

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

| Bil | Berita                                                                                       | Media                 | Capaian Berita Penuh   |
|-----|----------------------------------------------------------------------------------------------|-----------------------|------------------------|
| 1.  | <a href="#"><u>Renewable energy sector will deliver more jobs, investments, says Yeo</u></a> | The Malaysian Insight | Klik pada tajuk berita |
| 2.  | <b><u>Small actions can have big impact</u></b>                                              | The Sun               | Rujuk Lampiran 1       |
| 3.  | <a href="#"><u>Forest protection is Malaysia's climate ace card</u></a>                      | Malaysiakini          | Klik pada tajuk berita |
| 4.  | <b><u>Something fishy</u></b>                                                                | The Star              | Rujuk Lampiran 2       |
| 5.  | <b><u>Pollutant-absorbing plants to clean up Sungai Rui</u></b>                              | The Star              | Rujuk Lampiran 3       |
| 6.  | <a href="#"><u>Environmentallists, NGOs want Lynas' licence suspended</u></a>                | Malaysian Reserved    | Klik pada tajuk berita |
| 7.  | <a href="#"><u>Henti segera korek pasir</u></a>                                              | Harian Metro          | Klik pada tajuk berita |
| 8.  | <a href="#"><u>Tulang manusia di Uniten milik wanita berusia 20 hingga 30 tahun</u></a>      | Sinar Harian          | Klik pada tajuk berita |
| 8.  | <b><u>Tulang besar dalam selimut</u></b>                                                     | Harian Metro          | Rujuk Lampiran 4       |
| 9.  | <a href="#"><u>KADA tubuh bilik gerakan khas tangani masalah kemarau</u></a>                 | Kosmo!                | Klik pada tajuk berita |
| 10. | <a href="#"><u>MDV raises RM270m from Islamic medium term notes issuance</u></a>             | Malaymail             | Klik pada tajuk berita |
|     |                                                                                              |                       |                        |

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|-----|-----------------------------------------------------------------------------------------------------------------------|----------------------|------------------------|
| 11. | <a href="#"><u>MDV raih RM270 juta daripada terbitan Nota Kewangan Islam Jangka Sederhana</u></a>                     | Utusan Malaysia      | Klik pada tajuk berita |
| 12. | <a href="#"><u>SMEs should tap RM517 mil soft loans from MIDF, MTDC</u></a>                                           | The Edge Markets     | Klik pada tajuk berita |
| 13. | <a href="#"><u>SMEs should tap RM517m soft loans from MIDF, MTDC</u></a>                                              | Malaymail            | Klik pada tajuk berita |
| 14. | <b><u>MTDC, MIDF meterai MoU</u></b>                                                                                  | Harian Metro         | Rujuk Lampiran 5       |
| 15. | <a href="#"><u>1,500 penduduk Gerik berisiko keracunan arsenik</u></a>                                                | Free Malaysia Today  | Klik pada tajuk berita |
| 16. | <a href="#"><u>LAP: Penutupan loji LRA Ayer Ganda dicemari arsernik berkuat kuasa</u></a>                             | Malaysiadateline.com | Klik pada tajuk berita |
| 17. | <a href="#"><u>Waste center</u></a>                                                                                   | Nanyang              | Klik pada tajuk berita |
| 18. | <a href="#"><u>Illegal garbage site</u></a>                                                                           | Penangchina.press    | Klik pada tajuk berita |
| 19. | <a href="#"><u>No respite for dumping ground</u></a>                                                                  | The Star             | Klik pada tajuk berita |
| 20. | <a href="#"><u>Drinking Shuangxi Leihe water suffering from cancer is not true</u></a>                                | Sin Chew             | Klik pada tajuk berita |
| 21. | <a href="#"><u>2 groups submit memo outside parliament building separately for anti-Lynas and supported Lynas</u></a> | Guang Ming Daily     | Klik pada tajuk berita |
| 22. | <a href="#"><u>wastewater polluted river has been ordered to close the factory</u></a>                                | Nanyang              | Klik pada tajuk berita |
| 23. | <a href="#"><u>Water is not to drink</u></a>                                                                          | China Press          | Klik pada tajuk berita |

## TEMPATAN

| Bil  | Berita                                                                             | Media              | Capaian Berita Penuh                         |
|------|------------------------------------------------------------------------------------|--------------------|----------------------------------------------|
| 24.. | <a href="#"><u>US\$1 billion investment made for Malaysia's first AI park</u></a>  | Borneo Post        | Klik pada tajuk berita                       |
| 25.  | <a href="#"><u>G3 Global partners Chinese firms in US\$1b AI park</u></a>          | The Edge           | Klik pada tajuk berita                       |
| 26.  | <a href="#"><u>Dr M: Third national car important for country</u></a>              | News Straits Times | Klik pada tajuk berita                       |
| 27.  | <a href="#"><u>Trading ideas: G3 Global, London Biscuits, MMHE</u></a>             | The Star           | Klik pada tajuk berita                       |
| 28.  | <a href="#"><u>Lynas visit can change views / Lynas visit can change views</u></a> | News Straits Times | Klik pada tajuk berita /<br>Rujuk Lampiran 6 |
| 29.  | <a href="#"><u>Dicemari arsenik, LRA Sungai Ganda diarah tutup</u></a>             | Berita Harian      | Klik pada tajuk berita                       |
| 30.  | <a href="#"><u>SPAN orders shutdown of Ayer Ganda water treatment plant</u></a>    | News Straits Times | Rujuk Lampiran 7                             |
| 31.  | <a href="#"><u>Islam meraikan evolusi teknologi</u></a>                            | Berita Harian      | Rujuk Lampiran 8                             |
| 32.  | <a href="#"><u>LEAF generasi kedua lebih padu</u></a>                              | Berita Harian      | Rujuk Lampiran 9                             |

## ANTARABANGSA

| Bil | Berita                                                               | Media              | Capaian Berita Penuh   |
|-----|----------------------------------------------------------------------|--------------------|------------------------|
| 33. | <a href="#"><u>Kapal angkasa Israel terhempas di Bulan</u></a>       | Utusan Malaysia    | Klik pada tajuk berita |
| 34. | <a href="#"><u>Nepal lancar operasi bersihkan Gunung Everest</u></a> | Sinar Harian       | Klik pada tajuk berita |
| 35. | <u>Ridding Space of old junk</u>                                     | News Straits Times | Rujuk Lampiran 10      |
| 36. | <u>UM part of black hole project</u>                                 | The Star           | Rujuk Lampiran 11      |

LAMPIRAN 1  
THE SUN (SPEAK UP): MUKA SURAT 9  
TARIKH: 12 APRIL 2019 (JUMAAT)

# SMALL ACTIONS CAN HAVE BIG IMPACT

**12 April 2019, Kuala Lumpur** - Tenaga Nasional Berhad is launching a campaign aiming to promote Energy Efficiency (EE) with the intention to remind and educate Malaysians on the significance of environmental sustainability through power saving. The larger purpose of the campaign is to steer the transformation towards a future energy ecosystem that delivers balance between environmental sustainability, secure and reliable energy supply and optimal economic development.

This message is especially important as we experience some of the highest temperatures that we have seen in the past years, in the last month. Prompting most of us to use more energy through usage of air conditioners or fans or coolers. Often leading to higher consumption.

"Given the increasing demand for energy at this time, and even globally, we believe more efficient energy usage is possible with change in energy consumption behavior which possibly necessitates a mindset shift", said Chief Corporate officer TNB, Datuk Wira Roslan Ab Rahman.

Disparity exists in the adoption of energy saving behavioral patterns amongst Malaysians and other parts of the world. Findings indicate that Malaysians are more apathetic towards the conservation of power. Malaysian scores pale in comparison certain Western countries like Norway, Switzerland and Sweden according to the World Economic Forum report, *Fostering Effective Energy Transition 2016*.

The study shows that mindfulness of energy efficiency and adoption of power conserving methods plus readiness for transition for secure, sustainable, affordable and reliable energy future is approximately 15% higher in these countries, allowing those economies to make strategic



energy investments committed towards environmental stewardship.

Current energy consumption patterns and associated environmental pressures have ignited the Malaysian government's concerns regarding energy conservation. Minister of Energy, Science, Technology, Environment and Climate Change, Yeo Bee Yin, highlighted that a regulatory framework, Energy Efficiency and Conservation Act (EECA) will be put in place to renew the National Energy Efficiency Action Plan, which is set out to achieve 8% energy efficiency by 2020.

In efforts to set the tone, the ministry committed to retrofit 50 government buildings with energy efficient LED lightings and high EEV (Energy Efficient Value) appliances. There is an expectation that this will lead to a savings of RM 47 billion over 15 years.

"We are at an interesting and important juncture of energy efficient evolution in the country. As the energy industry continues to evolve, TNB has become increasingly aware of the need to meet the global energy challenge and support the transition

towards a low-carbon economy. With TNB having the ability to play a significant role in much of the ongoing change, it takes upon itself the responsibility to balance this shift, although no single government, industry or institution can address the challenges alone", said Chief Strategy and Regulatory Officer TNB, Datuk Fazlur Rahman Zainuddin.

Having contributed to the nation's development, TNB's intention is to enhance its capabilities and stay abreast of the transition towards a low-carbon economy by promoting renewable energy generation, embracing new technologies throughout the operations and empowering customers to make better use of their power usage through energy efficiency.

"Energy is at the heart of modern economic prosperity. EE is believed to be the first leg of a sustainable global energy ecosystem, and as most things, this too begins at home.

"I believe it could be the first step towards mitigation of climate change, better energy security, growing green economies and delivering solid environmental benefits," he added.

While TNB stresses on the importance of energy efficiency to its 9.1 million customers, through the introduction of product innovations in energy technology like the smart meter, Maevi® and GSPARX® to Malaysian households, it recognizes these technologies as the first big step of empowering customers towards

the sustainable energy industry of the future, beyond instilling environmental consciousness into the minds of Malaysians.

The company also actively adopts efficient technologies and ensures that even the older plants are properly maintained and where possible, upgraded to maintain their efficiency.

As an example, the company decommissioned inefficient and ageing Combined Cycle Gas Turbine (CCGT) plants and replaced them with cutting-edge combined cycle gas turbine technologies enabling the plant to achieve generation efficiency of up to 60%.

Additionally, six of TNB's Distribution buildings were selected as models of energy efficient buildings in the country. Under the ASEAN Energy Awards, Wisma TNB Jalan Timur was awarded First-Runner up under the Energy Management for Buildings and Industries Awards in the Large Building Category, for demonstrating excellence, creativity, practicality and dedication in the field of energy efficiency. With this initiative, TNB managed to reduce up to 6% of energy consumption in the building.

Chief Corporate Officer TNB, Datuk Wira Roslan Ab Rahman said: "We believe it's the small steps that give us the eventual mileage. Sustainability lies at the core of all that we do and is embedded in our company policies and inextricably linked with our business strategy and decisions.

"Our mission is to continue contributing to the nation's development by providing Malaysia with safe, secure and reliable energy. Having said this, we anchor our operations on an identified strategy, embracing green initiatives throughout our business, from managing our own carbon footprint to providing clean energy products and services to customers."



LAMPIRAN 2  
THE STAR (NEWS): MUKA SURAT 4  
TARIKH: 12 APRIL 2019 (JUMAAT)

# Something fishy

Hundreds of tilapia killed after polluted water drains into retention pond in Klang

By EDWARD RAJENDRA  
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RESIDENTS in a gated community in Ambang Botanic 1, Klang, have been suffering from the stench and sight of hundreds of dead tilapia fish floating in a retention pond near their homes.

"There are dead fish rotting and a horrible stench permeates the area. Our residents have been facing this since April 4, after polluted water from the nearby commercial area drained into the retention pond," said Ambang Botanic 1 Residents Association committee member Datuk V. Lingam.

Lingam, 52, added that he had gone to check out a resident's complaint about dead fish all along the retention pond last week and was overpowered by a bad smell.

"I was shocked to see hundreds of dead fish floating in the pond and the water had turned dark greenish black. There was dark coloured water from two pipes that ran into the river

leading to the retention pond," he said.

Another resident Tee Song Thye, 57, said over the past six days, a breeze carried the stench of rotting fish to their homes.

"Every day workers scoop out the dead, rotting fish from the retention pond. Shallow holes are dug at various spots along the pond and the fish are buried to avoid the overpowering stench," he said.

Yesterday, at 12.30pm, *StarMetro* noticed dead fish floating in the discoloured water along the banks.

Datuk Thana Segaran, 53, and Simon Chong, 61, who are pioneer residents, said this was not the first time such an incident had occurred. It is the third since 2015.

"We had brought up this matter to the **Selangor Department of Environment, Klang** Municipal Council (MPK) and the current Sentosa assemblyman G. Gunaraj but to-date, the matter has not been resolved," said Chong.

Lingam urged the municipal council to



(From left) Lingam, Thana and Chong at the retention pond where water pollution has killed hundreds of fish. (Inset) The dead tilapia is being scooped out from the retention pond and buried in shallow graves. — Photos: K.K. SHAM/The Star



instal high-grade effluent filters for both water pipes that channel drain water from Bukit Tinggi commercial area into the retention pond inside the gated-and-guarded neighbourhood of Ambang Botanic.

"We want MPK to put in the high-grade effluent filter to treat wastewater before the water flows into the retention pond.

"Ours is a residential area and we want a good environment for all 1,900 people living in the 825 houses here," he said.

Thana said it was "disgusting to wake up and have our noses assailed by such bad smell that it makes us nauseous."

"Our families cannot even enjoy afternoon tea in the garden because of the smell.

"I want MPK to resolve this environmental issue and ensure it does not happen again," he said.

When contacted, MPK's Corporate Communications Department declined to comment on the issue.

LAMPIRAN 3  
THE STAR (NEWS): MUKA SURAT 4  
TARIKH: 12 APRIL 2019 (JUMAAT)

## Pollutant-absorbing plants to clean up Sungai Rui

By IVAN LOH  
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PLANTS may hold the key to helping clean up low levels of arsenic pollution in Sungai Rui, Hulu Perak.

A discussion is now ongoing between the Perak Forestry Department and Forest Research Institute Malaysia (FRIM) to search for plants that can absorb pollution.

Perak Menteri Besar Datuk Seri Ahmad Faizal Azumu said the task force that was set up to look into the polluted river issue had recommended the move in its bid to clean up the river.

He said it was one of its suggestions to rehabilitate idle mining areas near the river.

"We will execute it once the species of plant have been identified.

"For now, the state Department of Environment will continue to monitor the situation there," he said during a press conference at the state secretariat building.

"The task force will be informed of any



Recent checks showed low levels of arsenic in Sungai Rui. Villagers along the river have complained about skin problems which they believe are linked to the river contamination. (Right) Ahmad Faizal says the state Department of Environment will continue to monitor the situation at Sungai Rui.

further drop in river water quality," he added.

It was reported earlier this week that the state had found low amounts of arsenic in Sungai Rui.

State Environment Committee chairman Dr Abdul Aziz Bari, who called a press conference to highlight the matter, said there had been incidences of people getting skin cancer, believed to be related to the river water, but this was later refuted by Deputy Health Minister Dr Lee Boon Chye.

The villagers had complained of dead fish found floating in the river, with some folk linking their skin diseases to the pollution.

Ahmad Faizal earlier announced that all logging activities in Hulu Perak had been frozen until a conclusive report on the river pollution was obtained.

He said arsenic existed naturally in the ground in Hulu Perak, but 100 years of man-made activities could have caused it to seep into the river.

"The presence of arsenic in the river may have been caused by land clearing, mining activities, farming and erosion.

"Even though the pollution level is low, despite its murky and silted condition, we are serious in tackling this issue," he said.

"The freeze needs to be done, and we do it as we are responsible for the people."

Ahmad Faizal said, adding that the state expected to lose some RM30mil in revenue from the move.

When asked whether mining activities there would be stopped, Ahmad Faizal said the operations would continue.

He said the mining companies there were adhering to strict conditions to minimise pollution.

"They are required to provide reports on water quality and effluent analysis to our Mineral and GeoScience Department regularly," he said.

Ahmad Faizal said the state Health Department had checked and taken hair

samples from 300 people near Kampung Ayer Ganda in Hulu Perak.

He said of the 300, about 20 had skin conditions and that the samples had been sent to the Institute of Medical Research for analysis to check if there was any link to the polluted water.

"The report is expected to be ready by May or June.

"It is not certain that the water there can cause cancer. It could be from other sources," he said.

"This is why we kept the matter quiet and did not inform the public, as we did not want to cause panic.

"Until we get something conclusive, we will not announce anything," he added.

Meanwhile, the National Water Services Commission (SPAN) has announced that the Ayer Ganda, Gerik water treatment plant has been shut down as a precautionary measure due to the discovery of trace amounts of arsenic in the water.



LAMPIRAN 4  
HARIAN METRO (SETEMPAT): MUKA SURAT 4  
TARIKH: 12 APRIL 2019 (JUMAAT)



BARANGAN milik si mati yang ditemui di lokasi kejadian.

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#### Sepang

**P**olis mengesahkan tulang manusia yang ditemui dalam ladang getah terbiar di Universiti Tenaga Nasional (UNITEN) di Kampung Datuk Abu Bakar Baginda, kelmarin adalah wanita berusia 20 hingga 30 tahun.

Ketua Polis Daerah Sepang, Asisten Komisioner Abdul Aziz Ali ketika dihubungi berkata, pihaknya juga sudah menyerahkan DNA (asid deoksiribonukleik) kepada Jabatan Kimia untuk pemeriksaan dan pengesahan.

"Pada masa sama, kami juga akan mencari identiti mangsa menerusi pangka-

## Tulang besar dalam selimut

■ Juruukur terkejut temui rangka manusia dalam ladang getah terbiar

lan data laporan kes orang hilang," katanya.

Dalam kejadian jam 10 pagi itu, seorang juruukur yang sedang melakukan kerja pengukuran tanah di kawasan itu terkejut apabila menemui tulang manusia.

Turut ditemui selipar, pakaian, bantal selain beberapa tulang besar yang dibalut dengan selimut.

Selain itu, beberapa ba-

rangan lain turut ditemui di lokasi kejadian termasuk cincin, sehelai jaket berwarna gelap, gelang tangan, tali pengikat rambut, seluar dalam, baju dalam dan selimut.

Aziz sebelum ini mengesahkan mangsa dipercayai seorang wanita dan berkeungkinan mayat mangsa ditinggalkan di lokasi berkenaan setahun lalu.

Katanya, kes disiasat mengikut Seksyen 302 Kanun Keseksaan.

Orang ramai yang mempunyai maklumat berhubung kejadian boleh menyalurkannya dengan menghubungi Pegawai Penerimaan Kes ini, Asisten Superintendan Wan Azirul 0387774222 atau datang ke mana-mana balai polis berhampiran.



**LAMPIRAN 5**  
**HARIAN METRO (SETEMPAT): MUKA SURAT 37**  
**TARIKH: 12 APRIL 2019 (JUMAAT)**

**Kuala Lumpur**

**MTDC, MIDF meterai MoU**

Perbadanan Pembangunan Teknologi Malaysia (MTDC) dan Malaysian Industrial Development Finance Berhad (MIDF) memeterai perjanjian persefahaman (MoU) bagi menyediakan akses kewangan kira-kira RM517 juta kepada perusahaan kecil dan sederhana (PKS) yang menceburi revolusi Perindustrian Keempat (Industri 4.0).

Pengarah Urusan  
Kumpulan MIDF Datuk

Charon Mokhzani berkata, setakat 31 Mac 2019 MIDF meluluskan lebih kurang RM2.2 bilion pinjaman di bawah Skim Pinjaman Mudah bagi Automasi dan Modenisasi (SLSAM).

"SLSAM diperkenalkan pada tahun 2007 dan sudah memberi manfaat kepada 569 syarikat di seluruh Malaysia," katanya pada sidang media di majlis menandatangani MoU bersama MTDC di sini, semalam.

**LAMPIRAN 6**  
**NEWS STRAITS TIMES (LETTERS): MUKA SURAT 67**  
**TARIKH: 12 APRIL 2019 (JUMAAT)**

INDUSTRY 4.0

## LYNAS VISIT CAN CHANGE VIEWS

**P**OLICYMAKERS are harping on the need for countries to embrace the Fourth Industrial Revolution (4IR), or Industry 4.0, Malaysia included. A 4IR-centred economy is now shaping global business.

In Germany, the Fraunhofer Gesellschaft, a leading applied research network, recently celebrated 70 years of its establishment.

Its model of industry-centred research and development (R&D) has been hailed as the most effective in translating the findings of R&D into business.

No wonder Germany is recognised as a country that leads in technology. Its technological supremacy in the car industry, for example, is unchallenged.

Unlike Malaysia, the bulk of Germany's R&D funding is by federal and state governments. We need to increase our industry investment in R&D.

We have taken the first step in embracing this technology with the 4IR national blueprint, which

aims to motivate businesses to incorporate 4IR elements in their operations.

4IR is not just about automation and robotics, it is also about integrating all elements in business, allowing for a seamless flow of information and data.

It empowers the automation process and consequent deployment of robotics and artificial intelligence technologies to improve efficiency and boost productivity. Of the many elements that form the building blocks of 4IR, one common input is the rare earth metals.

Rare earth is critical in the production of supermagnets and sensors. This explains why China, the world's leading producer of rare earth, is convinced that rare earth would replace oil as the industry resource that's most in demand.

We are fortunate to have rare earth at our doorstep.

The misunderstanding about public safety associated with Lynas can be resolved if we are sincere.



*Lynas can be a game-changer in the nation's effort to build an industry around 4IR. FILE PIC*

For one, unlike the rare earth produced from tin waste we experienced earlier, the input material for Lynas is not waste. It is rare earth concentrate brought in from Australia.

Thorium and uranium, the main elements responsible for the radioactivity, have been removed in the concentrating process at mines in Australia.

This explains why the radiation level of the concentrates is low.

Such concentrate cannot be equated with tin tailings used in earlier rare earth extraction in Perak.

Lynas critics, please visit the plant in Gebeng.

None of the critics has accepted Lynas' invite to the plant. This is unfortunate. Making judgments without looking at its operation is unrealistic.

Experts who have visited the plant, a few of whom were critics,

have changed their stand after seeing the process firsthand.

A recent decision by the cabinet is more realistic, one which Lynas has complied with.

I believe Lynas can be a game-changer in our effort to build an industry around 4IR.

**PROFESSOR DATUK  
 DR AHMAD IBRAHIM**

Fellow, Asean Academy of Engineering and Technology, UCSI University

LAMPIRAN 7  
NEWS STRAITS TIMES (NEWS/NATION): MUKA SURAT 10  
TARIKH: 12 APRIL 2019 (JUMAAT)

## SPAN orders shutdown of Ayer Ganda water treatment plant

**KUALA LUMPUR:** Why was the Ayer Ganda water treatment plant in Gerik allowed to continue operations despite being told two months ago that arsenic pollution had been detected in the facility?

This was the question posed by the National Water Service Commission (SPAN) to the Perak Water Board (LAP), whose actions over the matter was deemed "irresponsible" given the danger it posed.

SPAN chairman Charles Santiago, in announcing an immediate directive to shut down the treatment plant, said the pollution was first detected by the Health Ministry on Jan 8.

He said on Jan 14, LAP was advised to address the issue, or failing that, to shut down the facility's operations.

It is learnt that LAP failed to upgrade the facility or find alternative water resources and allowed the treatment plant to con-

tinue operations.

Santiago said arsenic poisoning symptoms included skin rashes, and was especially dangerous for pregnant women.

"Arsenic poisoning is serious because you will not detect its effects now, but after two or five years, it can cause cancer."

"It is highly irresponsible for any water operator, after having known that there is a carcinogenic exposure (to consumers), to carry on operations. That is totally unacceptable," he told a media conference at the parliament lobby here yesterday.

Santiago said the plant, which produced 0.68 million litres of water daily, still had traces of ar-

senic pollution in February and last month.

"The Health Ministry detected arsenic pollution during the inspections in January. SPAN was subsequently informed of the matter."

"Following a discussion, we sent a letter to LAP voicing our concerns and suggested that they (among others) shut down the water treatment plant. But LAP had a different view."

"Last month, the Health Ministry stated that arsenic pollution remained present. We had no choice, but to instruct them to shut it down. Action was taken after more than a month."

"SPAN has sent a letter ordering them to shut down (the fa-

cility). No compromises. Although they (LAP) replied with a letter asking for flexibility, we did not accept it."

"We have discussed with the minister (Water, Land and Natural Resources Minister Dr Xavier Jayakumar) yesterday and he endorsed the decision to shut down the facility," said Santiago.

The cause of the pollution was said to be a 100-year-old mine, which released arsenic as a result of poor maintenance.

Santiago said the SPAN management committee had asked the Health Ministry to carry out a health assessment impact on all 312 consumer accounts involving 1,500 residents.

It has also asked the Agriculture and Agro-based Industries Ministry to check on riverine life, including the fish in Sungai Rui following arsenic pollution.

He said the water treatment

plant would cease operation until the water was safe for consumption. SPAN is now probing the issue on every aspect, including the possibility of negligence.

"This is the first (arsenic pollution). (If there's negligence) we can take serious action. We did not only tell them to shut it down, we also gave them suggestions to look for other resources, such as underground water."

"We will file charges against them (LAP) if there is a breach or oversight on their part."

Asked why LAP took more than two months to shut down the facility, Santiago replied: "You have to ask them. The SPAN enforcement team is already there carrying out detailed studies."

"But I want to issue a reminder here not to play around with people's health. We need to be serious in matters relating to water supply."



Charles Santiago



LAMPIRAN 8  
BERITA HARIAN (IBRAH): MUKA SURAT 69  
TARIKH: 12 APRIL 2019 (JUMAAT)

# Islam meraikan evolusi teknologi

Sejarawan dunia dan ulama tafsir, Imam al-Tabari yang menjelaskan peristiwa penuh bersejarah turunnya Nabi Adam AS dari syurga di bahagian awal karyanya, *Ta'rikh al-Rusul wal-Muluk* (Sejarah Rasul-rasul dan Raja-raja) meriwayatkan "andas, penyepit, batu asah dan tukul diturunkan bersama-sama Adam."

Apakah manusia berevolusi untuk menggunakan teknologi atau teknologi dievolusikan untuk kegunaan manusia? Peristiwa yang dibabadkan Imam al-Tabari menimbulkan keasalan teknologi; bagaimana manusia datang dari Tuhan, begitu juga teknologi sentiasa menemani manusia sepanjang sejarahnya. Apatah lagi, ia menekankan peranan Nabi Adam AS bukan hanya sekadar leluhur seluruh umat manusia, bahkan pembina tamadun pertama.

Teknologi berasal daripada perkataan Yunani, *tekhnnologia*. Menurut kamus Greek-English Lexicon, ia kajian (logia) berkenaan tekhné, suatu istilah yang merujuk kerja tangan manusia yang dikenali sebagai seni, kemahiran atau ketukangan.

Hakikat tekhné dibahaskan secara meluas dalam tradisi falsafah Yunani. Ahli falsafah Yunani mencirikan tekhné sebagai api ketuhanan seperti tukang yang bertindak sebagai suatu prinsip menguasai, serentak giat dan berdaya cipta. Zeno mengutarakan idea tekhné sebagai suatu sistem pemahaman.

Socrates membahagikan tekhné kepada dua jenis: pertama, mengguna pakai hanya sebahagian kecil kuasa berfikir namun menumpukan terutama kepada kerja berat dan kedua, mengguna pakai lebih banyak akal fikiran dalam helah bagi menyelesaikan masalah misalnya dalam matematik seperti kira-kira, logistik dan astronomi.

Dalam *Nichomachean Ethics*, Aristotle menyebutkan selain bertafakur dan berfikir dengan mendalam, iaitu jalan paling tinggi serta mulia untuk mencapai kebahagiaan, seseorang juga memperoleh kebahagiaan melalui kehidupan yang menekuni penat-lelah kehidupan bertukang.

Konsep yang dapat dibandingkan dengan 'membuat benda' dan 'kemahiran industri' terkait dalam tradisi keilmuan Islam ialah *sina'ah* seperti yang dirujuk dalam kamus Arab, *Mufradat fi Gharib al-Quran* oleh al-Raghib al-Isfahani dan *Lisan al-Arab* (Ibn Manzur).

Ibn Khaldun, sejarawan dan ahli falsafah Islam abad ke-15 yang mengkaji jatuh bangun peradaban Afrika Utara dan Andalusia, menyimpulkan dalam adikaryanya, *Muqaddimah* bahawa *sina'ah* sebagai seni pembuatan atau dikenali sebagai industri adalah hasil kebolehan akliyah manusia untuk memahami, menyusun dan menguasai pelbagai cabang ilmu dan sains.

Seperti sebahagian besar ahli metafizik Islam, Ibn Khaldun melihat alam tabi'i sebagai cip-

taan (kawn) oleh Tuhan yang dijadikan sebagai sumber bekalan untuk manusia yang juga sebahagian daripadanya untuk menjalani tempoh masa kehidupan yang ditentukan di dunia.

Agar manusia dapat menyempurnakan tugasnya sebagai khalifah yang dipertanggungjawabkan mengurus dan mentadbir bumi, Allah SWT menjadikan dalam diri manusia beberapa kekuatan (*quwwat*) yakni alat pertamanya dalam mendepani dunia luar yang dapat memastikan kelangsungan dan kemandirian hidup.

Kerangka tasawur atau pandangan Ibn Khaldun meletakkan *sina'ah* atau teknologi sebagai wajah penting peradaban. Oleh itu, kehilangannya mengisyaratkan tanda kejatuhan sesuatu tamadun. Kemajuan teknologi ialah kemajuan perbandaran, justeru suatu penanda aras yang boleh dipercayai dalam mengukur 'kesihatan' sesuatu peradaban.

Oleh itu, *sina'ah* dalam erti kata epistemologi ialah pengamalan kefahaman manusia dalam perlakuan mentadbir alam bersama-sama dengan kesedaran bahawa amal manusia sendiri adalah sebahagian daripada terzahirnya perlakuan berdaya cipta Tuhan yang berfirman: "Padahal Allah yang mencipta kamu dan benda-benda yang kamu buat itu!" (Al-Saffat :96)

Suatu tinjauan lebih dekat terhadap risalah alat gerak helah yang ditulis jurutera Muslim seperti Banu Musa dan al-Jazari mendedahkan penggunaan meluas pernyataan

insya-Allah (dengan izin Allah).

Pernyataan sedemikian adalah pengiktirafan bahawa sejauh mana andaian dalam pembuktian sains dan matematik, keajaiban dan perkara tidak terjangka tetap berlaku di luar kawalan manusia yang kekal menakutkan dan mempesonakan; setiap benda atau peristiwa berlaku menurut tabiat ditetapkan al-Khaliq Maha Berkuasa dan Maha Berkehendak.

Oleh itu, usaha pemikir dan jurutera Islam pada masa lalu memberikan gambaran yang bukan hanya suatu ideal, bahkan hakikat sejarah yang kegunaan amali kejuruteraan dan estetika wujud dalam kesatuan yang bersepadu.

Berdasarkan unsur kesenian dijumpai dalam artifak dan lakaran manuskrip, reka cipta mekanikal serta pernyataan estetika ialah wajah tidak terpisahkan dalam *sina'ah* - seni kemahiran adalah hasil budaya yang meraikan kerja dan pekerjaan.

Hakikat sejarah Islam memberi maklum bahawa selain menggesa kepada berbuat amal dan memulihkan kerja sebagai budi diganjarkan dengan pahala kebaikan, teknologi bukanlah suatu bentuk eskapisme atau jalan menganjurkan kemalasan.

Sebaliknya, ia jalan bagi manusia memperbaiki diri melalui penciptaan kemahiran dan dengan itu manusia memperoleh tujuan dan makna dalam kehidupan. Justeru, teknologi ialah pernyataan dan sewajarnya kekal sebagai keraian berdaya cipta kehidupan yang penuh bermakna.



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## LAMPIRAN 9 BERITA HARIAN (AUTO): MUKA SURAT 4 TARIKH: 12 APRIL 2019 (JUMAAT)

# LEAF generasi kedua lebih padu


**PELANCARAN BAHARU**
**Info**

### Nissan LEAF

- Mula diperkenalkan pada 2010
- Catat jualan lebih 400,000 unit

### Spesifikasi

#### Sistem pacuan kuasa

- Motor elektrik pacuan roda hadapan (147 hp/320 Nm)
- Pek bateri lithium-ion 40 kWh
- Jarak pengoperasian 400 km berdasarkan ujian di Jepun (378km berdasarkan data NEDC)
- Sistem pengecas 6.6 kW (8 jam masa pengecasan)
- Sistem pengecas pantas (80% dalam masa 40 minit)
- Advanced Air Bag System (AABS) dengan dua fasa pelaksanaan, 6 beg udara
- ABS, EBD, Vehicle Dynamic Control, Traction Control
- Tire Pressure Monitoring System (AEB) dengan pengesanan pejalan kaki
- Ciri bantuan pemanduan ProPILOT
- Amaran titik buta (BSW), lintasan trafik arah belakang (RCTA), Intelligent Driver Alertness (I-DA), Intelligent Lane Intervention (I-LI)
- Penarafan lima bintang penuh Euro NCAP

→ Jadi ikon Nissan Intelligent Mobility

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**K**eunggulan model LEAF yang dikeluarkan oleh Nissan pada 2010, iaitu kereta elektrik (EV) sepenuhnya yang mendapat perhatian dunia, sekali lagi tampil dengan versi generasi kedua yang dipertingkatkan.

LEAF adalah ikon bagi Nissan Intelligent Mobility, visi syarikat untuk mengubah cara kereta dikuasakan, dipandu dan berintegrasi dalam masyarakat.

Model generasi kedua itu dijangka mula berada di pasaran di beberapa negara Asia dan Oceania pada tahun ini serta Indonesia dan

Filipina pada 2020, sudah tentu menjadi antara yang dinantikan dalam dunia permotoran.

Baru-baru ini pada acara Nissan Futures yang diadakan di Hong Kong, delegasi media dari rantau ini diberi peluang untuk memandu uji LEAF baharu itu di sekitar bandaraya itu.

Hong Kong, boleh dianggap sebagai lokasi unik bagi acara dunia automotif memandangkan ia adalah wilayah yang kecil, sibuk dan lebih dikenali dengan kemudahan pengangkutan awam yang cekap.

#### Reka bentuk dinamik

Memandu di Hong Kong memberikan pengalaman yang berbeza yang mana sesi pandu uji itu membabitkan perjalanan antara dua pulau utama iaitu Hong Kong dan Kowloon serta dengan keadaan jalan yang sempit dan sesak.

Sesi pandu uji yang mengambil masa sekitar satu jam bagi perjalanan sejauh 40 kilometer itu menjadi lebih lancar kerana LEAF baharu itu dilengkapi dengan ciri Nissan Intelligent Mobility seperti bantuan Pro-

Pilot, e-Pedal, dan brek kecemasan automatik selain reka bentuk yang lebih dinamik.

Lebih menarik, sistem e-pedal pada kereta EV itu juga banyak membantu pemanduan di laluan penuh mencabar dan hanya 20 peratus kuasa elektrik digunakan sepanjang pandu uji dengan mod pemanduan yang berbeza-beza.

Sebagai perbandingan, LEAF terdahulu menggunakan bateri 30 kWh yang mampu dipacu sehingga jarak 250 km serta menawarkan kecukupan tenaga yang dipertingkatkan dengan bateri ion litium 40kWh yang berkapasiti tinggi.

Tidak seperti kereta hibrid, LEAF adalah kereta dengan kuasa elektrik sepenuhnya memberikan pengalaman yang lebih lancar, ringan dan memberikan prestasi pemanduan yang memuaskan kepada pemandu.

Dengan kelebihan e-pedal, pemandu hanya perlu mengawal kelajuan tanpa perlu kerap menggunakan brek, sekali gus menambatkan ciri keselamatan serta kereta juga akan berhenti secara mengejut sekiranya pemandu

melepaskan pedal kereta.

#### Kereta mesra alam

Malah, dengan kelebihan yang ditampilkan pada LEAF baharu ini, ia bersesuaian untuk dibawa sebagai kenderaan harian di bandaraya Kuala Lumpur, namun apa yang perlu dipertimbangkan adalah infrastruktur pengecas yang perlu dilakukan oleh pihak berkaitan.

Jadi, tidak hairan apabila kehebatan model Nissan LEAF itu diiktiraf sebagai Kereta Mesra Alam Terbaik 2018 di Pameran Auto Antarabangsa di New York pada tahun lalu.

Model terdahulu LEAF juga pernah dinobatkan sebagai 'World Car of the Year' pada 2011 dan kekal menjadi kenderaan elektrik 100 peratus untuk memenangi anugerah berkenaan sejak diperkenalkan pada 2010.

Usaha Nissan ini juga dianggap sebagai usaha futuristik bagi memastikan dunia automotif terus relevan di samping membantu melindungi alam sekitar dan menjamin udara bersih.

Nissan LEAF generasi kedua dijangka berada di pasaran beberapa negara Asia dan Oceania, tahun ini, termasuk Indonesia dan Filipina pada 2020.





**LAMPIRAN 10**  
**NEWS STRAITS TIMES (WORLD): MUKA SURAT 71**  
**TARIKH: 12 APRIL 2019 (JUMAAT)**

## NEW MARKET

# RIDDING SPACE OF OLD JUNK

Clean-up needed as risk of space-debris collisions grow

## COLORADO SPRINGS

**W**ITH constellations of thousands of telecommunication mini satellites expected to orbit Earth in the near future, the risk of space-debris collisions will grow. For Nobu Okada, it's an opportunity.

The 46-year-old Japanese entrepreneur founded the start-up Astroscale in Singapore in 2013 with the aim of launching "space sweepers". The company, now based in Tokyo, has 71 employees.

A demonstration will take place in 2020 when an Astroscale satellite will capture one of the company's mini satellites and try to nudge it out of its orbit and push it into the atmosphere to burn up.

Okada was at the 35th Space Symposium, a large meeting of the space industry in Colorado.

"One guy told me, 'Nobu, there's no market, nobody pays money to

remove space debris.' And when I heard there's no market, I feel this (is) a good news. If there's no market. There's no competition.

"The density of space debris has reached the critical level where chain collisions can happen at any time in the near future. So if we do not take any actions, space is not sustainable anymore. So somebody has to clean up space.

"The future debris will mostly come from constellations. A certain percentage of the satellites will go defunct in space. And they have to be replenished with new satellites to keep the coverage. To do that, they have to remove the oldest satellites to make sure their orbital plane is clean.

"The other business line is that we also have to clean up the debris which are already up there. And these are mostly littered by the governments. We should prioritise which debris are the most critical and have to be removed with high priority, with government money, like rocket upper stages.

"Two years ago, they were just listening, but now they are beginning to take responsibility.

"We have multiple projects with potential customers.

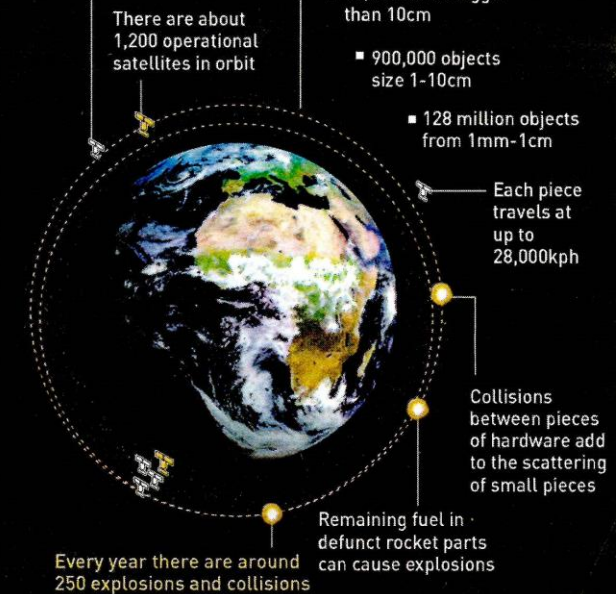
## SPACE JUNK

Six decades of human space exploration has produced a hazardous belt of orbiting debris around planet Earth

After more than 5,250 launches, about 23,000 objects are currently tracked in space

## Debris estimate:

- 8,400 tonnes: total mass of all space objects in Earth orbit
- 34,000 items bigger than 10cm
- 900,000 objects size 1-10cm
- 128 million objects from 1mm-1cm



Source : ESA

© AFP

"Before we set up this company, people had no idea how much money, it would cost to remove one debris, because there were no proven technologies.

"People were thinking US\$100,

US\$300 or US\$500 million (RM411 million to RM2 billion) to remove one object. But our price — it depends on the situation of the objects in space, but it is far, far less than that." **AFP**



LAMPIRAN 11  
THE STAR (NATION): MUKA SURAT 15  
TARIKH: 12 APRIL 2019 (JUMAAT)

# UM part of black hole project

Astronomer in global team that took first images of cosmic object

By CHRISTINA CHIN  
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**KUALA LUMPUR:** Universiti Malaya has made its mark in space research, and with photos to prove it too.

An astronomer from the country's oldest university was part of an international team that captured the world's first images of a black hole.

Dr Juan Carlos Algaba, from the Radio Cosmology Laboratory at UM's Faculty of Science, accomplished the scientific feat together with a team of over 200 researchers working together from around the world.

"I had mixed feelings looking at the images for the first time.

"It was the image that I was expecting based on previous models but knowing that this is a real picture and not a computer simulation, or an artist impression, was truly exciting.

"It's an achievement that we thought was impossible just a decade ago," said the Very Long Baseline Interferometry (VLBI) expert before speaking about the results at UM yesterday.

Algaba, who is from Spain, joined UM as a senior lecturer this year.

The images were captured using the Event Horizon Telescope (EHT), an Earth-sized "virtual telescope" with unprecedented sensitivity and resolution.

Funded by the US National Science Foundation (NSF), European Research Council (ERC) and agencies in East Asia, the EHT is an international project that links telescopes deployed at high-altitude



**Algaba:** 'It's an achievement that we thought was impossible just a decade ago.'

sites around the globe.

Data from the telescopes are then combined using highly specialised supercomputers.

Offering a new way to study the most extreme objects in the universe predicted by Einstein's general relativity, EHT can achieve an angular resolution of 20 micro-arcseconds – enough to read a newspaper in New York from a sidewalk café in Paris.

On Wednesday, EHT researchers unveiled the first direct visual evidence of a supermassive black hole and its shadow in *The Astrophysical Journal Letters*.

Algaba co-authored several of the scientific articles.

"I made key observations with some of the telescopes in Hawaii and participated in workshops and



**Extraordinary:** The first ever photo of a black hole. — Photo courtesy of Event Horizon Telescope collaboration via the National Science Foundation

preliminary data analysis at the MIT-Haystack Observatory."

He said observations were challenging as they were at remote locations.

The data analysis process was also hard.

"But it's very gratifying to be part of such a big project.

"Even though black holes have been theorised for several decades, they've mostly remained in the realm of science fiction.

"It's a great privilege to be part of the team that revealed one for the first time.

"It was marvellous to see the image after all the years of hard work," he said, adding that UM recently signed a Memorandum of Understanding with the East Asian

Observatory for more EHT collaborations.

The recently revealed image shows the black hole at the centre of Messier 87, a massive galaxy in the nearby Virgo galaxy cluster.

This black hole resides 55 million light years from Earth and has a mass 6.5 billion times that of the Sun.

Multiple calibration and imaging methods revealed the black hole's shadow – a ring-like structure with a dark central region.

Black holes are extraordinary cosmic objects with enormous masses but extremely compact sizes.

Their presence affects their environment in extreme ways, warping spacetime and super-heating any surrounding material.