREAT**

## Nasa deep space probe reaches asteroid Bennu

**WASHINGTON, DC:** The National Aeronautics and Space Administration's (Nasa) deep space explorer Osiris-Rex flew on Monday to within a dozen miles of its destination, a skyscraper-sized asteroid believed to hold organic compounds fundamental to life as well as the potential to collide with Earth in about 150 years.

Launched in September 2016, Osiris-Rex embarked on Nasa's unprecedented seven-year mission to conduct a survey of the asteroid Bennu, collect a sample from its surface and return that material to Earth for study.

Scientists believe that asteroids and comets crashing into early Earth delivered organic compounds and water that seeded the planet for life, and analysis of samples from Bennu could



*A view of the asteroid Bennu from a distance of 136km from Nasa's Osiris-Rex spacecraft. AFP PIC*

help prove that theory.

Scientists also estimate there is a one-in-2,700 chance of the asteroid slamming catastrophically into Earth 166 years from now. That probability ranks Bennu No. 2 on Nasa's catalogue of 72 near-Earth objects potentially capable of hitting the planet. **Reuters**

**LAMPIRAN 14**  
**UTUSAN MALAYSIA (LUAR NEGARA): MUKA SURAT 50 & 51**  
**TARIKH: 5 DISEMBER 2018 (RABU)**

## Spacex lancar 64 satelit serentak

WASHINGTON 4 Dis. - Syarikat aeroangkasa Amerika Syarikat (AS), SpaceX melancarkan roket Falcon 9 semalam dengan membawa sebanyak 64 satelit ke angkasa, terbanyak dalam sejarah negara ini. Malah, syarikat yang diketuai bilionair teknologi AS, Elon Musk itu turut mencatatkan satu lagi rekod baharu dalam usahanya membolehkan lebih banyak

roket digunakan semula seperti pesawat selepas menggunakan roket penggalak kitar semula buat kali ketiga.

Syarikat berpangkalan di California itu telah mendaratkan lebih daripada 30 roket penggalak kembali ke Bumi dan mengitar semula enjin berkenaan untuk misi mereka seterusnya.

Sebelum ini, kebanyakan

syarikat membenarkan bahagian badan roket yang menelan kos jutaan ringgit jatuh semula ke laut seperti sampah.

Pendaratan peringkat pertama roket itu, semalam berjalan lancar seperti misi sebelum ini.

Beberapa minit selepas dilancarkan, bahagian paling tinggi roket berwarna putih yang diketahui sebagai peringkat pertama dipisahkan

daripada peringkat kedua.

Raket penggalak itu kemudiannya melancarkan enjinnya dan membuat pendaratan yang dikendalikan secara menegak pada sebuah platform di Lautan Pasifik.

Pada masa sama, bahagian kedua roket terus memasuki ruang angkasa membawa 15 satelit mikro dan 49 CubeSats milik 34 pelanggan berbeza termasuk dari universiti awam dan swasta dari 17

negara berlainan antaranya Korea Selatan, Perancis dan Kazakhstan.

Pelancaran itu disewa oleh sebuah syarikat bernama Spaceflight, yang mempunyai kepakaran dalam membawa pelbagai jenis satelit pada roket yang sama.

Satelit mikro seberat beberapa kilogram manakala Cubesats jauh lebih kecil akan akan beroperasi dalam masa terdekat. - AFP



ROKET Falcon 9 membawa 64 satelit dilancarkan dari Pangkalan Tentera Udara Vandenberg, California kelmarin. - AGENSI

LAMPIRAN 15  
NEWS STRAIT TIMES (EDUCATION): MUKA SURAT 78  
TARIKH: 5 DISEMBER 2018 (RABU)

# U.N. CLIMATE SUMMIT KICKS OFF

At-risk nations plead for 'justice',  
G20 nations notably absent at COP24

KATOWICE (Poland)

NATIONS facing imminent environmental disaster on Monday called on rich polluters to help them back from the brink, as the United Nations warned the world's plan to avoid climate catastrophe was "way off course".

From glaciers melting in Nepal to the rising seas threatening to engulf small island states, the world is already experiencing the damage lying in wait if global warming runs unchecked.

Nearly 200 nations gathered in Poland on Monday for the start of the COP24 summit, where they must agree on a universal rule-book to make good on the promises they made in the 2015 Paris climate deal.

"Nepal is a country comprising mountains and plains," president Bidhya Devi Bhandari said.

"We have been bearing the brunt of disproportionate impact

of climate change despite being a low carbon-emitting country."

The Paris agreement vowed to limit global temperature rises to under 2°C and to the safer cap of 1.5°C if possible.

For this, richer nations must provide funding — US\$100 billion (RM413 billion) per year by 2020 — to steer developing countries towards greener energy while drastically drawing down their own emissions.

But developing nations have complained that richer states — responsible for the vast majority of historic fossil fuel use — aren't doing enough to help them adapt to our warming planet.

"We feel as if we have been penalised for the mistakes we never made," said Bhandari.

"It is incumbent on the international community to ensure that justice is done."

Trust in the Paris process has been hit by United States President Donald Trump's decision to



United Nations Secretary-General Antonio Guterres delivering his speech at the opening of the COP24 summit on climate change in Katowice, Poland, on Monday. AFP PIC

renege on his country's commitment, and there are fears the political will to act is waning as negotiations drag on.

Not a single G20 nation sent a top-level representative to the COP on Monday.

With just 1°C of warming so far, Earth is already being subjected to raging forest fires, flooding

and superstorms made worse by rising seas.

A string of UN reports have sounded the alarm: levels of carbon dioxide in our atmosphere are the highest in three million years and the last four years were the hottest in history.

UN Secretary-General Antonio Guterres warned nations that

their plan to chart a route away from runaway global warming was "way off course".

"Even as we witness devastating climate impacts causing havoc across the world, we are still not doing enough, nor moving fast enough, to prevent irreversible and catastrophic climate disruption," Guterres said. **AFP**